CHAPTER 3

Hire-Purchase Finance and Consumer Credit

Learning Objectives

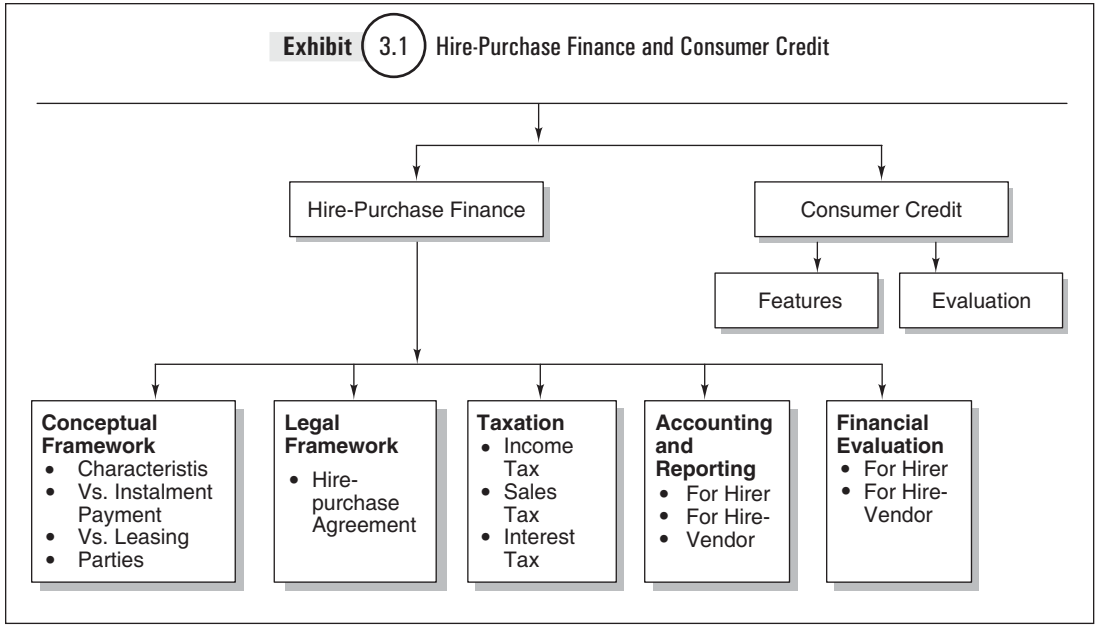
- Understand the basic characteristics of hire-purchase and distinguish it from instalment purchase and leasing.
- Discuss the main features of a hire-purchase agreement.
- Outline the three aspects of taxation of hire-purchase transactions—income-tax, sales tax and interest tax.
- Explain and illustrate the accounting and reporting practices relating to hire-purchase transactions in the books of the hirer as well as the hire-vendor.
- Discuss and illustrate the framework of financial evaluation of a hire-purchase deal *vis-à-vis* a finance lease.
- Understand the basic features of consumer credit as a financial service.

INTRODUCTION

This chapter examines the conceptual, legal, tax, accounting and evaluation framework of hire-purchase finance in India. It also outlines the salient aspects of consumer finance. Historically, hire-purchase finance has been associated with financing of commercial vehicles for road transport operators. It has emerged as a source of equipment financing in recent years as an alternative to lease financing. The consumer credit includes all asset-based financing to individuals to acquire consumer durables. Section 1 of the chapter explains the salient features/basics of hire-purchase transactions. The legal, tax and accounting aspects of such transactions are discussed in Sections 2, 3 and 4 respectively. The evaluation framework of hire-purchase transactions from the viewpoint of the hirer as well as the intermediary (finance company) is explained in Section 5. While Section 6 describes the salient features of consumer finance, the main points are summarised in the last Section. **These are portrayed in Exhibit 3.1.**

CONCEPTUAL FRAMEWORK

This Section covers **(i)** meaning and characteristics of hire-purchase, **(ii)** hire-purchase vs. instalment purchase, **(iii)** hire-purchase vs. leasing and **(iv)** parties to a hire-purchase contract.



Meaning and Characteristics

Hire-purchase is a peculiar kind of transaction in which the goods are let on hire with the option to the hirer to purchase them.

Hire-purchase is a mode of financing the price of the goods to be sold on a future date. In a hire-purchase transaction, the goods are let on hire, the purchase price is to be paid in installments and the hirer is allowed an option to purchase the goods by paying all the installments. A **hire-purchase** agreement is defined as peculiar kind of transaction in which the goods are let on hire with an option to the hirer to purchase them, with the following stipulations:

(a) Payment to be made in instalments over a specified period;

(b) The possession is delivered to the hirer at the time of entering into the contract;

(c) The property in the goods passes to the hirer on payment of the last instalment;

(d) Each instalment is treated as hire charges so that if default is made in payment of any instalment, the seller becomes entitled to take away the goods; and

(e) The hirer/purchaser is free to return the goods without being required to pay any further instalments falling due after the return.

Thus, a hire-purchase agreement has two aspects, firstly, an aspect of bailment of goods subject to the hire-purchase agreement, and secondly, an element of sale which fructifies when the option to purchase is exercised by the intending purchaser. Though the option to purchase is allowed in the very beginning, it can be exercised only at the end of the agreement. The essence of the agreement is that the property in the goods does not pass at the time of the agreement but remains in the intending seller, and only passes later when the option is exercised by the intending purchaser.

The *modus operandi* of a hire-purchase transaction is structured around the following features:

The finance (hire-purchase) company purchases the equipment from the equipment supplier and lets it on hire to the hirer to use it who is required to make a down payment of, say, 20–25 per cent of the cost and pay balance with interest in Equated Monthly Installments (EMI) in advance or arrears spread over 36–48 months. Alternatively, in place of the margin in the down-payment plan, under a deposit-linked plan, the hirer has to put an equal amount as a fixed deposit with the finance company which provides the entire finance on hire-purchase terms repayable with interest as EMI over 36–48 months. The deposit together with the accumulated interest is returned to the hirer after the payment of the last instalment. ***The interest component of each hire-purchase instalment is computed on the basis of a flat rate of interest and the effective rate of interest is applied to the declining balance of the original loan amount to determine the interest component of each instalment***. For a given flat rate of interest, the equivalent effective rate of interest is higher. **The computation of the effective rate of interest is illustrated in Appendix 3-A at the end of the chapter.** During the hire-period (period of agreement/contract), the hirer can opt for an early repayment and repurchase the asset by paying the remaining installments (not fallen due) **minus** an interest rebate. **The computation of interest rebate is shown in Appendix 3-B at the end of the chapter.** Finally, the hirer has the right to terminate the contract after giving due notice (*call option*).

Hire-Purchase *vs* Instalment Payment

In an **instalment sale**, the contract of sale is entered into, the goods are delivered and the ownership is transferred to the buyer but the price of the goods is paid in specified installments over a definite period. The first distinction between hire-purchase and instalment purchase is based on the **call option** (to purchase the goods at any time during the term of the agreement) and the right of the hirer to terminate the agreement at any time before the payment of the last instalment **(right of termination)** in the former while in the latter the buyer is committed to pay the full price. Secondly, in instalment sale the ownership in the goods passes on to the purchaser simultaneously with the payment of the initial/first instalment, whereas in hire-purchase the ownership is transferred to the hirer only when he exercises the option to purchase/or on payment of the last instalment.

Instalment sale is a contract of sale in which the ownership is transferred to the buyer but the price is paid in specified instalments over a definite period.

Lease Financing *vs* Hire-purchase Financing

These two modes of financing differ in the following respects:

Ownership The lessor (finance company) is the owner and the lessee (user/manufacturer) is entitled to the economic use of the leased asset/equipment only in case of lease financing. The ownership is never transferred to the user (lessee). In contrast, the ownership of the asset passes on to the user (hirer) in case of hire-purchase finance on payment of the last installment; before the payment of the last instalment, the ownership of the asset vests in the finance company/intermediary (seller).

Depreciation The depreciation on the asset is charged in the books of the lessor in case of leasing while the hirer is entitled to the depreciation shield on assets hired by him.

Magnitude Both lease finance and hire-purchase are generally used to acquire capital goods. However, the magnitude of funds involved in the former is very large, for example, for the purchase of aircrafts, ships, machinery, air-conditioning plants and so on. The cost of acquisition

in hire-purchase is relatively low, that is, automobiles, office equipments and generators and so on are generally hire-purchased.

Extent Lease financing is invariably 100 per cent financing. It requires no margin money or immediate cash down payment by the lessee. In a hire-purchase transaction typically a margin equal to 20 – 25 per cent of the cost of the equipment is required to be paid by the hirer. Alternatively, the hirer has to invest an equivalent amount on fixed deposits with the finance company which is returned after the payment of the last installment.

