Learning Objectives
After going through the chapter student shall be able to understand.

- Meaning, types, advantages and disadvantages of Leasing.
- Financial evaluation of lease proposal from Leasee and Lessor Perspective
- Break Even Lease Rental (BELR) from Lessee’s and Lessor’s point of view
- Cross Border Leasing

1. Leasing

1.1 What is lease: Lease can be defined as a right to use an equipment or capital goods on payment of periodical amount. This may broadly be equated to an instalment credit being extended to the person using the asset by the owner of capital goods with small variation.

1.2 Parties to a Lease Agreement: There are two principal parties to any lease transaction as under:

**Lessor**: Who is actual owner of equipment permitting use to the other party on payment of periodical amount.

**Lessee**: Who acquires the right to use the equipment on payment of periodical amount.

1.3 Lease vis-à-vis Hire Purchase: Hire-purchase transaction is also almost similar to a lease transaction with the basic difference that the person using the asset on hire-purchase basis is the owner of the asset and full title is transferred to him after he has paid the agreed installments. The asset will be shown in his balance sheet and he can claim depreciation and other allowances on the asset for computation of tax during the currency of hire-purchase agreement and thereafter.

In a lease transaction, however, the ownership of the equipment always vests with the lessor and lessee only gets the right to use the asset. Depreciation and other allowances on the asset will be claimed by the lessor and the asset will also be shown in the balance sheet of the lessor. The lease money paid by the lessee can be charged to his Profit and Loss Account. However, the asset as such will not appear in the balance sheet of the lessee. Such asset for the lessee is, therefore, called off the balance sheet asset.
2. Types of Leasing

A lease transaction has many variants relating to the type and nature of leased equipment, amortisation period, residual value of equipment, period of leasing, option for termination of lease etc. Various types of leasing transactions are, therefore, operating in the market on the basis of these variants. The different leasing options may however, be grouped in following categories as under:

(a) Operating Lease: In this type of lease transaction, the primary lease period is short and the lessor would not be able to realize the full cost of the equipment and other incidental charges thereon during the initial lease period. Besides the cost of machinery, the lessor also bears insurance, maintenance and repair costs etc. The lessee acquires the right to use the asset for a short duration. Agreements of operating lease generally provide for an option to the lessee/lessor to terminate the lease after due notice. These agreements may generally be preferred by the lessee in the following circumstances:

- When the long-term suitability of asset is uncertain.
- When the asset is subject to rapid obsolescence.
- When the asset is required for immediate use to tide over a temporary problem.

Computers and other office equipments are the very common assets which form subject matter of many operating lease agreements.

(b) Financial Lease: As against the temporary nature of an operating lease agreement, financial lease agreement is a long-term arrangement, which is irrevocable during the primary lease period which is generally the full economic life of the leased asset. Under this arrangement lessor is assured to realize the cost of purchasing the leased asset, cost of financing it and other administrative expenses as well as his profit by way of lease rent during the initial (primary) period of leasing itself. Financial lease involves transferring almost all the risks incidental to ownership and benefits arising therefrom except the legal title to the lessee against his irrevocable undertaking to make unconditional payments to the lessor as per agreed schedule. This is a closed end arrangement with no option to lessee to terminate the lease agreement subsequently. In such lease, the lessee has to bear insurance, maintenance and other related costs. The choice of asset and its supplier is generally left to the lessee in such transactions. The variants under financial lease are as under:

- Lease with purchase option—where the lessee has the right to purchase the leased assets after the expiry of initial lease period at an agreed price.
- Lease with lessee having residual benefits—where the lessee has the right to share the sale proceeds of the asset after expiry of initial lease period and/or to renew the lease agreement at a lower rental.

In a few cases of financial lease, the lessor may not be a single individual but a group of equity participants and the group borrows a large amount from financial institutions to purchase the leased asset. Such transaction is called ‘Leveraged lease’.
3.3 Strategic Financial Management

(c) Sales and Lease Back Leasing: Under this arrangement an asset which already exists and is used by the lessee is first sold to the lessor for consideration in cash. The same asset is then acquired for use under financial lease agreement from the lessor. This is a method of raising funds immediately required by lessee for working capital or other purposes. The lessee continues to make economic use of assets against payment of lease rentals while ownership vests with the lessor.

