# UNIT 15 LEASING AND HIRE PURCHASE

## Objectives

After studying this unit, you should be able to:

- understand the concepts and distinguishing features of leasing and hire purchase;
- explain different types of leasing;
- understand standard clauses in a lease agreement; and
- take a lease or buy decision.

## Structure



## 15.1 INTRODUCTION

Financing of Capital assets of a firm requires long-term funds of substantial magnitude. Several sources have been tapped to raise such funds, e.g. equity, debt instruments and development finance in the form of term loans. All these sources have their distinctive advantages and disadvantages to the borrowers and the lenders or investors. Raising long-term funds for acquiring capital assets through debt instruments or long-term debts, imposes several obligations on the borrowers, who have to bear some degree of risk also. Hence, alternative means for acquiring the capital assets without raising funds immediately, have been devised. Leasing and hire purchase of capital assets are two such methods through which the need for raising the funds can be avoided. These are the substitutes for raising finance. We shall deal in this unit these two means of acquiring capital assets for use in a firm.

## 15.2 LEASING : DEFINITION AND MAIN FEATURES

A lease is a contract whereby the owner of an asset (the lessor) grants to another person (the lessee) exclusive right to use the asset for an agreed period of time, in return for the payment of a rent (called lease rental). Capital assets like land, buildings, equipments, machinery, vehicles are the usual assets which are generally acquired on lease basis. The lessor remains the owner of the asset, but the possession and economic use of the asset is vested in the lessee.

As there is no separate statute in India to govern the contracts of leasing, which is akin to a contract of bailment, the provisions of the Indian Contract Act apply to it. According to Section 146 of the Indian Contract Act, 1872 bailment is "the delivery of goods by one person to another person for some purpose, upon a contract that they shall, when the purpose is accomplished, be returned or otherwise disposed of according to the directions of the person delivering them." The person delivering the goods is called the bailor and the person to whom they are delivered is called the bailee.

Since an equipment lease transaction falls in the category of a bailment contract, the obligations of the lessor and the lessee are similar to those of the bailor and the bailee (unless expressly specified otherwise in the lease agreement) as given in the Indian Contract Act. Briefly, these may be stated as follows:

1) The lessor has the duty to deliver the asset to the lessee, to legally authorise the lessee to use the asset and to leave the asset in peaceful possession of the lessee during the lease period.
2) The lessor has the obligation to pay the lease rentals as specified in the lease agreement, to protect the lessor's title, to take reasonable care of the asset, and to return the leased asset at the expiry of the lease period.

## Main Elements of Leasing

The essential features of a leasing contract are as follows:

a) **A Valid Contract of Leasing:** A leasing arrangement is undertaken by entering into a valid contract between the lessor and the lessee. Both the parties must be competent to contract. The lessor must have clear and undisputed title to the assets to be leased. The agreement must satisfy the essentials of a valid contract as per the Indian Contract Act.

b) **Delivery of Goods:** The movable property, generally termed as 'goods' must be delivered by the lessor to the lessee. Delivery of the goods may be either actual delivery or constructive delivery. In the former case physical possession of the goods is handed over to the lessee, but in the latter case, there is no change in the physical possession, but some instruction or direction is given to the possessor of the goods to hold the same on behalf of the lessee rather than the lessor.

c) **Purpose:** Goods are delivered to the lessee with the specific purpose of using them for his specified lawful activity throughout the lease period.

d) **Consideration:** The lessee undertakes to pay to lessor regularly lease rental, as consideration for the use of the goods.

e) **Return of the Goods:** The goods must be returned to the lessor exactly in the same form, after the lease period is over.

f) **Ownership:** The lessor, after handing over possession of the leased asset, remains owner of the asset throughout the lease period and even thereafter.

g) **Methodology:** The prospective lessee identifies the equipment to be leased and its supplier and enters into a lease arrangement with a leasing company. He furnishes certain particulars, such as his name, address, details about his business, name and address of the guarantor, if any, description of the equipment (model, make, size, specification etc.), the name and address of the supplier and the price quoted by the supplier, place of installation, duration of the lease, etc.

The lessor examines the lease proposal and evaluates the credit-worthiness of the applicant, his past performance in the business and his capacity to pay the periodical rentals, taking into account the profitability and projected cash flows of his business and his reputation, etc.