Maintenance The cost of maintenance of hired asset is to be borne typically by the hirer himself. In case of finance lease only, the maintenance of the leased assets is the responsibility of the lessee. It is the lessor (seller) who has to bear the maintenance cost in an operating lease.

Tax Benefits The hirer is allowed the depreciation claim and finance charge and the seller may claim any interest on borrowed funds to acquire the asset for tax purposes. In case of leasing, the lessor is allowed to claim depreciation and the lessee is allowed to claim the rentals and maintenance cost against taxable income.

Parties to Hire-purchase Contract

Basically, there are two parties in a hire-purchase contract, namely, the intending seller and the intending purchaser or the hirer. Now a days, however, hire-purchase contracts generally involve three parties, namely, the seller, the financier and the hirer. With the acknowledgment of the finance function as a separate business activity and the substantial growth of finance companies in the recent times, the sale element in a hire-purchase contract has been divorced from the finance element. A dealer now normally arranges a hire-purchase agreement through a finance company with the customer. It is, therefore, a tripartite deal. A tripartite hire-purchaser contract is arranged with following modalities:

1. The dealer contracts a finance company to finance hire-purchase deals submitted by him. For this purpose, they enter into a contract drawing out the terms, warranties that the dealer gives with each transaction, and so on.
2. The customer selects the goods and expresses his desire to acquire them on hire-purchase. The dealer arranges for him the full set of documents to be completed to make a hire-purchase agreement. The documents are generally printed by the finance company.
3. The customer then makes cash down payment on completing the proposal form. The down payment is generally retained by the dealer as a payment on account of the price to be paid to him by the finance company.
4. The dealer then send the documents to the finance company requesting them to purchase the goods and accept the hire-purchase transactions.
5. The finance company, if it decides to accept the transactions, signs the agreement and sends a copy to the hirer along with the instructions as to the payment of the installments. The finance company also notifies the same to the dealer and asks him to deliver the goods, if not already done so.
6. The dealer delivers the goods to the hirer against acknowledgments and the property in the goods passes on to the finance company.
7. The hirer makes payment of the hire installment periodically.
8. On completion of the hire-term, the hirer pays the last instalment and the property in the goods passes to him on issue of a completion certificate by the finance company.

LEGAL FRAMEWORK

There is no exclusive legislation dealing with hire-purchase transactions in India. *The Hire-Purchase Act* was passed in 1972. An Amendment Bill was introduced in 1989 to amend some of the provisions of the *Hire-Purchase Act*. However, the Act has not been enforced so far. The provisions of the Act are not inconsistent with the general law and can be followed as a guideline particularly where no provisions exist in the general laws which, in the absence of any specific law, govern the hire-purchase transactions. The Act contains provisions for regulating **(1)** the format/contents of the hire-purchase agreement, **(2)** warrants and the conditions underlying the hire-purchase agreement, **(3)** ceiling on hire-purchase charges, **(4)** rights and obligations of the hirer and the owner. A brief account of these is given in the **Appendix 3-C on the Website. The address of the website is http://www.mhhe.com/khanfs9e.**

In the absence of any specific law, the hire-purchase transactions are governed by the provisions of the *Indian Contract Act* and the *Sales of Goods Act*. The hire-purchase transaction/agreement has two aspects: **(1)** an aspect of bailment of goods which is covered by the Contract Act, **(2)** an element of sale when the option to purchase is exercised by the hirer/intending purchaser which is covered by the *Sales of Goods Act*. The provisions of the *Contract Act* in sofaras they relate to hire-purchase transaction have already been discussed in Chapter 2. The stipulation contained in the *Sales of Goods Act* are available in Appendix 3-D on the website. The website address is **http://www.mhhe.com/khanfs9e.** The contents of a hire-purchase agreement are, however, briefly outlined.

Hire-purchase Agreement

A hire-purchase agreement is in many ways similar to a lease agreement, in so far as the terms and conditions are concerned. The important clauses in a hire-purchase agreement are:

Nature of Agreement Stating the nature, term and commencement of the agreement.

Delivery of Equipment The place and time of delivery and the hirer's liability to bear delivery charges.

Location The place where the equipment shall be kept during the period of hire.

Inspection That the hirer has examined the equipment and is satisfied with it.

Hire-Charges To be paid by the hirer, the time schedule, the rate of interest/penalty for delayed payment/default.

Repairs The hirer to obtain at his cost, insurance on the equipment and to hand over the insurance policies to the owner.

Alteration The hirer not to make any alterations, additions, and so on to the equipment, without prior consent of the owner.

Termination The events or acts of hirer that would constitute a default eligible to terminate the agreement.

Risk Of loss and damage to be borne by the hirer.

Registration and Fees The hirer to comply with the relevant laws, obtain registration and bear all requisite fees.

Indemnity clause

Stamp Duty

Schedule of equipments forming subject-matter of agreement.

Schedule of hire charges.

The agreement is usually accompanied by a promissory note signed by the hirer for the full amount payable under the agreement including the interest element or finance charge.

TAXATION ASPECTS

The taxation aspects of hire-purchase transactions can be divided into three parts: **(i)** income tax, **(ii)** sales tax and **(iii)** interest tax.

Income Tax

Hire-purchase, as a financing alternative, offers tax benefits both to the hire-vendor, (hire-purchase finance company) and the hire-purchaser (user of the asset).

Assessment of Hire-purchaser (Hirer) According to circular issued by the Central Board of Direct Taxes in 1943 and a number of court rulings, the hirer is entitled to **(a)** the tax shield on depreciation calculated with reference to the cash purchase price and **(b)** the tax shield on the '**consideration for hire**' (total charge for credit). In other words, though the hirer is not the owner of the asset, he is entitled to claim depreciation as a deduction on the entire purchase price. Similarly, he can claim deduction on account of 'consideration for hire', that is, finance charge. The finance charge is the difference between the hire-purchase price and the cash price. The amount of finance charge to be deducted each year is to be spread evenly over the term of the agreement. No method is specified for evenly distributing the finance charge. The hirer can choose one of the alternatives, namely, **(1)** level/equal distribution, or **(2)** distribution on the basis of sum-of-years-digits method, or **(3)** rate of return method. If the hire-purchase agreement does not materialise and is terminated by return of the asset to the owner (hire-vendor), no deduction is allowed in respect of finance charge after the date of termination. If the agreement is terminated by outright purchase of the equipment, the deduction similarly ceases from its date of termination. Finally, the consideration is viewed as rental charge rather than interest. Therefore, if the agreement/contract expressly provides for the **option of purchasing the goods at any time** or of returning **the same before the total amount is paid**, no deduction of tax at source is to be made from the consideration of hire paid to the owner.

Assessment of Owner (Hire-Vendor) The consideration for hire/hire charge/income received by the hire-vendor is liable to tax under the head profits and gains of business and profession where hire purchase constitutes the business (mainstream activity) of the assessee, otherwise as income from other sources. The hire income from house property is generally taxed as income from house property. Normal deduction (except depreciation) are allowed while computing the taxable income.

Tax Planning in Hire-purchase The hire-purchase transaction can be used as a tax planning device in two ways:

First, the net income (finance income less interest on borrowings by the hire-vendor) can be inflated at the rear end of the transaction and thereby defer tax liability. This is permissible by distributing the finance charge/income over the period of hire/agreement as the interest on his borrowings which is a major item of expense is larger in the early years and declines as the hire installments are received whereas the finance income remains constant. The hirer can similarly postpone his tax liability by allocating finance charge on the basis of a actuarial/rate of return method which implies a higher deduction in the early years.

Secondly, another possible area of tax planning is to use hire-purchase as a bridge between the lessor and the lessee. In other words, instead of a direct lease an intermediate financier is introduced. Suppose, X wants to lease an asset to Z. Instead of going for a direct lease they adopt a different strategy, wherein Y steps in as a intermediary. Y takes the asset on hire-purchase from X and gives the same asset to Z on lease. There is no prohibition on such arrangement, unless the hire purchase agreement prohibits the sub-lease. Under this strategy Y gets the dual advantage of depreciation and finance charge against his income from lease rentals, thereby postponing his taxes. This strategy can be very useful in case Y is a high tax paying entity. Y in consideration for reduction in his tax liability will pass off some income to X in the form of high hire charges and to Z by way of low lease rentals. Even if the intermediary Y derives no financial gains, substantial tax savings can be reaped by distributing the income and tax benefits.