(d) Sales-Aid-Lease: When the leasing company (lessor) enters into an arrangement with the seller, usually manufacturer of equipment, to market the latter’s product through its own leasing operations, it is called a ‘sales-aid-lease’. The leasing company usually gets a commission on such sales from the manufacturers and increases its profit.

Apart from term loan and other facilities available from financial institutions including banks to a promoter to acquire equipment and other capital goods, the promoter now has an alternative option to acquire economic use of capital assets through leasing. The ultimate decision to either approach a financial institution or a leasing company will, however, depend on the nature of each such transaction.

3. Advantages

– The first and foremost advantage of a lease agreement is its flexibility. The leasing company in most of the cases would be prepared to modify the arrangement to suit the specific requirements of the lessee. The ownership of the leased equipment gives them added confidence to enable them to be more accommodative than the banks and other financial institutions.

– The leasing company may finance 100% cost of the equipment without insisting for any initial disbursement by the lessee, whereas 100% finance is generally never allowed by banks/financial institutions.

– Banks/financial institutions may involve lengthy appraisal and impose stringent terms and conditions to the sanctioned loan. The process is time consuming. In contrast leasing companies may arrange for immediate purchase of equipment on mutually agreeable terms.

– Lengthy and time consuming documentation procedure is involved for term loans by banks/institutions. The lease agreement is very simple in comparison.

– In short-term lease (operating lease) the lessee is safeguarded against the risk of obsolescence. It is also an ideal method to acquire use of an asset required for a temporary period.

– The use of leased assets does not affect the borrowing capacity of the lessee as lease payment may not require normal lines of credit and are payable from income during the operating period. This neither affects the debt equity ratio or the current ratio of the lessee.

– Leased equipment is an ‘off the balance sheet’ asset being economically used by the lessee and does not affect the debt position of lessee.
Leasing Decisions

– By employing ‘sale and lease back’ arrangement, the lessee may overcome a financial crisis by immediately arranging cash resources for some emergent application or for working capital.
– Piecemeal financing of small equipments is conveniently possible through lease arrangement only as debt financing for such items is impracticable.
– Tax benefits may also sometimes accrue to the lessee depending upon his tax status.

4. Disadvantages
– the lease rentals become payable soon after the acquisition of assets and no moratorium period is permissible as in case of term loans from financial institutions. The lease arrangement may, therefore, not be suitable for setting up of the new projects as it would entail cash outflows even before the project comes into operation.
– The leased assets are purchased by the lessor who is the owner of equipment. The seller’s warranties for satisfactory operation of the leased assets may sometimes not be available to lessee.
– Lessor generally obtain credit facilities from banks etc. to purchase the leased equipment which are subject to hypothecation charge in favour of the bank. Default in payment by the lessor may sometimes result in seizure of assets by banks causing loss to the lessee.
– Lease financing has a very high cost of interest as compared to interest charged on term loans by financial institutions/banks.

Despite all these disadvantages, the flexibility and simplicity offered by lease finance is bound to make it popular. Lease operations will find increasing use in the near future.

5. Evaluation of Lease

The most important part in lease financing is its evaluation both from the point of view of Lessee and Lessor.

5.1 Lessee Perspective

A lease can be evaluated either as an investment decision or as a financing means. If an investment decision has already been made, a firm (lessee) has to evaluate whether it will purchase the asset equipment or acquire it on lease basis. The lease rentals can be taken as interest on debt. Thus, leasing in essence is alternating source of financing to borrowing. The lease evaluation thus is debt financing versus lease financing.

There are three methods of evaluating a leasing proposal viz. Present Value analysis, Internal Rate of Return analysis, and the Bower Herringer Williamson method. These three methods are explained below with the help of an example.

**Example**

A leasing company expects a minimum yield of 10% on its investment in the leasing business. It proposes to lease a machine costing ₹ 5,00,000 for ten years. Lease payments will be received in advance.
Evaluate the proposal of acquisition of machine from lessor’s view point either by borrowing and buying or leasing assuming (a) borrowing rate of 16% (b) the income tax rate 50% (c) the operating costs are the same under lease and 'buy' alternatives (d) depreciation is allowable on straight line basis (e) residual value is 'nil'.