## 15.3 BENEFITS OF LEASING

Several benefits are derived by the lessee by acquiring the assets on lease basis, as compared to buying the same. The benefits are as follows:

a) **Convenience in case of short-term need:** If the capital asset is needed for a short period only, say a year or two, leasing is a very convenient and appropriate method of acquiring. It dispenses with the formalities and expenses incurred in purchasing the asset and selling it soon after the need is over.

b) **No Risk of Technological Obsolescence:** In case of owning the asset, the firm bears the risk of the asset becoming obsolete. In the present age of technological innovations, risks in owning an asset with outdated and old technology cannot be ignored. With such equipments, the firm cannot compete with its competitors and will incur heavy losses. Leasing provides a shield against all these hazards by shifting the risk of obsolescence of equipment to the lessor. This is true of operating leases which are for short duration and cancellable at the option of the lessee. The lessee can cancel an old lease agreement and enter into a new one in case a technologically superior product is available in the market. It is true that lease rentals for such equipments tend to be higher, but this disadvantage is more than off-set by the benefits the lessee derives by passing on the risk of obsolescence to the lessor.

c) **Efficient Maintenance Services:** Under operating or full service lease, the lessee avails of the maintenance and other services provided by the lessor, who is well equipped, qualified and experienced to provide such services efficiently. Of course, the lessee pays for such services in the form of higher rentals.

d) **Low Administrative and Transactions Costs:** Many leasing companies specialise in leasing a few types of equipments, machines or vehicles only. They can easily bargain with the suppliers/manufacturers etc. and acquire the assets at better prices and can economise in other administrative expenses also. The lessee may get a concession in lease rent on the basis of the economies derived by the lessor.

e) **Debt-Equity Ratio remains unchanged:** When an asset is acquired on lease basis, lease rentals are shown as an expense in the firm's profit and loss account. Neither the leased asset nor the liability under the lease agreement are shown in the Balance Sheet. Hence the debt-equity ratio remains unaffected as compared to a firm which buys the asset with borrowed funds. The following example will make this difference clear.

There are two firms in an industry with identical balance sheets as shown below:

**Balance Sheet**

| | | | |
|---|---|---|---|
| Equity Capital | 100 | Fixed Assets | 100 |
| Debts | 100 | Current Assets | 100 |
| **Total** | **200** | **Total** | **200** |

Debt Equity Ratio = 1 : 1

Firm A borrows Rs. 100 to buy a fixed asset, while firm B takes it on lease. The respective balance sheets of the two firms will appear as follows:

**Firm A**

| | | | |
|---|---|---|---|
| Equity Capital | 100 | Fixed Assets | 200 |
| Debts | 200 | Current Assets | 100 |
| **Total** | 300 | **Total** | 300 |

Debt Equity Ratio = 2 : 1

**Firm B**

| | | | |
|---|---|---|---|
| Equity Capital | 100 | Fixed Assets | 100 |
| Debts | 100 | Current Assets | 100 |
| **Total** | 200 | **Total** | 200 |

Debt Equity Ratio = 1 : 1

The debt-equity ratio of firm A increases from 1 : 1 to 2 : 1, while that of firm B remains unaffected. In its balance sheet the leased asset is shown as an off balance sheet item. Higher debt-equity ratio of Firm A will adversely affect its further debt taking capacity, while firm B can take further debt easily to acquire other assets or to meet its working capital needs. If the firm has got surplus cash with it, it can employ it fruitfully elsewhere.

f) **Benefit of Tax Shield:** The lessee claims lease rentals as tax deductible expenses every year during the lease period. Thus, his tax liability is reduced to that extent.

In case he buys the asset with borrowed funds, he can claim (i) depreciation, and (ii) interest on borrowed funds as tax deductible expenses. To the extent the lease rental exceeds the depreciation and interest burden, his deductable expenses are larger and his tax liability is lower. The net burden, in such cases, is neutralised by the benefits derived by the lessee as enumerated above.

In the books of the lessor, lease rentals received are taxable, under the head 'Profits and Gains from Business or Professions', after deducting: (i) depreciation on the assets, and (ii) interest on the borrowed funds, if any.

## 15.4 TYPES OF LEASES

The terms and conditions on which an asset is leased and the rights and obligations of the lessor and the lessee are clearly incorporated in the Lease Agreement. On the basis of variations in all these, leases are classified into the following categories:

1) **Operating Lease**

In case of operating lease, the lessor not only leases the asset of which he remains the owner throughout, but also undertakes to provide services attached to such assets, e.g., maintenance, repairs, technical advice, etc. Such lease is also called service lease. Computers, office equipments, automobiles and trucks are the typical capital assets which are leased under operating lease arrangement. The main features of an operating lease are as follows:

i) The lease contract is generally for a period which is considerably shorter than the useful life of the leased asset. For example, a machine may be acquired on lease for a period of 5 years, while its useful life may be 10 years.

ii) The lessor does not, therefore, recover the full cost of the asset from one lessee only. The leased asset is returned back to the lessor at the end of the lease period and is, thereafter, leased again to another lessee for another lease period.