Sales-Tax Aspects

The salient features of sales tax pertaining to hire-purchase transactions after the Constitution (Forty-sixth Amendment) Act, 1982, are as detailed below:

Hire-purchase as Sale Hire-purchase, though not sale in the true sense, is **demand to be sale**. Such transactions are *per se* liable to sales tax. The sales tax is payable once the goods are delivered by the owner (hire-vendor) to the hirer (hire-purchaser) even if the transaction does not fructify into a sale. There is no provision for the refund of sales tax on the unpaid installment. In other words, full tax is payable irrespective of whether the owner gets the full price of the goods or not.

Delivery *vs* Transfer of Property: *Taxable Event* A hire-purchase deal is regarded as a sale immediately the goods are delivered and not on the transfer of the title to the goods. That is, the taxable event is the delivery of the goods and not transfer of the title to the goods. For the purpose of levying sales tax, a sale is deemed to take place only when the hirer exercises the option to purchase.

Taxable Quantum The quantum of sales tax is related to the sales price. It must be determined to be the consideration for the transfer of the goods when the delivery of the goods takes place. The consideration for the sale of the goods is the total amount which is agreed to be paid before the transfer of the goods takes place in a hire purchase contract. In other words, sales tax is

levied on the entire amount payable under the agreement by deeming it to be the sale price of the goods instead of reducing the amount by the hire charges assumed to be included and by depreciation in the value of the goods for the period when the goods were on hire.

States Entitled to Impose Tax When a hire-purchase transaction is entered in the state where the goods are lying, the concerned state is entitled to impose sales-tax. In case where the contract of hire-purchase is entered into one state and the goods are in another state, the entitlement to tax vests with the state in which the goods are delivered by the hire-vendor to the hirer even though the goods may be transported/transferred to a different states subsequently.

Sales tax on hire-purchase is not levied if the state in which goods are **delivered** has a single point levy system in respect of such goods and if the owner (finance company) had purchased the goods within the same state. Moreover, sales tax is not levied on hire purchase transactions structured by finance companies if they are not dealers in the type of goods given on hire.

The inter-state hire-purchase deals attract central sales tax (CST). But in actual practice, no hire-purchase transaction is likely to be subject to CST. Under the CST, the taxable event is not delivery but the transfer of goods. In inter-state hire-purchase deals, movement of goods would normally be occasioned at the time of delivery while the property in the goods is transferred when the option to buy is exercised. In other words, inter-state movement of goods is not occasioned when the property in goods is transferred and a hire-purchase deal is concluded. In fact, there is, strictly speaking, no inter-state hire-purchase deal.

Rate of Tax The rates of sales tax on hire-purchase deals vary from state to state. There is, as a matter of fact, no uniformity even regarding the goods to be taxed. If the rates undergo a change during the currency of a hire-purchase agreement, the rate in force on the date of delivery of the goods to the hirer is applicable.

Interest-tax

The hire-purchase finance companies, like other credit/finance companies, have to pay interest-tax under the Interest-Tax Act, 1974. According to this Act, interest tax is payable on the total amount of interest earned less bad debts in the previous year @ 2 per cent. The tax is treated as a tax-deductible expense for the purpose of computing the taxable income under the Income-tax Act.

ACCOUNTING AND REPORTING

Hire-purchase, as a form of financing, differs from lease financing in one basic respect: while in a hire-purchase transaction, the hirer has the option to purchase the asset at the end of the period on payment of the last installment of hire-charge, the lessee does not have the option to acquire the ownership of the leased asset. A hire-purchase transaction has, therefore, some typical features from the point of view of accounting and reporting. First, although the legal title over the equipment remains with the hire-vendor (finance company), all risks and rewards associated with it stand transferred to the hirer (purchaser) at the inception of the transaction. The accounting implication is that the asset should be recorded in the books of the hirer. The hire-vendor should record them **(a)** as

hire-asset stock-in trade or as receivables. Secondly, the hirer should be entitled to the depreciation claim. Finally, the hire charges, like the lease rental in a financial lease, have two components: **(i)** interest/finance charge, **(ii)** recovery of principal. But there is no accounting standard/ guidelines note for accounting treatment of hire-purchase in India. There is also no specific law/ regulation to govern hire-purchase contracts. The issues/aspects which have a bearing on the accounting and reporting of hire-purchase deals are the timings of the capitalisation of the asset **(inception *vs* conclusion of the deal)**, the price, the depreciation charge and the treatment of hire-charges. This Section highlights the prevalent accounting practices relating to hire-purchase transactions in the books of the hirer as well as the hire-vendor.

In the Books of the Hirer

The cash purchase price of the asset is capitalised and the capital content of the hire-purchase installment, that is, the cash purchase price less down payment, if any, is recorded as a liability. The depreciation is based on the cash purchase price of the asset in conformity with the policy regarding similar owned assets. The total charge for credit (unmatured finance charge at the inception of the hire-purchase transaction/deal) is allocated over the hire-period, using one of the several alternative methods, namely, effective rate of interest method, sum-of-the-years-digits method and straightline method. The mechanisms of accounting and reporting is shown in Illustration 3.1.

Illustration 3.1

Under a hire-purchase deal structured by the Hypothetical Finance Ltd (HFL) for the Hypothetical Industries Ltd (HIL), the HFL has offered to finance the purchase of an equipment costing ₹150 lakh. The (flat) rate of interest would be 13 per cent. The amount would have to be repaid in 48 equated monthly installments in advance. The HIL is required to make a cash down payment of 25 per cent. It uses WDV method of depreciation @ 30 per cent on similar assets.

From the foregoing information, you are required to show: **(A)** the allocation of total charge for credit (finance charge), on the basis of **(1)** effective rate of interest (ERI)/annual percentage rate (APR) method, **(ii)** sum-of-year's-digits (SOYD) method and **(iii)** straight line method (SLM) of depreciation; **(B)** how the deal will be recorded in the financial statements (profit and loss account and balance sheet) of the hirer (HIL) in the first two years. You can make, if necessary, your assumptions.

Solution

(A) (i) Allocation of Total Charge for Credit: ERI/APR Method *(₹ lakh)*

Year	*Outstanding amount at the beginning*	*Interest content*	*Capital content/ recovery*	*Annual installment (3.5625 × 12)*
1	112.50	23.54	19.21	42.75
2	93.29	18.52	24.22	42.75
3	69.06	12.20	30.55	42.75
4	38.52	4.22	38.53	42.75

Working Notes

1. Computation of ERI/APR:
   Total charge for credit = ₹112.50 [₹150 lakh – down payment (₹37.50 lakh)] × 0.13 × 4 = ₹58.50 lakh
   Monthly installment = (₹112.50 lakh + ₹58.50 lakh) ¸ 48 = ₹3.5625 lakh
   Annual installment = ₹3.5625 lakh × 12 = ₹42.75 lakh
   The ERI per annum, I, is given by equation:

$$3.5625 \times 12 \times \frac{1}{d^{(12)}} \text{PVIFA}_{12}\ (I,4) = ₹112.50 \text{ lakh}$$

   or $3.5625 \times 12 \times \frac{1}{d^{(12)}} \times \text{PVIFA}\ (1,4) = ₹112.50$ lakh

   or $\frac{I}{d^{(12)}} \times \text{PVIFA}\ (1,4) = 2.632$

   By trial and error and interpolation, I = 26.1 per cent

2. Annual installment equivalent to the value of the 12-monthly installment = where I = 0.261 = 3.5625 × 12 × 1.1363 = ₹48.58 lakh

3. Annual installment and interest netted for interest rebate = ₹[48.58 – (3.5625 × 12) lakh = ₹5.82 lakh

4. Assumption: Salvage value after 4 years, nil.

(A) (ii) Allocation of Total Charge for Credit: SOYD Method (₹ lakh)

Year	*Annual installment (3.5625 × 12)*	*Finance charge*	*Capital recovery*
1	42.75	25.42	17.33
2	42.75	18.21	24.55
3	42.75	11.04	31.71
4	42.75	3.83	38.92

Working Notes

Finance charge (₹ lakh)

Year $1 = \frac{48+47+\ldots+37}{48+47+\ldots+1} \times ₹58.50 \text{ lakh} = ₹25.42 \text{ lakh}$

$2 = \frac{36+35+\ldots+25}{48+47+\ldots+1} \times ₹58.50 \text{ lakh} = ₹18.21 \text{ lakh}$

$3 = \frac{24+23+\ldots+13}{48+47+\ldots+1} \times ₹58.50 \text{ lakh} = ₹11.04 \text{ lakh}$

$4 = \frac{12+11+\ldots+1}{48+47+\ldots+1} \times ₹58.50 \text{ lakh} = ₹3.83 \text{ lakh}$