First we determine the Lease Rental to be charged by the Lessor Company:

The lease rental can be determined from the following equation:

\[ 5,00,000 = x + \frac{x}{(1 + 0.1)^1} + \frac{x}{(1 + 0.1)^2} + \ldots + \frac{x}{(1 + 0.1)^9} \]

where \( x \) = lease rental per annum

\[ \frac{5,00,000}{x} = 73,976 \]

The above solution gives us the present value of one lease rental payment at time 0, plus the present value of nine lease rental payments at the end of each of the next nine years. We can find the present value discount factor for an even stream of cash flows for nine years to the capital recovery factor in D.C.F. analysis, where we recover principal and interest in equal installment during the specified period.

Now we analyze the decision of the Leasee company by following three approaches as follows:

5.1.1 Present Value Analysis (Net Advantage of Leasing): In this method, the present value of the annual lease payments (tax adjusted) is compared with that of the annual loan repayments adjusted for tax shield on depreciation and interest, and the alternative which has the lesser cash outflow will be chosen.

Otherwise we can also define it as Net Advantage of Leasing (NAL) as follows:

\[ NAL = PV \text{ of Cost of Owning} - PV \text{ of Leasing} \]

If NAL is positive, we should opt for leasing otherwise borrowing and buying option.

The discounting rate is the after-tax cost of borrowing i.e. 8% in our example.

Table 1 : Schedule of cash outflows : Leasing alternative

<table>
<thead>
<tr>
<th>End of year</th>
<th>Lease payment ₹</th>
<th>Tax shield cash outflows ₹</th>
<th>After tax of cash outflows ₹</th>
<th>Present value at 8% ₹</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>73,976</td>
<td>–</td>
<td>73,976</td>
<td>73,976</td>
</tr>
<tr>
<td>1-9</td>
<td>73,976</td>
<td>36,988</td>
<td>36,988</td>
<td>2,31,064</td>
</tr>
<tr>
<td>10</td>
<td>–</td>
<td>36,988</td>
<td>(36,988)</td>
<td>(17,125)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,87,915</td>
</tr>
</tbody>
</table>
Table 2: Schedule of debt repayments

The loan amount is repayable together with the interest at the rate of 16% on loan amount and is repayable in equal installments at the end of each year. The PVAF at the rate of 16% for 0-9 years is 5.6065, say 5.61 the amount payable will be

\[
\text{Annual Payment} = \frac{\text{₹} \times 5,00,000}{5.61} = \text{₹} \times 89,127 \text{ (rounded)}
\]

* It is assumed that this loan will be repaid with interest in the same period as the term of the lease. This assumption places the loan on an equivalent basis with the lease.

<table>
<thead>
<tr>
<th>End of year</th>
<th>Interest plus principal payment</th>
<th>Principal amount owing at the end of year</th>
<th>Annual Interest @16%</th>
<th>Principal component</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>89,127</td>
<td>4,10,873</td>
<td>–</td>
<td>89,127</td>
</tr>
<tr>
<td>1</td>
<td>89,127</td>
<td>3,87,486</td>
<td>65,740</td>
<td>23,387</td>
</tr>
<tr>
<td>2</td>
<td>89,127</td>
<td>3,60,357</td>
<td>61,998</td>
<td>27,129</td>
</tr>
<tr>
<td>3</td>
<td>89,127</td>
<td>3,28,887</td>
<td>57,657</td>
<td>31,470</td>
</tr>
<tr>
<td>4</td>
<td>89,127</td>
<td>2,92,382</td>
<td>52,622</td>
<td>36,505</td>
</tr>
<tr>
<td>5</td>
<td>89,127</td>
<td>2,50,036</td>
<td>46,781</td>
<td>42,346</td>
</tr>
<tr>
<td>6</td>
<td>89,127</td>
<td>2,00,915</td>
<td>40,006</td>
<td>49,121</td>
</tr>
<tr>
<td>7</td>
<td>89,127</td>
<td>1,43,934</td>
<td>32,146</td>
<td>56,981</td>
</tr>
<tr>
<td>8</td>
<td>89,127</td>
<td>77,836</td>
<td>23,029</td>
<td>66,098</td>
</tr>
<tr>
<td>9</td>
<td>90,290*</td>
<td>–</td>
<td>12,454</td>
<td>77,836</td>
</tr>
</tbody>
</table>

\[
\text{Present value of cash flows} = 3,92,433 + 5,00,000
\]

*Difference in the last installment is due to rounding off of annuity factor to two decimal points.