After its useful life is over, it is sold off and its scrap value is realised by the lessor.

iii) Operting lease generally contains a cancellation clause also, wherein the lessee retains the right to cancel the lease any time before the lease period is over. Such clause is beneficial to the lessee as he may terminate the lease, if the asset becomes obsolete or his need for the asset is over.

iv) The lease agreement contains a maintenance clause whereby the lessor is required to maintain the leased assets. Thus, necessary repairs, fuel, support staff may be provided by the lessor, as agreed upon.

v) The lease rental includes: (a) a part of the amortisation of the cost of the equipment, (b) cost of the maintenance services provided, and (c) profit of the lessor.

2) **Financial Lease**

In case of a financial lease, the lessor remains the owner of the leased asset during the lease period, but does not undertake its necessary maintenance. The rental received by the lessor fully amortises the cost of the equipment and earns a profit for him. These leases are non-cancellable. Ultimately, the ownership of the leased asset may be transferred to the lessee at an agreed price. The lessor thus acts as a financier only and earns a return on his investment in the leased asset by way of rentals. Financial leases are for the major part of the useful life of the asset.

3) **Sale and Lease Back**

This is another type of lease arrangement wherein the lessee who already owns the assets, sells the same to the lessor, and thereafter takes the same asset from him on lease basis. This is called 'Sale and Lease Back arrangement'. Under this arrangement, the lessee immediately recovers the value of his already owned assets from the lessor. Thereafter, the lessee makes payment of the lease rentals periodically as usual. Such a lease arrangement enhances the liquid resources of the lessee immediately, which can be utilised otherwise to meet his working capital requirements or to purchase another asset on cash payment basis. This type of lease is an alternative to a mortgage of the assets.

4) **Leveraged Lease**

In case of an ordinary lease, the lessor purchases the asset with an appropriate mix of debt and equity. But the creditor (i.e., supplier of the debt funds) does not have recourse to the lessee. In other words, in case the lessor defaults in making repayment of the debt, the creditor cannot claim the same from the lessee. He will have recourse to the lessor only.

Leveraged lease is just opposite to the above. In such case, the creditor remains entitled to have recourse to the lessee, i.e., he can recover his claims from the lessee also. The lease rental is assigned to the creditor. The lessee is required to pay the lease rental directly to the creditor of the lessor. Generally this transaction is undertaken through a trustee, who receives the lease rental and appropriates it as debt service component to the creditor and the balance amount to the lessor.

4) **Domestic Lease and International Lease**

This classification is based on the domicile of the parties to a lease contract. If all the parties, viz. equipment supplier, lessor and the lessee are residing in the same country, the lease is called domestic lease. If they are residing in different countries, it is called international lease. If the lessor and the lessee are domiciled in the same country and equipment is imported from another country, it is called import lease. If the lessor and lessee are domiciled in different countries, the lease is called cross-border lease. In such cases, the equipment supplier may be the resident of any country. In case of international lease, there are two additional risks, i.e., country risk and currency risk.

### Activity 1

Give the points of distinction between

i) Operating and Financial Lease.

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ii) Sale and Lease Back and Leveraged Lease.

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## 15.5 MAIN CLAUSES IN THE LEASE AGREEMENT

After the lease transaction is finalised, lease agreement is prepared and executed by the parties. The lease agreement incorporates the legal rights and obligations of the lessor and the lessee so as to bind them and serve the purpose of evidence, if any dispute arises during the lease period. The main clauses which are usually incorporated in a lease agreement are as follows:

1) **Nature of the Lease:** This clause specifies the nature of the lease (i.e., operating lease, financial lease or a leveraged lease) and the names of the parties to the Agreement.

2) **Description of the Asset:** This clause gives the description of the equipment to be leased, its make, model, size, specification etc.

3) **Duration of Lease Period:** This clause specifies the period for which the asset is leased, which is called the primary period. The clause generally also gives an option to the lessee to renew the agreement for a further period. The second term of the lease is known as secondary period.

4) **Lease Rentals:** This clause specifies the lease rental payable by the lessee, which is fixed by taking into consideration the cost of funds, depreciation, repairs, profit expected, and risk involved in the lease transaction etc. The rent may be payable monthly or quarterly. The quantum of such rental, the time within which it is payable and the consequences of failure to pay the same are stipulated in this clause.

5) **Delivery and Re-delivery:** This clause mentions when and how the leased equipment would be delivered to the lessee and how it will be delivered back to the lessor on the completion of the lease period.

6) **Right to Use:** This clause allows the lessee to make proper and lawful use of the equipment.

7) **Repairs and Maintenance:** Usually this clause states that the lessee shall maintain and repair the equipment and keep it in good and working condition. The cost of such maintenance shall be borne by the lessee.