(A) (iii) Equated Annual Finance Charge: SLM

₹58.50 lakh ÷ 4 = ₹14.62 lakh

(B) Financial Statements

Income Statement *(₹ lakh)*

Expenses	*Year 1*	*Year 2*
Depreciation (150 × 0.30)	45.00	—
(105 × 0.30)	—	31.50
Finance charge	23.54	18.52

Balance Sheet *(₹ lakh)*

Liabilities	*Amount*		*Assets*	*Amount*	
	Year 1	*Year 2*		*Year 1*	*Year 2*
Secured loans:			Fixed assets:		
Hire-purchase outstanding (due after one year)	69.06	38.51	Equipment on hire purchase:	150.00	150.00
			Gross Block	45.00	76.50
Current liabilities:			*Less:* Accumulated depreciation		
Hire-purchase outstanding (due within one year)	24.22	30.50	Net block	105.00	73.50

In the Books of Hire-Vendor (Finance Company)

At the inception of the transactions, the finance company should record the hire-purchase installments receivables as a current asset (i.e. stock on hire) and the (unearned) finance income component of these installments as a current liability under the head Unmatched Finance Charges. At the end of each accounting period, an appropriate part of the unmatured finance income should be recognised as current income for the period. It would be allocated over the relevant accounting periods on the basis of any of the following methods, namely, **(i)** ERI, **(ii)** SOYD and **(iii)** SLM. At the end of each accounting period, the hire-purchase price less the installments received should be shown as a receivable/stock on hire and the finance income component of these installments should be shown as a current liability/unmatched finance charge. The direct costs associated with structuring the transaction/deal should be either expensed immediately or allocated against the finance income over the hire period. The accounting treatment in the books of the finance company is shown in Illustration 3.2.

Illustration 3.2

For the Hypothetical Finance Ltd (HFL) in **Illustration 3.1**, assume that the initial cost of structuring the deal is ₹1.2 lakh. Using the effective rate of interest method for allocating finance income, show how the transaction will appear in the books of the HFL. You can make other assumptions, if necessary.

Solution

Allocation of Unearned Finance Income (ERI: 26.1%) *(₹ lakh)*

Year	*Outstanding amount at the beginning*	*Installment*	*Interest component*	*Capital recovery*
1	112.50	42.75	23.54	19.21
2	93.29	42.75	18.52	24.22
3	69.06	42.75	12.22	30.55
4	38.52	42.75	4.22	38.53

Record in Financial Statements:

Income Statement *(₹ lakh)*

Expenses	*Amount*		*Income*	*Amount*	
	Year 1	*Year 2*		*Year 1*	*Year 2*
Direct costs	1.2	—	Hire finance income	23.54	18.52

Balance Sheet *(₹ lakh)*

Liabilities	*Amount*		*Assets*	*Amount*	
	Year 1	*Year 2*		*Year 1*	*Year 2*
Current liabilities:			Current assets:		
Finance income/charge (unmatured/unearned)	34.95	16.42	Stock on hire (agreement value less amount/installment received)	128.24	85.49

FINANCIAL EVALUATION

The framework of financial evaluation of a hire-purchase deal *vis-a-vis* a finance lease discussed in this Section covers both the hirer's as well the finance company's viewpoint.

From the Point of View of the Hirer (Hire-purchaser)

The tax treatment given to hire-purchase is exactly the opposite of that given to lease financing. It may be recalled that in lease financing, the lessor is entitled to claim depreciation and other deductions associated with the ownership of the equipment including interest on the amount borrowed to purchase the asset, while the lessee enjoys full deduction of lease rentals. In sharp contrast, in a hire-purchase deal, the hirer is entitled to claim depreciation and the deduction for the finance charge (interest) component of the hire installment. Thus, hire-purchase and lease financing represent alternatives modes of acquisition of assets. The evaluation of hire-purchase transaction from the hirers' angle, therefore, has to be done in relation to leasing alternative.

Decision-criterion The decision-criterion from the point of view of a hirer is the cost of hire-purchase *vis-a-vis* the cost of leasing. If the cost of hire-purchase is less than the cost of leasing, the hirer (purchaser) should prefer the hire-purchase alternative and *vice versa*.

Cost of Hire-purchase The cost of hire-purchase to the hirer (CHP) consists of the following:

1. Down payment
2. *Plus* Service charges
3. *Plus* Present value of hire purchase payments discounted by cost of debt (K_d)
4. *Minus* Present value of depreciation tax shield discounted by cost of capital (K_c)
5. *Minus* Present value of net salvage value discounted by cost of capital (K_c)

Cost of Leasing The cost of leasing (COL) consists of the following elements:

1. Lease management fee
2. *Plus* Present value of lease payments discounted by K_d
3. *Less* Present value of tax shield on lease payments and lease management fee discounted by K_c
4. *Plus* Present value of interest tax shield on hire purchase discounted by K_c

The computation of the CHP and CL is illustrated in illustration 3.3

Illustration 3.3

The Hypothetical Industries Ltd (HIL) has an investment plan amounting to ₹108 lakh. The tax relevant rate of depreciation of the HIL is 25 per cent, its marginal cost of capital and marginal cost of debt are 16 per cent and 20 per cent respectively and it is in 35 per cent tax bracket.

It is examining financing alternative for its capital expenditure. A proposal from the Hypothetical Finance Ltd (HFL), with the following salient features, is under its active consideration:

Hire Purchase Plan: The (flat) rate of interest charged by the HFL is 16 per cent. The repayment of the amount is to be made in 36 equated monthly installments in advance. The hirer/hire-purchaser is required to make a down payment of 20 per cent.

Leasing Alternative: The lease rentals are payable @ ₹28 ptpm in advance. The primary lease period can be assumed to be 5 years.

Assume that the SOYD method is used to allocate the total charge for credit under the hire-purchase plan. The net salvage value of the equipment after 3 years can be assumed to be ₹33 lakh.

Which alternative–leasing or hire-purchase–should the HIL use? Why?

Solution

The choice will depend on the relative cost of hire-purchase and leasing

Cost of Hire-Purchase (CHP)	*(₹ lakh)*
1. Down payment (working note 1)	₹21.6
2. Present value of monthly hire-purchase installment (working note 2)	99.19
3. Minus: Present value of depreciation tax shield (working note 3)	20.44
4. Minus: Present value of net salvage value	15.70
Total cost of hire-purchase	84.65

Working Notes

1. Down payment = ₹108 lakh × 0.20 = ₹21.6 lakh

2. Monthly hire-purchase installment = [₹86.4 lakh (₹108 lakh less 20 per cent down payment) + (₹86.4 lakh × 0.16 × 3 years)] × 36 = ₹3.552 lakh

Present value of monthly hire-purchase installment

$$= ₹3.552 \text{ lakh} \times 12 \frac{1}{d^{(12)}} \times \text{PVIFA } (20,3) \text{ where I} = 0.20$$

= (₹3.553 lakh × 12) × 2.106 × 1.105 = ₹99.19 lakh

3. Present value of depreciation tax shield:

= [₹27 lakh × PVIF (16,1) + ₹20.25 lakh × PVIF × (16,2) + ₹15.19 lakh × PVIF (16,3) + ₹11.39 lakh × PVIF (16,4) + ₹8.54 lakh × PVIF (16,5)] × 0.35

= [(27 × 0.862) + (20.25 × 0.743) + (15.19 × 0.641) + (11.39 × 0.552) + (8.54 × 0.476)] × 0.35

= ₹20.44 lakh

Cost of Leasing (COL) *(₹ lakh)*

1. Present value of lease payments (working note 1)	₹119.93
2. *Minus:* Present value of tax shield on lease payment (2)	41.58
3. *Plus:* Present value of tax shield on charge for credit (3)	11.56
Total cost of leasing	89.91

Working Notes

1. Present value of lease payments:

$$= \left[(₹108 \text{ lakh} \times 0.028 \times 12) \times \frac{1}{d^{(12)}} \times \text{PVIFA } (20,5) \right], \text{ where I} = 0.20$$

= ₹108 lakh × 0.028 × 12 × 1.105 × 2.991 = ₹119.93 lakh

2. Present value of tax shield on lease payment = [₹108 lakh × 0.028 × 12 × PVIFA (16,5)] × 35 = (₹36.29 lakh × 3.274) × 0.35 = ₹41.58 lakh

3. Present value of tax shield on charge for credit: Total charge for credit = ₹108 lakh × 0.80 × 0.16 × 3 = ₹41.47 lakh

Allocation of total charge for credit: SOYD method

Year	*SOYD Factor*	*Annual charge (₹ lakh)*
1	$\frac{36+35+\ldots+25}{36+35+\ldots+1} = \frac{366}{666}$	22.79
2	$\frac{24+23+\ldots+1}{36+35+\ldots+1} = \frac{222}{666}$	12.82
3	$\frac{12+11+\ldots+1}{36+35+\ldots+1} = \frac{78}{666}$	4.86

Present value of tax shield = [(₹22.79 × 0.862) + (₹13.82 × 0.743) + (₹4.86 × 0.641)] × 0.35 = ₹11.56 lakh.