Table 3: Schedule of cash outflows in debt financing

<table>
<thead>
<tr>
<th>End of year</th>
<th>Annual loan repayment at 8%</th>
<th>Interest @16%</th>
<th>Depreciation</th>
<th>Tax shield</th>
<th>Net cash outflows</th>
<th>Present value of cash flows</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>0</td>
<td>89,127</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>89,127</td>
<td>89,127</td>
</tr>
<tr>
<td>1</td>
<td>89,127</td>
<td>65,740</td>
<td>50,000</td>
<td>57,870</td>
<td>31,257</td>
<td>28,944</td>
</tr>
<tr>
<td>2</td>
<td>89,127</td>
<td>61,998</td>
<td>50,000</td>
<td>55,999</td>
<td>33,128</td>
<td>28,391</td>
</tr>
</tbody>
</table>
The present value of cash outflows under lease financing is ₹ 2,87,915 while that of debt financing (i.e., owning this asset) is ₹ 3,32,205. Thus, leasing has an advantage over ownership in this case.

Or

NAL = ₹ 3,32,205 - ₹ 2,87,915 = ₹ 44,290

Since NAL is positive leasing is preferable.

5.1.2 Internal rate of return analysis: Under this method there is no need to assume any rate of discount. To this extent, this is different from the former method where the after-tax cost of borrowed capital was used as the rate of discount. The result of this analysis is the after-tax cost of capital explicit in the lease which can be compared with that of the other available sources of finance such as a fresh issue of equity capital, retained earnings or debt. Simply stated, this method seeks to establish the rate at which the lease rentals, net of tax shield on depreciation are equal to the cost of leasing. For the above example, the calculation of this rate i.e. cost of leasing is shown below:

Table 4: Computation of cash flows for internal rate of return

<table>
<thead>
<tr>
<th>End of year</th>
<th>Cost of asset</th>
<th>Lease rental</th>
<th>Depreciation</th>
<th>Additional tax shield on lease rental</th>
<th>Net cash outflow</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)*</td>
<td>(6) = [(3)-(5)]</td>
</tr>
<tr>
<td>0</td>
<td>₹ 5,00,000</td>
<td>₹ 73,976</td>
<td>₹ –</td>
<td>₹ –</td>
<td>₹ 4,26,024</td>
</tr>
<tr>
<td>1</td>
<td>₹ –</td>
<td>₹ 73,976</td>
<td>₹ 50,000</td>
<td>₹ 11,988</td>
<td>(₹ 61,988)</td>
</tr>
<tr>
<td>2</td>
<td>₹ –</td>
<td>₹ 73,976</td>
<td>₹ 50,000</td>
<td>₹ 11,988</td>
<td>(₹ 61,988)</td>
</tr>
<tr>
<td>3</td>
<td>₹ –</td>
<td>₹ 73,976</td>
<td>₹ 50,000</td>
<td>₹ 11,988</td>
<td>(₹ 61,988)</td>
</tr>
<tr>
<td>4</td>
<td>₹ –</td>
<td>₹ 73,976</td>
<td>₹ 50,000</td>
<td>₹ 11,988</td>
<td>(₹ 61,988)</td>
</tr>
<tr>
<td>5</td>
<td>₹ –</td>
<td>₹ 73,976</td>
<td>₹ 50,000</td>
<td>₹ 11,988</td>
<td>(₹ 61,988)</td>
</tr>
</tbody>
</table>

(t = tax rate)
t = tax rate at 50%

*[(3) - (4)] × t

In the above table, the last column shows the cash flow stream. When we compute the rate of
discount that equates the negative cash flows with the positive cash flows, we get, 5.4% (As
shown below). This should be compared with the after-tax cost of debt finance i.e. 8%. Since
the cost of lease is lower than after tax cost of debt finance, the former should be preferred.