8) **Alterations/Additions to Equipment:** This clause states that the lessee shall not make any alterations or additions to the equipment or remove it from the premises without the written consent of the lessor.

9) **Right to Inspect Equipment:** This clause gives the lessor the right to enter the premises of the lessee and to inspect the equipment as and when he desires.

10) **Damage to Equipment:** It is usual to stipulate that the lessee will bear all risks, losses, damages, theft or destruction of the equipment as long as it is in his custody.

11) **Prohibition of Sub-leasing:** This clause prohibits the lessee from sub-leasing the equipment or selling it to any party.

12) **Default by Lessee and Remedies:** It is usual to include a clause indicating the specific events of default by the assessee and the remedies available to the lessor in such cases. The remedies may be:

    a) to declare that all unpaid rentals are due and payable immediately and to sue the lessee for the recovery of the same,

    b) to terminate the lease agreement, and

    c) to seize the equipment given on lease.

13) **Insurance:** This clause requires the lessee to take out a fire insurance policy in respect of the equipment in the joint names of the lessee and the lessor (named therein as the owner). Lessee shall pay the premium and renew the policy every year.

14) **Other Charges:** This clause shall specify which party will pay the various expenses and charges in connection with the purchase and installation of equipment.

## 15.6 TO BUY OR LEASE : A CRUCIAL DECISION

### 15.6.1 Lessee's Point of View

A firm going to acquire a capital asset has to make a crucial decision regarding buying it or acquiring it on lease basis. In the former case, the firm shall have to raise funds through debt or equity, if it does not possess surplus funds with itself. The decision of the firm will rest on the evaluation of both the proposals and comparative costs involved therein. The following steps are involved in such an evaluation:

1) The decision of the firm to acquire a particular asset is basically a capital budgeting decision and must be taken by the firm very carefully by any of the methods of capital budgeting.

2) Having decided the above, the firm shall have to make a choice between buying the asset or leasing it, based on the relative costs involved therein.

3) In the case of *outright purchase* of an asset, the company will need the total amount of funds equal to the cost of the asset at the time of acquisition. If the company has sufficient funds of its own, it may like to go for outright purchase of the same.

4) If the funds required for outright purchase are not sufficient with the firm, it shall have to raise the same through issue of shares or in the form of long term borrowings. Both of these sources will entail cost to the firm, which is to be estimated realistically.

5) In case of *outright purchase*, the firm shall be entitled to charge depreciation on the asset and interest on the borrowed funds as deductible expenses for Income Tax purposes. Thus, the cost of buying option is reduced by the extent of reduction in tax liability. Only the after-tax cost of buying decision is considered for comparing the same with the cost of leasing decision.

6) In case of purchase, the scrap value of the asset is also to be considered.

7) In case of the *leasing option*, the company shall have to make payment of lease rental regularly over the lease period. The entire amount of lease rental is tax deductible expense. Hence, the after-tax cost of lease rentals (cash outflows) each year is calculated as follows:

   Lease rental payment × (1 – tax rate)

8) It is important that the period of total after tax cash outflows in both the alternatives must be identical, e.g., if the lease period is 10 years, the net cash outflows in the buying decision should also be calculated for 10 year period.

9) Compare the present value (PV) of cash outflows under leasing decision with the present value of the buying alternative by employing after-tax cost of debt as the discount rate for this purpose.

10) Select the alternative with lower present value of cash outflows. Thus, the decision criterion is:

    i) if PV of cash outflows under leasing alternative is greater than PV of cash outflows under buying alternative — buy the asset.

    ii) if PV of cash outflows under buying alternative is greater than the PV of cash outflows under leasing alternative — lease the asset.

**Example 1**

A Limited company is contemplating to have an access to a machine for a period of 5 years. The company can have the use of machine for the stipulated period through leasing arrangement or the requisite amount can be borrowed at 14% to buy the machine. The firm is in the 50% tax bracket.

In the **case of leasing**, the firm would be required to pay at the end-of-year lease rent of Rs.1,20,000 for 5 years. All maintenance, insurance and other costs are to be borne by the lessee.

In the **case of purchase** of the machine (which costs Rs.3,43,300), the firm would have 14% five-year loan to be paid in 5 equal annual instalments, each instalment becoming due at the end of each year. The machine would be depreciated on a straight line basis, with no salvage value.

Advise the company which option it should go for, assuming lease rents are paid (a) at the end of the year (b) in advance.

**Solution**

The analysis is presented in Tables 15.1 to 15.3 (year-end lease rental payments) and Table 15.4 (advance lease payments).