Decision: Since the cost of leasing exceeds the cost of hire-purchase, the HIL should acquire the equipment from the HFL under the hire-purchase plan.

From the Viewpoint of Finance Company (Hire-Vendor)

Hire-purchase and leasing represent two alternative investment decisions of a finance company/financial intermediary/hire-vendor. The decision-criterion, therefore, is based on a comparison of the net present values of the two alternatives, namely, hire-purchase and lease financing. The alternative with a higher net present value would be selected and the alternative having a lower net present value would be rejected.

Net Present Value of Hire-purchase Plan [NPV (HPP)] The NPV (HPP) consist of:

1. Present value of hire-purchase installments
2. *Plus:* Documentation and service fee
3. *Plus:* Present value of tax shield on initial direct cost
4. *Minus:* Loan amount
5. *Minus:* Initial cost
6. *Minus:* Present value of interest tax on finance income (interest)
7. *Minus:* Present value of income tax on finance income (interest) meted for interest tax
8. *Minus:* Present value of income tax on documentation and service fee

Net Present Value of Lease Plan [NPV (LP)] The NPV (LP) consists of the following elements:

1. Present value of lease rentals
2. *Add:* Lease management fee
3. *Add:* Present value of tax shield on initial direct costs and depreciation
4. *Add:* Present value of net salvage value
5. *Less:* Initial investment
6. *Less:* Initial direct costs
7. *Less:* Present value of tax liability on lease rentals and lease management fee

The decision-analysis is shown in illustration 3.4.

Illustration 3.4

For the HFL in **illustration 3.3**, assume the following:

- Front-end (advance) cost of structuring the deal, 0.5 (half) per cent of the amount financed
- Marginal cost of debt, 20 per cent
- Marginal cost of equity, 25 per cent
- Target long-term debt-equity ratio, 4:1
- Marginal tax rate, 35 per cent
- Residual value under lease plan, 10 per cent of the investment cost

Required: Which plan — hire-purchase or lease — is financially more attractive to the HFL? Why?

Solution

(A) (i) Net Present Value of Hire-Purchase Plan

(₹ lakh)

1. Present value of monthly hire-purchase instalment (working note 1)	104.46
2. *Plus:* present value of tax shield on initial direct costs (working note 2)	0.13
3. *Less:* amount financed (₹108 lakh – 21.60 lakh, down payment)	86.40
4. *Less:* initial direct cost (0.5 per cent of 86.4 lakh)	0.43
5. *Less:* present value of interest tax on hire purchase-related income (working note 3)	0.67
6. *Less:* present value of income tax on net finance income (working note 4)	11.41
Total	5.68

Working Notes

Marginal cost of capital [0.80 × 0.20 × 0.65] + [0.20 × 0.25] = (0.104 + 0.05) = 15.4 per cent

1. Monthly hire-purchase installment = [(₹86.4 lakh + (₹86.4 lakh × 0.16 × 3)] × 36 = ₹3.552 lakh

Present value of monthly hire-purchase instalments: = ₹3.552 lakh × $PVIFA_m$ (15.4, 3)

= ₹3.552 lakh × 12 × 2.265 × 1.082 = ₹104.46 lakh

2. Present value of tax shield on initial direct costs: Initial direct costs (0.5 per cent of ₹86.4 lakh) = 0.432 lakh

Present value = ₹0.432 lakh × 0.866 × 0.35 = ₹0.13 lakh

3. Present value of interest tax on hire-purchase-related income:

Unexpired finance income (total charge for credit) at inception = ₹86.4 lakh × 0.16 × 3 = ₹41.47 lakh

Allocation of unexpired finance income based on SOYD method

Year	*SOYD Factor*	*Annual charge (₹ lakh)*
1	$\frac{36+35+\ldots+25}{36+35+\ldots+1}=\frac{366}{666}$	22.79
2	$\frac{24+23+\ldots+1}{36+35+\ldots+1}=\frac{222}{666}$	12.82
3	$\frac{12+11+\ldots+1}{36+35+\ldots+1}=\frac{78}{666}$	4.86

Interest tax and income-tax on annual finance income *(₹ lakh)*

Year	*Gross finance income*	*Interest tax (2%)*	*Net finance income*	*Income tax (0.35)*
1	22.79	0.46	22.33	7.82
2	13.82	0.28	13.54	4.74
3	4.86	0.10	4.76	1.67

Present value = (₹0.46 lakh × 0.866) + (₹0.28 lakh × 0.751) + (₹0.10 lakh × 0.648) = ₹0.67 lakh

4. Present value of income tax on net finance income: = (₹7.82 lakh × 0.866) + (₹7.74 lakh × 0.751) + (₹1.67 lakh × 0.648) = ₹11.41 lakh

(A) (ii) Net Present Value of Leasing *(₹ lakh)*

1. Present value of lease rentals/receipts (working note 1)	130.08
2. *Plus:* Present value of depreciation tax shield (note 2)	20.62
3. *Plus:* Present value of tax shield on initial direct cost (note 3)	0.16
4. *Plus:* Present value of residual value (note 4)	5.21
5. *Less:* Initial investment	108.00
6. *Less:* Initial direct cost	0.54
7. *Less:* Present value of income tax on lease rentals (note 5)	42.09
Total	5.44

Working Notes

1. Present value of lease rentals = ₹108 lakh × 0.028 × 12 × PVIFA (15.4, 5) = ₹108 lakh × 0.028 × 12 × 1.082 × 3.313 = ₹130.08 lakh
2. Present value of depreciation tax shield = [₹27 lakh × PVIF (15.4,1) + ₹20.25 lakh × PVIF (15.4,2) + ₹15.19 lakh × PVIF (15.4,3) + ₹11.34 lakh × PVIF (15.4,4) + ₹8.55 lakh × PVIF (15.4,5)] × 0.35 = [₹27 lakh × 0.866) + (₹20.25 lakh × 0.751) + (₹156.19 lakh × 0.648) + (₹11.34 lakh × 0.562) + (₹8.55 lakh × 0.482)] × 0.35 = ₹20.62 lakh
3. Present value of tax shield on initial direct cost:
   = 0.54 lakh (0.5 per cent of ₹108 lakh) × PVIF (15.4,1) × 0.35 = ₹0.16 lakh
4. Present value of residual value = ₹10.80 lakh (0.10 × ₹108 lakh) × PVIF (15.4,5) = ₹5.21 lakh
5. Present value of income tax on lease rentals = ₹108 lakh × 0.028 × 12 × PVIFA (15.4,5) × 0.35 = (₹36.29 lakh × 3.314) × 0.35 = ₹42.09 lakh

Decision: As the net present value of hire-purchase (₹5.68 lakh) exceeds the net present value of leasing (₹5.44 lakh), the hire-purchase plan is financially more attractive to the HFL.

CONSUMER CREDIT

Consumer credit includes all asset-based financing plans offered to primarily individuals to acquire durable consumer goods. Typically, in a consumer credit transaction the individual-consumer-buyer pays a fraction of the cash purchase price at the time of the delivery of the asset and pays the balance with interest over a specified period of time. From a modest beginning in the early eighties, the consumer credit has emerged as an important asset-based financial service in India. The main suppliers of consumer credit are foreign/multi-national banks, commercial banks, and finance companies and cover items such as cars, scooters, VCRs, VCPs, TVs, refrigerators, washing machines, home appliances, personal computers, cooking ranges, food processors, and so on. There is, however, no specific legislation to regulate consumer credit in India. This Section briefly discusses the salient aspects of consumer credit as a financial service.

Consumer credit includes all asset-based financing plans offered to primarily individuals to quire durable consumer goods.

Salient Features

The salient features of consumer credit are: **(1)** parties to the transaction, **(2)** structure of the transaction, **(3)** mode of payment, **(4)** repayment period and rate of interest, and **(5)** security.

Parties to the Transaction The parties to a consumer credit transaction depend upon the nature of the transaction: In **(i)** A bipartite arrangement, there are two parties, namely, borrower-consumer-customer and dealer-cum-financier; **(ii)** A tripartite arrangement where the parties are dealer, financier and the customer. The dealer in this type of arrangement arranges the credit from the financier.

Structure of the Transaction A consumer credit arrangement can be structured in three ways:

Hire-Purchase The customer has the option to purchase the assets. But he may not exercise the option and return the goods according to the terms of the agreement. Most of the tripartite consumer credit transaction are of this type.