Let us discount cash flows at 5%, then NPV is

\[ \text{NPV} = 4,26,024 + (\text{PVIFA (5\%,9)} \times 61,988) + (11,988 \times \text{PVF (5\%,10)}) \]

\[ = 4,26,024 + (61,988 \times 7.108) + 11,988 \times 0.614 \]

\[ = 4,26,024 + 4,40,611 + 7,361 = 7,226 \]

Since the value is negative now we shall discount at higher rate say at 6%.

\[ = 4,26,024 + (61,988 \times 6.802) + 11,988 \times 0.558 \]

\[ = 4,26,024 + 4,21,642 + 6,689 = 11,071 \]

Using interpolation formula

\[ = 5\% + \frac{-7226}{-7226-11071} \times (6\%-5\%) = 5\% + \frac{7226}{18297} = 5\% + 0.395\% = 5.395\% \text{ say 5.4\%} \]

It will be noticed that there is no need to assume any cost of capital for discounting purposes
in the IRR method unlike the Present value method. The management understands the IRR
better than it does the Present Value. It is, therefore, considered that the IRR method may be
preferred to the other methods.

**5.1.3 Bower-Herringer-Williamson Method:** This method segregates the financial and tax
aspects of lease financing. If the operating advantage of a lease is more than its financial
disadvantage or vice-versa lease will be preferred.

The procedure of evaluation is briefly as follows:

1. Compare the present value of debt with the discounted value of lease payments (gross),
   the rate of discount being the gross cost of debt capital. The net present value is the
   financial advantage (or disadvantage).
2. Work out the comparative tax benefit during the period and discount it at an appropriate
cost of capital. The present value is the operating advantage (or disadvantage) of
leasing.
3. If the net result is an advantage, select leasing.

For the given example:

| Present value of loan payments | ₹ 5,00,000 |
| Present value of lease payments discounted at 16% | ₹ 4,15,005 |
| i.e. ₹ 73,976 × 5.61 (1 + 4.61) | |
| Financial advantage | ₹ 84,995 |

The present value of comparative tax-benefits i.e., the operating advantage (disadvantage) is calculated below:

### Table 5: Operating advantage (disadvantage) of lease

<table>
<thead>
<tr>
<th>End of year</th>
<th>Tax shield on leasing</th>
<th>Tax shield on borrowings</th>
<th>Incremental saving in tax due to leasing</th>
<th>Present value factor at 15%</th>
<th>Present value at 15%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>36,988</td>
<td>57,870</td>
<td>(20,882)</td>
<td>0.87</td>
<td>(18,167)</td>
</tr>
<tr>
<td>2</td>
<td>36,988</td>
<td>55,999</td>
<td>(19,011)</td>
<td>0.76</td>
<td>(14,448)</td>
</tr>
<tr>
<td>3</td>
<td>36,988</td>
<td>53,829</td>
<td>(16,841)</td>
<td>0.66</td>
<td>(11,115)</td>
</tr>
<tr>
<td>4</td>
<td>36,988</td>
<td>51,311</td>
<td>(14,323)</td>
<td>0.57</td>
<td>(8,164)</td>
</tr>
<tr>
<td>5</td>
<td>36,988</td>
<td>48,391</td>
<td>(11,403)</td>
<td>0.50</td>
<td>(5,702)</td>
</tr>
<tr>
<td>6</td>
<td>36,988</td>
<td>45,003</td>
<td>(8,015)</td>
<td>0.43</td>
<td>(3,446)</td>
</tr>
<tr>
<td>7</td>
<td>36,988</td>
<td>41,073</td>
<td>(4,085)</td>
<td>0.38</td>
<td>(1,552)</td>
</tr>
<tr>
<td>8</td>
<td>36,988</td>
<td>36,515</td>
<td>473</td>
<td>0.33</td>
<td>156</td>
</tr>
<tr>
<td>9</td>
<td>36,988</td>
<td>31,227</td>
<td>5,761</td>
<td>0.28</td>
<td>1,613</td>
</tr>
<tr>
<td>10</td>
<td>36,988</td>
<td>25,000</td>
<td>11,988</td>
<td>0.25</td>
<td>2,997</td>
</tr>
</tbody>
</table>

**Note:** The rate of 15% is considered to be the appropriate cost of capital.

Since the financial advantage exceeds the operating disadvantage in lease, it is advantageous to go for leasing.
5.1.4 Selection of Discount Rate: While examining the proposals of Lease Vs. Borrowing and Buying the selection of discounting rate for discounting is an issue. Related cash flows can be discounted both at the rate of Post Tax Cost of Debt and Cost of Capital and final decision will be same. However, since leasing is substitute for borrowing option, post-tax cost of debt is a good option for discounting.