**Table 15.1: Present value of total lease payments**

| *Year-end* | *Lease payment (L) after tax L(1-0.5) (Rs.)* | *PV factor at after tax cost of debt 7% or 14% (1-0.5)* | *Total PV of Lease payments Col. (2) X Col. (3) (Rs.)* |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1-5 | 60,000 | 4.100 | 2,46,000 |

**Table 15.2: Determination of the interest and Principal Components and Loan Instalment**

| *Year-end* | *Loan instalment (Rs.)* | *Loan at the begining of the year (Rs.)* | *Payment of Interest on loan (Col. 3 x 14%) (Rs.)* | *Principal re-payment (Col. 2- Col. 4) (Rs.)* | *Principal outstanding at the end of the year (Col. 3-Col. 5) (Rs.)* |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | 1,00,000* | 3,43,300 | 48,062 | 51,938 | 2,91,362 |
| 2. | 1,00,000 | 2,91,362 | 40,791 | 59,209 | 2,32,153 |
| 3. | 1,00,000 | 2,32,153 | 32,501 | 67,499 | 1,64,654 |
| 4. | 1,00,000 | 1,64,654 | 23,052 | 76,948 | 87,706 |
| 5. | 1,00,000 | 87,706 | 12,294 | 87,706 | – |

* Determination of loan instalment:

$$\frac{\text{Amount of loan}}{\text{PV factor of annuity of 1 Re. for}} = \frac{\text{Rs. 3,43,300}}{3.433} = \text{Rs. 1,00,000}$$

5 years at 14% rate of interest.

**Table 15.3: Present Value of After-Tax Cash Outflows under Buying (Borrowing) alternative**

| *Year-end* | *Loan instalment (Rs.)* | *Tax advantage on interest payment I (0.5) (Rs.)* | *Tax advantage on depreciation Rs. 68,660 (0.5) (Rs.)* | *Net Cash outflows (Col. 2-Col.3+4) (Rs.)* | *PV factor at after-tax cost of debt 7% (Rs.)* | *PV of buying alternative (Rs.)* |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | 1,00,000 | 24,031 | 34,330 | 41,639 | 0.935 | 38,932 |
| 2. | 1,00,000 | 20,395 | 34,330 | 45,275 | 0.873 | 39,525 |
| 3. | 1,00,000 | 16,250 | 34,330 | 49,420 | 0.816 | 40,327 |
| 4. | 1,00,000 | 11,526 | 34,330 | 54,144 | 0.763 | 41,312 |
| 5. | 1,00,000 | 6,147 | 34,330 | 59,523 | 0.713 | 42,440 |
| | | | | | | Total 2,02,536 |

**Table 15.4: PV of Cash Outflows under Leasing Alternative, when Lease Rent is Paid in Advance**

| *Year-end* | *Lease Payment (Rs.)* | *Tax Shield (Rs.)* | *Cash outflows after taxes (Rs.)* | *PV factor at 7% (Rs.)* | *Total PV (Rs.)* |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 1,20,000 | – | 1,20,000 | 1,000 | 1,20,000 |
| 1-4 | 1,20,000 | 60,000 | 60,000 | 3,387 | 2,03,220 |
| 5 | – | 60,000 | –60,000 | 0.713 | –42,780 |
| | | | | | 2,80,440 |

The operational implication of advance payment for tax purposes is that it qualifies for tax shield only in the year for which payment applies. For instance, Rs.1,20,000 payment at the beginning of the period (t = 0) represents a pre-paid expense and is not deductible for tax purposes until year 1. Similarly, the other 4 payments are not deductible until the following year. The schedule of cash flows under leasing alternative when the payment is made in advance is shown in Table 15.4.

### Example 2

ABC Ltd. is considering to acquire an additional computer to supplement its time sharing services. It has two options:

i) To purchase the computer for Rs.22,00,000, and

ii) To lease the computer on an annual rental (payable at the end of the year) of Rs.5,00,000 plus 10% of gross revenue from time sharing services. An amount of Rs.6,00,000 is also payable at the end of year 3.

The revenues from time sharing services are estimated at Rs.22,50,000, Rs.25,00,000 and Rs.27,50,000 for 3 years. The computer has a salvage value of Rs.10,00,000 at the end of 3rd year.

Annual operating cost (excluding depreciation and lease rent) is estimated at Rs.2,00,000 per annum and an additional revenue expense of Rs.2,00,000 is payable for training in the beginning of the 1st year (both these costs are to be borne by the lessee in case of lease). Funds for purchase are to be acquired at the rate of 16% and are repayable Rs.5,00,000, Rs.8,50,000 and Rs.8,50,000 at the end of 3 years respectively. The firm pays tax at the rate of 50% and provides depreciation at straight line method.