Conditional Sale The ownership is not transferred to the customer until the total purchase price including the credit charge is paid. The customer cannot terminate the agreement before the payment of the full price.

Credit Sale The ownership is transferred to the customer on payment of the first installment. He cannot cancel the agreement.

Mode of Payment From the point of view of payment, the consumer credit arrangements fall into two groups: **(i) down payment schemes** and **(ii) deposit-linked schemes**. The down payment may range between 20-25 per cent of the cost while the deposit may vary between 15-25 per cent of the amount financed at compound rate of interest. Some arrangements also provide zero deposit scheme with higher equated monthly installment (EMI).

Payment Period and Rate of Interest A wide range of options are available. Typically, the repayment period ranges between 12-60 monthly installments. The rate of interest is normally expressed at a flat rate; the effective rate of interest is generally not disclosed. In some schemes, the rate of interest is not disclosed, instead the EMI associated with the different repayment periods is mentioned. Most of the schemes provide for easy repayment. They also provide for either a rebate for prompt payment and charge for delayed payment.

Security is generally in the form of a first charge on the asset. The consumer cannot sell/pledge/hypothecate the asset.

Evaluation

The evaluation of consumer credit can be made with reference to effective rate of interest, rebate for early repayment and effective rate of interest on completed transaction. The mechanism is shown in **illustrations 3.5 to 3.6.**

Illustration 3.5 *(Flat and Effective Rates of Interest)*
The Hypothetical Consumer Finance Ltd (HCFL) has structured a consumer credit deal for ₹4,00,000 on the following basis:

Monthly repayment period	*Equated monthly instalment*
12	₹38,000
24	₹21,400

Required: Compute the flat and effective rates of interest for each alternative/option.

Solution

Flat and Effective Rates of Interest

	Repayment period (months)	
	12	*24*
Total charge for credit	₹56,000	₹56,800
Flat rate of interest (%)	0.14	0.142
Effective rate of interest (%)	0.2585	0.2726

Working Notes

1. Total annual charge for credit = (₹38,000 × 12) – ₹4,00,000 = ₹56,000

= [(₹21,400 × 24) – (₹4,00,000)] × 2 = ₹56,800

2. Flat rate of interest $= \frac{₹56,000}{₹4,00,000} \times 100 = 0.14$ $= \frac{₹56,800}{₹4,00,000} \times 100 = 0.142$

3. Effective rate of interest $= \frac{n}{n+1} \times 2F$ $= \frac{n}{n+1} \times 2\tilde{F}$

$= \frac{12}{13} \times 28$ = 25.85 per cent $= \frac{24}{25} \times 28.4$ = 27.26 per cent

Illustration 3.6

The Hypothetical Consumer Finance Ltd (HCFL) has structured the following types of consumer credit schemes to finance some specified assets for ₹30,000:

(A) Zero Deposit Scheme: **(1)** Repayment period, 36 months, **(2)** Equated monthly installment, ₹1,110, **(3)** Bullet installment at the end, ₹2,700.

(B) 25% Deposit Scheme: **(1)** Repayment period, 36 months, **(2)** Equated monthly installment, ₹1,068, **(3)** Accumulated interest on deposit after 36 months, ₹3,833.

(C) Prompt Payment Bonus Scheme: Bonus of ₹10 per ₹1,000 per month on the expiry of the repayment period in respect of both the above schemes — A and B.

The HCFL levies a front-ended (advance) documentation and service fee of ₹600 in both the schemes. The EMI is payable at the end of every month.

Required:

(a) Calculate the effective rate of interest for all the schemes.

(b) Assume an early settlement after 24 months under the second scheme, that is, the 25 per cent deposit scheme. The HCFL would levy a 2 per cent service charge on the principal amount outstanding on the date of settlement. It also gives a prompt payment bonus in respects of installments paid. Further, interest rebate would also be due according to Rule of 78 method. What would be the effective rate of interest on the completed transaction?

Solution

(a) (i) Effective rate of interest implicit in the 25 per cent deposit scheme:
The effective rate of interest, i, is given by the equation:
Loan amount – Present value of installment paid – Service fee + Present value of accumulated value of deposit + Present value of prompt payment bonus = 0
Accumulated value of deposit after 36 months = ₹7,500 (deposit) + ₹3,833 (accumulated interest) = ₹11,333
Or ₹7,500 × PVIF (i_3) = ₹11,333
Simplifying the equation, i_1 = 14.75 per cent per annum or 14 per cent per annum compounded quarterly.

(ii) Effective rate of interest on zero deposit scheme with prompt bonus:

$$\text{Prompt payment bonus} = \frac{₹1,100}{₹3,000} \times 0.10 \times 36 = ₹39.36$$

Effective rate of interest (i_1) is given by the equation:
₹30,000 – ₹600 – (₹1,110 × 12 × PVIFA$_m$ (i_1,3) – ₹2,700 × PVIF (i_1,3) + ₹39.96 × PVIF (i_1,3) = 0
By trial and error and interpolation, i_1 = 27.41 per cent

(iii) Effective rate of interest, i_2, on 25 per cent deposit scheme with prompt payment bonus:

$$\text{Prompt payment bonus} = \frac{₹1,0368}{₹3,000} \times 0.10 \times 36 = ₹38.45$$

Effective rate of interest (I_2) can be obtained from the equation:
₹22,500 – ₹600 – {₹1,068 × 12 × PVIFA$_m$ (i_2,3) + ₹11,333 × PVIF (i_2,3) + [₹38.45 × PVIF (i_2,3) = 0
By trial and error and interpolation, i_2 = 25.3 per cent

(b) Effective rate of interest (i_3) on the completed transaction:
The i_3 is given by the equation:
₹22,500 – ₹600 – [₹1,068 × 12, PVIFA$_m$ (i_3, 2)] – [₹12,037 × PVIF (i_3,2) + [₹9,876 × PVIF (i_3, 2) = 0
By trial and error and interpolation, i_3 = 24.85 per cent
Thus, the effective rate of interest on the completed transaction is higher than the effective rate of interest implicit in the original transaction.

Working Notes

1. Total charge for credit = (₹1,068 × 12 × 3) – ₹30,000 = ₹8,448.

2. Interest rebate according to rule of 78 method = $\frac{12 \times 13}{36 \times 37} \times ₹8,448 = ₹989.4$

3. Capital content of the installment outstanding on payment of the 24th installment: (₹12,816** – ₹989.4) = ₹11,827

**Total payment liability (₹30,000 + 8,448 = ₹38,498) – Payment made upto 24 months (EMI × 24 = ₹25,632) = ₹12,816

4. Service charge on the amount of principal outstanding = (₹11,827 × 0.02) = ₹236.54

5. Rebate for prompt payment = $\frac{₹1,068}{₹3,000} \times 0.10 \times 24 = ₹25.5$

6. Amount payable on early settlement = (₹12,816 + ₹236.4 – ₹989.4 – ₹25.5) = ₹12,037.5

7. Accumulated value of deposits after 2 years $= ₹7,500 \times \left[1 + \frac{0.14}{4}\right]^8 = ₹7,500 \times (1.035)^8$ = ₹9,876

RECAPITULATION

- Hire-purchase is a mode of financing the price of goods to be sold on a future date. It is an agreement relating to a transaction in which goods are let on hire, the purchase price is to be paid in installments and the hirer is allowed the option to purchase the goods paying all the installments. Though the option to purchase the goods/assets is allowed in the very beginning, it can be exercised only at the end of the agreement.
- The essence of the agreement is that the property in the goods does not pass at the time of the agreement but remains in the intending seller (hire-vendor) and only passes when the option is exercised by the hirer (intending hire-purchaser). In contrast, in installment sale the ownership in the goods passes on to the purchaser simultaneously with the payment of the initial/first installment. The hire-purchase also differs from the installment sale in terms of the call option and right of termination in the former but not in the latter. Similarly, hire-purchase and leasing as modes of financing are also differentiated in several respects such as ownership of the asset/equipment, its capitalisation, depreciation charge, extent of financing and accounting and reporting.
- Under the down payment plan of hire-purchase, the hirer has to make a down payment of 20-25 per cent of the cost and pay the balance in equated monthly installments (EMIs). As an alternative, under a deposit-linked plan the hirer has to invest a specified amount in the fixed deposit of the finance company which is returned together with interest after the payment of the last EMI by the hirer. The hire-purchase installment has two components: **(i)** interest/finance charge and **(ii)** recovery of principal. The interest component is based on a flat rate of interest while effective rate is applied to the declining balance of the original amount to determine the interest component of each installment. During the hire-period, the hirer can opt for early repayment/purchase of the equipment/asset by paying the remaining installments minus an interest rebate. The hirer has the right to terminate the contract after giving due notice.
- There is no exclusive legislation dealing with hire purchase transactions in India. The *Hire-Purchase Act* was passed in 1972. A bill was introduced in 1989 to amend some of the provisions of the Act. However, the Act has not been enforced so far. In the absence of any specific law, the hire-purchase transactions are governed by the general laws. The hire-purchase transaction has to aspects: **(i)** an aspect of bailment of goods which is covered by the *Indian Contract Act*, **(ii)** an element of sale when the option to purchase is exercised by the hirer which is covered by the *Indian Sales of Goods Act*. The hire-purchase agreements also contain provisions for the regulation of hire-purchase deals.
- There are three aspects of taxation of hire-purchase deals: **(i)** income-tax, **(ii)** sales tax and, **(iii)** interest tax. Though the hirer is not the owner of the asset, he is entitled to claim depreciation as a deduction on the entire purchase price. He can also claim deduction on account of consideration for hire, that is, finance charge. The amount of finance charge to be deducted each year is to be spread evenly over the term of the agreement on the basis of a method