5.2 Lessor Perspective: The leasing evaluation from view point of Lessor is in fact is a Capital Budgeting Decision involving financing of asset out of the funds acquired from various sources involving some costs.

Accordingly, Lessor would like to invest only if it has positive return. In other words, the Lessor would be ready for the financing proposal if the return from it is more than cost of funds involved.

Like traditional capital budgeting decision, the Lessor can accept the proposal of financing on the following methods of evaluation:

(i) Net Present Value (NPV) Method: The Lessor would accept the proposal of financing the asset if NPV of the same is zero or more. If it negative, then it would be accepted as I would not be beneficial to accept the proposal.

(ii) Internal Rate of Return (IRR) Method: In terms of IRR Method the financing proposal should be accepted only if computed IRR of cash flows is more than the required cut-off rate or Cost of Capital or Weighted Average Cost of Capital (WACC).

Like Capital Budgeting Decision the various types of Cash flows involved in financing decisions are as follows:

(a) Initial Cash Outflow: Like in Capital Budgeting decision the initial cash outflow in financing proposal involves the Purchase Price of Machine and incidental expenses thereto.

(b) Annual Cash Flows: The Annual Cash Flow shall be accrued in the form of Annual Lease Rental adjusted in light of tax benefits on Depreciation and tax liability. Accordingly, it can be computed as follows:

\[ = (\text{Lease Rental} – \text{Depreciation}) \times (1 – t) + \text{Depreciation} \]

(c) Terminal Cash Flows: Just like in the terminal year of a project in financing proposal the terminal cash flow involved is disposal/ salvage value of the asset financed net of Tax Adjustment on Short Term Capital Loss or Gain, if any.

6. Break Even Lease Rental (BELR)

Break-Even Lease Rental can be from both point of views i.e. from lessee's view as well as lessor's point of view.

6.1 Break Even Lease Rental (BELR) from Lessee's point of view: From the point of view of lessee the BELR is the rental at which the lessee is indifferent between borrowing and buying option and lease financing option. In other words, he can opt for any one option. At this rental the Net Advantage of Leasing (NAL) will be zero. It can also be defined as maximum lease rental the lessee would be willing to pay.
6.2 Break Even Lease Rental (BELR) from Lessor’s point of View: From the lessor’s view point, BELR is the minimum (floor) lease rental, which he should accept. In this case also NAL should be zero. Any lease rent below BELR should not be accepted. It is to be noted that while computing NAL, the over all cost of capital of the firm should be used. The computation of BELR from lessor’s point of view can be understood with the help of following illustration.

**Illustration**

*With the following data available compute, the BELR that ABC Ltd. should charge from lessee.*

<table>
<thead>
<tr>
<th>Details</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of Machine</td>
<td>₹ 150 Lakh</td>
</tr>
<tr>
<td>Expected Useful Life</td>
<td>5 year</td>
</tr>
<tr>
<td>Salvage Value of Machine at the end of 5 years</td>
<td>₹ 10 lakh</td>
</tr>
<tr>
<td>Rate of Depreciation (WDV)</td>
<td>25%</td>
</tr>
<tr>
<td>$K_o$</td>
<td>14%</td>
</tr>
<tr>
<td>Applicable Tax Rate</td>
<td>35%</td>
</tr>
</tbody>
</table>

*Machine will constitute a separate block for depreciation purpose.*

**Solution**

\[
\text{Cost of Machine} - \text{PV of Salvage Value (W1)} - \text{PV of Tax benefit on Depreciation (W2)} - \text{PV of Tax Saving on STCL at the end of 5 year (W3)} = 110,65,938
\]

\[
\text{PVIFA for 5 years @14\%} = 3.433
\]

\[
\text{After tax Break Even Lease Rental} = \frac{110,65,938}{3.433} = 32,23,400
\]

\[
\text{Before Tax BELR} = \frac{32,23,400}{1 - 0.35} = ₹ 49,59,100
\]

**Working Notes**

**W1**

<table>
<thead>
<tr>
<th>Details</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salvage Value</td>
<td>₹ 10,00,000</td>
</tr>
<tr>
<td>PVF @14%</td>
<td>0.5194</td>
</tr>
<tr>
<td>PV of Salvage Value</td>
<td>₹ 5,19,400</td>
</tr>
</tbody>
</table>