### Solution

In this case, the firm has two options: To buy the computer out of borrowed funds or lease the computer. In case of buying option, the funds are to be acquired at the rate of 16%. Therefore, the after-tax cost of debt of the firm is 8% i.e., 16% (1–0.5). This 8% rate can be used to discount the future cash flows for the evaluation purpose as follows:

**Evaluation of Lease Option**

**(Figures in Rs.)**

| *Year* | *Rental* | *10% of Rev.* | *Total* | *Tax Shield* | *Net Outflow* | *PVF* | *PV* |
|---|---|---|---|---|---|---|---|
| 1 | 5,00,000 | 2,25,000 | 7,25,000 | 3,62,500 | 3,62,500 | .926 | 3,35,675 |
| 2 | 5,00,000 | 2,50,000 | 7,50,000 | 3,75,000 | 3,75,000 | .857 | 3,21,375 |
| 3 | 11,00,000 | 2,75,000 | 13,75,000 | 6,87,500 | 6,87,500 | .794 | 5,45,875 |
| | | | | Present value of outflows | | | 12,02,925 |

**Evaluation of Purchase Option**

| *Year* | *Installment (1)* | *Interest (2)* | *Dep. (3)* | *Expenses (4)* | *Total (2+3+4)* | *Tax Shield @ 50%* | *Net CF* |
|---|---|---|---|---|---|---|---|
| 0 | – | – | – | 2,00,000 | 2,00,000 | – | 2,00,000 |
| 1 | 5,00,000 | 3,52,000 | 4,00,000 | 2,00,000 | 9,52,000 | 5,76,000 | 4,76,000 |
| 2 | 8,50,000 | 2,72,000 | 4,00,000 | 2,00,000 | 8,72,000 | 4,36,000 | 8,86,000 |
| 3 | 8,50,000 | 1,36,000 | 4,00,000 | 2,00,000 | 7,36,000 | 3,68,000 | 8,18,000 |

The net cash flows have been calculated as follows:

Net CF = (Instalment+Interest+Expense – Tax Shield)

The tax shield for the first year has been calculated as follows : At the time of installation of the computer system, a revenue expense of Rs.2,00,000 is incurred. This is, however, tax deductible at the end of year 1 and so the tax shield in respect of this expense of Rs.2,00,000 (i.e. Rs.1,00,000) is available only at the end of the year 1. So, for the year 1, the total tax shield is (50% of Rs.9,52,000) + Rs.1,00,000 = Rs.5,76,000 and the cash outflows for the year 1 is (Rs.5,00,000+3,52,000+2,00,000–5,76,000) = Rs.4,76,000.

**Calculation of Present Value**

| *Year* | *NetCF* | *PVF* | *PV* |
|---|---|---|---|
| 0 | Rs.–2,00,000 | 1.000 | Rs.–2,00,000 |
| 1 | –4,76,000 | .926 | –4,40,776 |
| 2 | –8,86,000 | .857 | –7,59,302 |
| 3 | –8,18,000 | .794 | –6,49,492 |
| 3 | +10,00,000 | .794 | +7,94,000 |
| | Net Present Value | | –12,55,570 |

Since the NPV of outflows is lower in case of lease (i.e. Rs.12,02,295) as compared to NPV of the purchase option (i.e. Rs.12,55,570), the firm should acquire the computer system on lease.

**Working Notes:** The depreciation has been calculated as per straight line method as follows:

Annual Depreciation = (Rs.22,00,000 – Rs.10,00,000)/3
= Rs.4,00,000.

The interest at the rate of 16% has been calculated on the outstanding balance of total purchase price of Rs.22,00,000.

### 15.6.2 Lessor's Perspective

The lessor shall have to take a decision whether to lease an asset or not. He will be willing to go for leasing only when the leased asset earns a return higher than his weighted average cost of capital. In other words, after-tax cash inflows accruing to him must give a rate of return which is greater than the cost of capital. In substance, the Net Present Value (NPV) should be positive. Following steps are required to be undertaken by the lessor for cost-benefit analysis of leasing out the asset.

1) **Determination of Cash Outflows:** Cash outflows will constitute the cost of the asset. If any tax advantage is available in the form of an investment allowance, or a subsidy, the same may be deducted from the cash outflows.

2) **Determination of Cash Inflows**

| | |
|---|---|
| Lease revenue | ........... |
| Less Depreciation | ........... |
| Earnings before taxes | ........... |
| Less Taxes | _______ |
| Earnings after taxes | _______ |
| Add Depreciation | _______ |
| Cash Inflows after taxes | _______ |

Depreciation is added back to earnings after taxes, as it is a non-cash expense and does not result in cash outflow.

3) **Determination of PV of Cash Inflows:** Cash inflows after taxes can be discounted by the appropriate weighted cost of capital of the lessor to arrive at present value of cash inflows.