chosen from amongst the alternatives: SOYD, ERI, SLM. The consideration is viewed as a rental charge rather than interest and no deduction of tax at source is made. The hire-purchase transaction can be used as a tax planning device in two ways: **(i)** by inflating the net income (finance income – interest on borrowings by the finance company) at the rear-end of the deal and **(ii)** by using hire-purchase as a bridge between the lessor and the lessee, that is, introduction of an intermediate financier instead of a direct lease. Hire-purchase transaction, as deemed sales, are liable to sales tax. However, hire-purchase transaction structured by finance companies (which are not hire-vendors), being essentially a financing arrangement, do not attract sales tax. An interest tax has to be paid on the interest earned less bad debts. The tax is treated as a tax-deductible expense for the purpose of computing the taxable income under the *Income-Tax Act*.

- There was no accounting standard/guidance note for accounting treatment of hire-purchase in India. According to the current reporting practices, in the books of the hirer, the cash purchase price of the equipment is capitalised and an equal amount less down payment, if any, is recorded as a liability. The depreciation is charged on the cash purchase price in conformity with the general depreciation policy for similar assets. The total charge for credit is spread over hire-term according to one of the alternative methods: ERI, SOYD, SLM. As far as the finance company is concerned, the hire installment receivable is shown as a current asset under the head stock on hire and the finance income element of the installment is recorded as a current liability under the head unmatured/unearned finance charge and is spread over the accounting period (hire-term). The direct costs are expensed immediately/amortised over the accounting period. The ICAI has recently issued AS-19: Leasing, 2001. It defines leasing to include hire-purchase for accounting and reporting purposes. These are discussed in an earlier chapter.
- The decision-criterion for evaluation of a hire- purchase deal from the point of view of a hirer is the cost of hire-purchase *vis-a-vis* the cost of leasing. If the discounted cost of hire-purchase is less than the discounted cost of leasing, the hire-purchase alternative should be preferred and *vice versa*. The preference for the alternative implies that the equipment should be acquired under that alternative. The decision-criteria from the viewpoint of the financial intermediary is based on a comparison of the NPVs of the hire-purchase and the leasing alternatives. The finance company would choose the financing plan with higher NPV.
- Consumer credit includes all asset-based financing plans offered to primarily individuals to acquire durable consumer goods. In a typical consumer credit deal, the customer pays a fraction of the cash purchase price on delivery of the goods and the balance is paid together with interest over a specified period of time. The consumer credit plans/schemes can be down payment type or deposit-linked type. Such credit usually carries a flat rate of interest. The loan is secured by a first charge on the concerned equipment.

REVIEW QUESTIONS

3.1 Discuss the main characteristics of hire-purchase. How does it differ from **(a)** installment payment, and **(b)** finance lease.

3.2 Write notes on

- Tax benefits of hire-purchase to the hire-purchase and the hire-vendor.
- Tax planning in hire-purchase

3.3 What are the accounting practices relating to hire-purchaser transactions in the books of the hirer as well as the hire-vendor?

3.4 Briefly explain the evaluation framework of hire-purchase transaction *vis-à-vis* leasing.

3.5 Discuss the main features of consumer credit.

3.6 The Hypothetical Manufacturer Ltd (HML) has under consideration an investment in equipment amounting to ₹144 lakh. It is expected to generate a stream of operating profit (profit before depreciation, lease rental, interest and taxes) detailed below:

Years	1 – 3,	₹33 lakh
	4 – 6,	₹27 lakh
	7 – 8,	₹18 lakh

The experience has been that cost of similar capital equipments escalate annually by 12 per cent and the salvage value after five years is 10 per cent of the original cost. Further, the disposal of used equipments in the secondary markets entails a transaction cost of 15 per cent of the estimated residual value. The following assumptions can be made: **(i)** tax relevant rate of depreciation, 25 per cent, **(ii)** marginal tax rate, 35 per cent, **(iii)** marginal cost of capital and debt 15 per cent and 18 per cent respectively.

The finance manager of the HML is evaluating, *inter alia*, the following two financing alternatives structured by the Hypothetical Finance Ltd (HFL):

Hire-Purchase Plan: Flat rate of interest, 15 per cent; Repayment in 48 EMI in advance; Amount of financing 100 per cent with an initial 4-year deposit equal to 20 per cent of the investment cost, on which quarterly compounded rate of interest, 16 per cent; Rebate for prompt payment, 2 per cent of the loan.

Lease Plan: Period, 8 years, lease rate, ₹28 ptpm during the primary period of 5 years and ₹2 ptpm during the secondary period of 3 years; Payment monthly in advance.

Which plan should be used by the HML? Why? You can make your own assumptions, if necessary.

3.7 For the facts in review question **3.1**, assume the HML opts for the hire-purchase plan. How will the deal be recorded in the books over the hire-period, according to SOYD method of allocating the total charge for credit?

3.8 For the facts a review question **3.1**, if the hire-purchase deal is accepted, show how the transaction will be recorded in the financial statements of the HFL according to SLM for allocating the unearned finance income over the hire period.

3.9 The undermentioned facts relate to a hire-purchase deal structured by the Hypothetical Finance Ltd:

- Hire-term, 3 years.
- Deposit required, 20 per cent of the amount financed. Interest on the security deposit @ 15 per cent compounded quarterly.
- Flat rate of interest, 14 per cent.
- Repayment in equated monthly installment in advance.
- Front-ended documentation fee, 1 per cent of the loan.
- Rebate for prompt payment, 2 per cent of the amount.

If the rebate for prompt payment is availed of by the hirer, what would be the effective rate of interest?

3.10 The Hypothetical Finance Ltd has structured a hire-purchase deal. The hirer is required to make a down payment of 20 per cent of the investment cost. The hire-term is four years

with quarterly payment in advance. The flat rate of interest is 13 per cent. The finance company would charge a front-ended documentation and service fee and allow rebate for prompt payment @ 0.5 per cent and 1 per cent of investment outlay respectively.

Assuming after paying 24th installment, a hirer wishes to exercise the purchase option, what is the interest rebate according to **(i)** actuarial method, **(ii)** rule of 78 method and, **(iii)** SLM?

3.11 From the facts in review question **3.7**, assume a rebate of 1 per cent of the aggregate installment paid till date as rebate for prompt repayment and modified rule of 78 with 3 months time-lag for calculating interest rebate, what is the effective rate of interest per annum implicit in the completed transaction?

APPENDIX 3-A
Flat Rate vs Effective Rate of Interest/Annual Percentage Rate

The interest component of each hire-purchase installment is calculated on the basis of a flat rate of interest. But the original amount of the loan is repaid over the term of the loan in equated installments. To determine the interest component of each installment of the declining balance of the principal amount over a period of time, the equivalent effective rate of interest (invariably higher than the flat rate) is to be used. Thus, the effective rate of interest (ERI) is an important element of accounting and reporting of a hire-purchase transaction. It is also known as annual percentage rate (APR). The computation of APR depends on whether the hirer has to (a) make a down payment, or (b) invest in fixed deposit of the finance company. The APR also depends on the fact that the equated installments are paid in arrears or advance. The computation of APR/ERI is shown in **illustrations 3.A.1–3.A.2.**

Illustration 3-A.1 *(Cash Down Payment)*

Under a hire-purchase deal structured by the Hypothetical Finance Ltd (HFL) for the Hypothetical Industries Ltd (HIL), the (flat) rate of interest is 15 per cent. The HIL is required to make a cash down payment of 25 per cent and the repayment of the loan is to be made in 36 equated monthly installments. On the assumption of payment of installment in (a) advance (b) arrear, compute the ERI/APR for the plan.