**W2**

Table showing calculation of PV of Tax Benefit on Depreciation
Leasing Decisions

### Year Opening WDV Depreciation @ 25% Closing WDV PVF @14% PV

<table>
<thead>
<tr>
<th>Year</th>
<th>Opening WDV (₹)</th>
<th>Depreciation @ 25% (₹)</th>
<th>Closing WDV (₹)</th>
<th>PVF @14%</th>
<th>PV (₹)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>150,00,000</td>
<td>37,50,000</td>
<td>11,250,000</td>
<td>0.877</td>
<td>32,88,750</td>
</tr>
<tr>
<td>2</td>
<td>112,50,000</td>
<td>28,12,500</td>
<td>84,37,500</td>
<td>0.769</td>
<td>21,62,813</td>
</tr>
<tr>
<td>3</td>
<td>84,37,500</td>
<td>21,09,375</td>
<td>63,28,125</td>
<td>0.675</td>
<td>14,23,828</td>
</tr>
<tr>
<td>4</td>
<td>63,28,125</td>
<td>15,82,031</td>
<td>47,46,094</td>
<td>0.592</td>
<td>9,36,562</td>
</tr>
</tbody>
</table>

Tax Benefit on Depreciation = ₹ 78,11,953 X 0.35 = ₹ 27,34,184

**W3**

PV of Tax benefit on Short Term Capital Loss (STCL)

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount (₹)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WDV at beginning of 5 year as per above table</td>
<td>47,46,094</td>
</tr>
<tr>
<td>Less: Salvage Value</td>
<td>10,00,000</td>
</tr>
<tr>
<td>STCL</td>
<td>37,46,094</td>
</tr>
<tr>
<td>Tax Benefit</td>
<td>13,11,133</td>
</tr>
<tr>
<td>PVF at 14%</td>
<td>0.519</td>
</tr>
<tr>
<td>PV of Tax Benefit on STCL</td>
<td>6,80,478</td>
</tr>
</tbody>
</table>

**7. Cross-Border Leasing**

Cross-border leasing can be considered as an alternative to equipment loans in some emerging foreign market, where finance leases are treated as conditional sales agreements. The only difference between international leasing and loans will be the documentation, with down payments, payment streams, and lease-end options the same as offered under **Equipment Loans to Foreign Buyers**. The various kinds of leasing arrangements available in the U.S. market are not yet feasible in most cases for cross-border leasing transactions. There are however, attempts to develop more flexible international leasing structures for export financing. Operating leases may be feasible for exports of large equipment with a long economic life relative to the lease term.

Cross-border leasing is a leasing arrangement where lessor and lessee are situated in two different countries. This raises significant additional issues relating to tax avoidance and tax shelters.

Cross-border leasing has been widely used in some European countries, to arbitrage the difference in the tax laws of different countries. Typically, this rests on the premise that, for tax purposes, some assign ownership and the attendant depreciation allowances to the entity that has legal title to an asset, while others assign it to the entity that has the most of the use (legal title being only one of several factors taken into account). In these cases, with
sufficiently long leases (often 99 years), an asset can end up with two effective owners, one each in different countries, this is often referred to as a double-dip lease.

Often the original owner of an asset is not subject to taxation in any country and therefore not able to claim depreciation. The transaction often involves an entity selling an asset (such as sewerage system or power plant) to an investor (who can claim depreciation), and long-term leasing it right back (often referred to as a saleleaseback).

Leasing techniques had been used for financing purposes for several decades throughout the world. The practice was developed as a method of financing aircraft. Several airlines entities in the early 1970s were unprofitable and very capital intensive. These airlines had no need for the depreciation deductions generated by their aircraft and were significantly more interested in reducing their operating expenses. A very prominent bank purchased aircraft and leased them to the airlines and because the bank was able to claim depreciation deductions for those aircraft, the bank was able to offer lease rates that were significantly lower than the interest payments that airlines would have to pay on an aircraft purchase loan (and most commercial aircraft flying today are operated under a lease). In the United States, this spread into leasing the assets of U.S. entities and governmental entities and eventually evolved into cross-border leasing.