4) **Decision:** The lessor should prefer leasing the asset if the PV of cash inflows exceeds PV of cash inflows.

## 15.7 MAJOR LEASING INSTITUTIONS IN INDIA

In India the business of leasing is undertaken by the followings:

1) **Equipment Leasing Companies**

Equipment Leasing Companies are primarily engaged in the business of equipment leasing and fall in the category of Non-Banking Finance Companies. Reserve Bank of India being the regulatory authority for all NBFCs, exercises control over these companies also. According to Reserve Bank of India Act, 1934, all NBFCs are required to obtain a Certificate of Registration from Reserve Bank of India for carrying on their business. The statutory requirement for minimum net owned funds for registration was stipulated at Rs.25 lakh for the existing companies and Rs.2 crore for new companies seeking Certificate of Registration after April 21, 1999.

The number of Equipment Leasing Companies increased from 56 as at end March 2002 to 58 as at end March 2003. But their assets declined from Rs. 3112 crore to Rs. 2011 crore during the same period. These companies solicit public deposits which also declined from Rs. 668 crore to Rs. 511 crore during the same period.

Reserve Bank of India exercises supervision over these companies through: (i) on-site inspection, (ii) off-site monitoring, (iii) market intelligence, and (iv) exception reports of statutory auditors.

2) **All India Financial Institutions**

Major portion of the financial assistance provided by these institutions takes the form of project finance, they are also engaged in providing non-project finance to industries. Equipment leasing is one of the ways in which they provide non-project finance.

3) **Commercial Banks**

Reserve Bank of India has stipulated that commercial banks can undertake equipment leasing business and/or invest in the shares of equipment leasing companies within specified limits through their subsidiary companies. Hence, commercial banks' subsidaries are engaged in the business of leasing to limited extent only.

## 15.8 HIRE PURCHASE

Hire purchase is another method of acquiring a capital asset for use, without paying its price immediately. Under hire purchase arrangement goods are let on hire, the hirer (user) is allowed to pay the purchase price in instalments and enjoys an option to purchase the goods after all the instalments have been paid. Thus the ownership in the asset is passed on to the hirer on payment of the last instalment. The amount and number of instalments is fixed at the time of delivering the asset to the hirer. If the hirer makes default in making payment of any instalment, the seller is entitled to recover the asset from the hirer. The hirer may, on his own also, return the asset to the hiree without any commitment to pay the remaining instalments. The instalments for this purpose are treated as hire charges. Thus, the property in the asset remains vested in the seller (hiree) till, the right of purchase is exercised by the hirer after making payment of all the instalments.

The hire purchase transaction takes place in the following manner:

i) The seller (hiree) purchases the asset from the supplier/manufacturer and hires it to the hirer who is required to make a cash down payment of, say 20-25% of the cost of the asset.

ii) The balance of the cost price of the asset with interest thereon is payable in equated monthly instalments either in advance or in arrears, over a pre-determined period which ranges between 36 months to 48 months.

iii) Sometimes, in place of cash down payment, a fixed deposit is required to be made with the seller and the entire amount of the cost is recovered through EMIs. The amount of FDR plus interest is returned to the hirer on payment of the last instalment.

iv) Each instalment comprises of the (a) cost of the asset, and (b) interest thereon. Interest is computed on the basis of a flat rate of interest. Thereafter the effective rate of interest is applied to the reducing balance of the original cost of asset to find out the interest component of each instalment. The effective rate of interest happens to be higher than the flat rate of interest.

v) The hirer is entitled to terminate the hire purchase contract by giving due notice to the seller (hiree).

A hire purchase transaction is to be distinguished from an instalment payment sale. In the latter case, the ownership in the asset is passed on to the user (buyer) on payment of the first instalment itself. Moreover, the buyer does not enjoy the right of termination of the agreement before making payment of all the instalments.

## Leasing and Hire Purchase

In case of hire purchase, ownership of the asset passes on to the user (hirer) after payment of all the instalments, but in case of a lease, the lessee is entitled to use the asset; ownership remains vested in the lessor. The hirer (user) can charge depreciation on the asset, while in case of lease, only the lessor can do so. The hirer remains liable to maintain the asset, but in case of operating lease the lessor has to bear the maintenance cost also. Moreover, the hirer can charge depreciation on the hired assets and other charges, while the hiree can claim interest on borrowed capital only. But in case of a lease, the lessor is allowed to claim depreciation, while the lessee can claim the rentals and maintenance expenses as deductible expenses from income. Lease is for the full value of the equipment, while in case of hire purchase, a cash down payment is generally required.

### Split of Hire Purchase Instalments Between Interest and Principal Repayment

To Illustrate how the hire-purchase instalments are split between interest and principal repayment components, let us consider an example.