Solution

The ERI/APR can be computed (i) by applying the trial and error approach or (ii) by using the approximation formula.

(A) Approximation Approach/Formula

(a) Computation of APR/ERI (Payment in Arrear)

$$I = \frac{N}{N+1} \times 2F$$

I = APR/ERIs

N = Number of repayments

F = Flat rate of interest per unit time

$$= \frac{36}{37} \times 2 \times 0.15 = 0.292 = 29.2 \text{ per cent}$$

(b) Computation of APR/ERI (Payment in Advance):

$$I = \frac{N}{N-1} \times 2F = \frac{36}{35} \times 2 \times 0.15 = 0.0309 = 30.9 \text{ per cent}$$

(B) Trial and Error Approach (Assumed Amount of ₹1,000)

(a) Computation of APR/ERI (Payment in Arrear):

Amount of loan (0.75 × ₹1,000) = ₹750

Total credit charge = ₹750 × 0.15 × 3 = ₹337.5

Equated monthly installment = [₹1,087.5 (₹750 + ₹337.5)] × 36 = ₹30.21

The value of I (APR) is given by the equation:

(₹30.21 × 12) × PVIFA$_m$ (I, 3) = ₹750

$$= 362.52 \times \frac{1}{I^{(12)}} \times \text{PVIFA}\,(1, 3) = ₹750$$

By trial and error and interpolation,

I = 29.4 per cent

(b) Computation of IPR/ERI (Payment in Advance):

The value of I can be obtained by the equation:

(30.21 × 12) PVIFA$_m$ (I, 3) = ₹750

By trial and error and interpolation

I = 31.2 per cent

Illustration 3-A.2 *(Deposit-Linked Plan)*

Under a purchase deal structured by the Hypothetical Finance Ltd (HFL) for the Hypothetical Industries Ltd (HIL), the HFL offers to provide 100 per cent finance to the HIL at a flat rate of interest of 13 per cent. The HIL has to invest 20 per cent of the investment cost as fixed deposit with the HFL during the hire-purchase period of three years at 15 per cent compounded monthly. The repayment has to be made in 36 monthly installments in arrear. Compute the ERI/APR on an investment cost of ₹1,000.

Solution

APR/ERI (I) = Rate of interest which equates the present value of the cash inflows with the present value of the cash outflows. The elements of the monthly cash flows are: (1) loan amount (2) initial deposit (3) installment amount (4) accumulated value of deposit. The monthly net cash flow = Loan amount less initial deposit less installment amount plus accumulated value of deposit.

Month	*Net monthly cashflow*
0	₹800 [(₹1,000 loan) – (₹200 deposit)] – 38.61 (monthly installment)
1-35	274.18 [(accumulated deposit, ₹312.79 – installment, 38.61)]
36	

$$\text{Monthly instalment} = \frac{\text{Total charge for credit}}{\text{Months}} = ₹38.61$$

Total charge for credit = Loan amount + Interest

= ₹1,000 + [(₹1,000 × 0.13 × 3)] = ₹1,390

$$\text{Accumulated value of deposit} = ₹200 \times \left[1 + \frac{0.15}{36}\right]^{36} = ₹312.79$$

ERI, (I) is given by the equation:

₹38.61 × PVIFA$_m$ (I, 35/12) = ₹800 + ₹274.18 × PVIF (I, 3)

or $$₹463.32 \times \frac{1}{I^{(12)}} \times \text{PVFIA}\,(1, 2.9167) = ₹800 + ₹274.18 \times PVIF\,(I, 3)$$

By trial and error and interpolation, I = 31.39 per cent

APPENDIX 3-B
Interest Rebate

The interest rebate for early repayment of hire-purchase installments to exercise the option to purchase the asset can be computed in either of two ways: (1) on the basis of effective rate of interest method and (2) by Rule/modified rule of 78 method or sum-of-year's-digits method.

Interest Rebate: Effective Rate of Interest (ERI) Method

This is a true and fair method to determine the interest rebate. This is also known as IRR method. According to it, the interest rebate is equal to the total amount of outstanding (but not due) installments less the discounted value of the outstanding installment as on the date of early repayment. The computation is shown in illustration 3.B.1.

Illustration 3-B.1

The Hypothetical Finance Ltd (HFL) has structured a hire- purchase deal for the Hypothetical Industries Ltd (HIL) at a (flat) rate of interest of 13 per cent. The payment would be made in 36 equal monthly installments in arrears. The HIL is required to make a cash down payment of 20 per cent.

Assume that after paying the 24th installment, the HIL wishes to repay the outstanding amount and purchase the equipment. What is the interest rebate per ₹1,000 of investment cost, according to the ERI/IRR method?

Solution

Amount of loan/hire-purchase finance = 0.80 × ₹1,000 = ₹800

Total charge for credit = ₹800 × 0.13 × 3 years = ₹312

$$\text{Monthly Installment} = \frac{(₹800 + ₹312)}{36} = ₹30.89$$

Amount outstanding on the date of repayment = ₹30.89 × 12 = ₹370.68 (X)

Discounted value of the outstanding installments on the date of repayment = ₹30.89 × PVIFA_m (25.38@, 1)

$$= ₹30.89 \times 12 \times \frac{0.2538}{0.2283} \times \text{PVIFA}\,(25.38^{@}, 1)$$

$$= ₹30.89 \times 12 \times \frac{0.2538}{0.2283} \times 0.7976 = ₹328.68\ (Y)$$

Interest rebate = (X) – (Y) = ₹370.68 – ₹328.68 = ₹42

Working Notes

@ ERI = $\frac{N}{N+1} \times 2F$, where N = total number of repayments.

F = flat rate of interest per unit time

$$\text{ERI} = \frac{36}{37} \times 2 \times 0.13 = 0.253 = 25.38 \text{ per cent}$$

Interest Rebate: Rule of 78/Sum-of-Year's-Digits Method

According to this method, the interest rebate (*IR*)

$$= \frac{t\ (t+1)}{n\ (n+1)} \times D$$

where, t = number of level investments (not due) outstanding
n = total number of level installments
D = total charge for credit

Illustration 3-B.2

For the facts in **illustration 3-B.1**, compute the interest rebate (*IR*) according to the rule of 78 method.

Solution

$$\text{IR} = \frac{12 \times 13}{36 \times 37} \times ₹312 = ₹36.54$$

Compared to the ERI method, the IR is lower in case of rule of 78 method. The implication of lower interest rebate is that the effective rate of interest on the completed transaction will be higher than what was implicit in the original transaction. When the interest rebate is calculated according to the ERI method, the implicit rate of interest is the same as the rate of interest implicit in the original transaction. For instance, for the facts in illustration 5-B.1, the effective rate of interest implied by the completed transaction (E_i) according to the ERI method:
= ₹30.89 × 12 × PVIFA$_m$ (E_i,2) + (₹370.67 – ₹42) × PVIF (E_i,1) = ₹800
By trial and error and interpolation, E_i = 25.38 per cent
If the interest rebate is calculated on the basis of rule of 78 method, the E_i = ₹30.89 × 12 × PVIFA$_m$ (E_i, 2) + (₹370.67 – ₹36.5) × PVIF (E_i, 2) = ₹800
By trial and error and interpolation, E_i = 26 per cent that is, marginally higher than what is implicit in the original transaction.

Interest Rebate: Modified Rule 78 Method

According to this method, finance companies allow for a deferment period for the repayment of the outstanding amount. Accordingly

$$\text{IR} = \frac{(T - dp)(t - d + 1)}{n(n+1)} \times \text{D} = 0, \text{ where } dp = \text{deferent period}$$

Illustration 3-B.3

For facts in **illustration 3.B.1**, compute interest rebate (*IR*) assuming that the HFL calculates the rebate on the basis of modified rule of 78 which provides for a deferment period of 3 months. If the borrower wants to repay the outstanding loan after paying the 33rd installment, calculate the amount of interest rebate and the rate of interest on the completed transaction.

Solution

(a) IR = $\frac{(12 \times 3) \times (12 \times 3 + 1)}{36 \times 37} \times ₹312 = ₹21.1A$

The implicit rate of interest for the completed transaction would work out to be 27 per cent.

(b) Since the number of remaining unpaid installments is equal to the deferment period, IR would be = 0. The effective rate of interest on the completed transaction (E_i) would be given by the following equation: ₹30.89 × 12 × PVIFA$_m$ (E_i, 2.75) + ₹92.67 × PVIFA (E_i, 2.75) = ₹800.

E_i = 26 per cent