One significant evolution of the leasing industry involved the collateralization of lease obligations in sale leaseback transactions. For example, an entity would sell an asset to a bank, the bank would require lease payment and give an entity an option to repurchase the asset, the lease obligations were low enough (due to the depreciation deductions the banks were now claiming) so that the entity could pay for the lease obligations and fund the repurchase of the asset by depositing most but not all of the sale proceeds in an interest bearing account. This resulted in the entity having pre-funded all of its lease obligations as well as its option to repurchase the asset from the bank for less than the amount received in the initial sale of the asset so the entity would be left with additional cash after having pre-funded all of its lease obligations.

This gave the appearance of entities entering into leasing transactions with banks for a fee. By the late 1990s many of such leasing transactions were with entities in Europe. However, in 1999 cross border leasing in the United States was “stopped” by the effective shutdown of LiLOs (lease-in/lease outs). LiLOs were significantly more complicated than the typical lease where an owner (for example) would lease an asset to a bank and then lease it back from the bank for a shorter period of time.

Cross-border leasing has been in practice as a means of financing infrastructure development in emerging nations. Cross-border leasing may have significant applications in financing infrastructure development in emerging nations – such as rail and air transport equipment, telephone and telecommunications equipment and assets incorporated into power generation and distribution systems and other projects that have predictable revenue streams.
A major objective of cross-border leases is to reduce the overall cost of financing through utilization by the lessor of tax depreciation allowances to reduce its taxable income. The tax savings are passed through to the lessee as a lower cost of finance. The basic prerequisites are relatively high tax rates in the lessor’s country, liberal depreciation rules and either very flexible or very formalistic rules governing tax ownership.

Other important objectives of cross border leasing include the following:

- The lessor is often able to utilize nonrecourse debt to finance a substantial portion of the equipment cost. The debt is secured by among other things, a mortgage on the equipment and by an assignment of the right to receive payments under the lease.
- Also, depending on the structure, in some countries the lessor can utilize very favourable “leveraged lease” financial accounting treatment for the overall transaction.
- In some countries, it is easier for a lessor to repossess the leased equipment following a lessee default because the lessor is an owner and not a mere secured lender.
- Leasing provides the lessee with 100% financing.

While details may differ from one transaction to another, most leasing structures are essentially similar and follow the “sale-leaseback” pattern. The principal players are (i) one or more equity investors; (ii) a special purpose vehicle formed to acquire and own the equipment and act as the lessor; (iii) one or more lenders, and (iv) the lessee. The lease itself is a “triple-net lease” under which the lessee is responsible for all costs of operation, maintenance and insurance.

In many transactions, the lessee’s fixed payment obligations are prefunded or “defeased” through an up-front payment (in an amount equal to the present value of the fixed payment obligations) to a financial entity that assumes such obligations. The benefits of defeasance include (i) the lessee can lock in its financial savings by making the defeasance payment; (ii) by routing the lease payments through the defeasance entity’s jurisdiction, withholding taxes applicable to lease payments in the lessee’s jurisdiction may possibly be avoided; (iii) defeasance serves to some extent as a credit enhancement technique for the lessor, and (iv) defeasance may eliminate or reduce currency risk exposure.

In order for the lessor to obtain the tax benefits associated with equipment leasing, most countries require that the lease be treated as a “true lease” for tax purposes, as opposed to a conditional sale or other secured financing arrangement. This objective generally can be satisfied if the lessor has “tax ownership” of the leased equipment.

Each country applies differing rules for determining whether the party acting as lessor under a cross-border lease is the “owner” of the leased asset for tax purposes and is thereby entitled to claim tax allowances. In the United States and some other countries, the principal focus is on whether the lessor possesses substantially all attributes of economic ownership of the leased asset. Other countries such as the United Kingdom and Germany apply more
formalistic property law concepts and focus primarily on the location of legal title, although these countries usually also require that the lessor have some attributes of economic ownership or, at least, that the lessee have only a minimal economic interest in the equipment. In Japan, ownership of legal title is essential, but the lessor is only required under current law to obtain nominal incidents of economic ownership (all that is required is that the lease will provide a return of the equity investment plus a pre-tax profit of 1% of equipment cost). While Japan does have detailed tax lease guidelines, these guidelines are designed primarily to circumscribe the tax benefits available to the lessor in a cross-border lease to prevent undue tax deferral; they do not require the lessor to have a significant economic interest in the leased equipment.

The non-tax issues associated with cross-border leasing can best be described by reference to the various structural risks that may arise in a given transaction and must be addressed in the documentation.