**Example:** Nidhi Finance offers a hire-purchase proposal to one of its customers, Synthetic Chemicals, which requires an equipment costing Rs.10 lakhs on the following terms

i) a flat interest rate of 15 per cent, and

ii) a hire-purchase period of 36 months.

Given this information, the total interest burden and the monthly hire-purchase instalment would be as follows.

Total interest burden : Rs. 10,00,000 (0.15) (3) = Rs. 4,50,000

$$\text{Monthly hire-purchase instalments: } \frac{\text{Rs. } 10{,}00{,}000 + \text{Rs. } 4{,}50{,}000}{36} = \text{Rs. } 40{,}277$$

The annual hire-purchase instalment would simply be:

(Rs. 10,00,000 + Rs. 4,50,000)/3 = Rs. 4,83,333

To determine the split of the hire-purchase instalments between interest and principal repayments, let us first allocate the interest burden of Rs. 4,50,000 over the three years as per the sum of the years digit method. According to this method, the proportions of interest allocated to the three years would be as follows:

$$\text{1st year : } \frac{36 + 35 + 34 + \ldots + 25}{36 + 35 + 34 + \ldots + 1} = \frac{366}{666}$$

$$\text{2st year : } \frac{24 + 23 + 22 + \ldots + 13}{36 + 35 + 34 + \ldots + 1} = \frac{222}{666}$$

3rd year : $\dfrac{12 + 11 + 10 + ... + 1}{36 + 35 + 34 + ... + 1} = \dfrac{78}{666}$

Based on these proportions, the interest allocations would be as follows:

1 st year : $\dfrac{366}{666} \times$ Rs. 4,50,000 = Rs. 247,297

2nd year : $\dfrac{222}{666} \times$ Rs. 4,50,000 = Rs. 1,50,000

3rd year : $\dfrac{78}{666} \times$ Rs. 4,50,000 = Rs. 52,703

Given these interest allocations, the annual hire-purchase instalments would be split as follows:

| *Year* | *Hire purchase* | *Interest instalment* | *Principal repayment* |
|---|---|---|---|
| 1 | Rs. 4,83,333 | Rs. 2,47,297 | Rs. 2,36,036 |
| 2 | Rs. 4,83,333 | Rs. 1,50,000 | Rs. 3,33,333 |
| 3 | Rs. 4,83,333 | Rs. 52,703 | Rs. 4,30,630 |

**Activity 2**

Visit any Finance company of your choice and identify the various items for which they provide finance through Leasing/Hire Purchase schemes.

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## 15.9 CHOICE BETWEEN LEASING AND HIRE PURCHASE

Before discussing the procedure for choosing between leasing and hire purchase options, the following differences between them, from the point of view of the lessee (hirer), may be noted:

| **Leasing** | **Hire Purchase** |
|---|---|
| • Depreciation and investment allowance cannot be claimed by the lessee | • Depreciation and investment allowance can be claimed by the hirer |
| • The entire lease rental is a tax-deductible expense | • Only the interest component of the hire purchase instalment is tax-deductible |
| • The lessee, not being the owner of the asset, does not enjoy the salvage value | • The hirer, being the owner of the asset, enjoys the salvage value of the asset |

## 15.10 SUMMARY

In this unit we have considered two alternative methods of financing the assets, namely leasing and hire purchase. Leasing is a contract whereby the owner of an asset transfers the asset to another person with the exclusive right to use it for an agreed period of time, in return for the payment of lease rental. In hire purchase, the purchaser pays the price plus interest in equal periodic instalments spread over a period of time. In both the forms of acquiring the assets, the ownership remains vested in the lessor and hiree respectively till all the instalments are paid.

We have also discussed different types of leases and the main clauses usually incorporated in the leasing agreements. Method of evaluating a lease proposal from the point of view of lessor and the lessee had been discussed with examples. In case of hire purchase the method of splitting hire purchase instalments, interest and repayment of principal has also been explained.

## 15.11 SELF ASSESSMENT QUESTIONS

1) Explain the concepts of Leasing and Hire Purchase and point out the differences between the two.
2) Differentiate between Operating Lease and Finance Lease. Why is sale and lease back prepared and when?
3) Discuss the main advantages of leasing an asset instead of buying it.
4) Explain the main clauses in a Lease Agreement.
5) Explain the method of splitting the hire purchase instalments into interest and principal repayment.

## 15.12 FURTHER READINGS

1) Khan, M.Y (2004). *Financial Services*. Tata McGraw Hill Publishing Co. Ltd.
2) Rustogi, R.P. (2000). *Financial Management.* Galgotia Publishing Co.
3) Sriram, K. *Handbook of Leasing, Hire Purchase and Factoring*. The Institute of Chartered Financial Analysts of India.