CHAPTER VII

PROVISION FOR DEPRECIATION

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(A) Concept of Depreciation

(B) Objectives of Providing Depreciation

(C) Depreciation Methods

(D) Depreciation as a Source of Finance

(E) Depreciation and Tax Law

(F) Provision for Depreciation and Cotton Textile Mills of Ahmedabad

* * *
(A) Concept of Depreciation

According to the cost principle, all fixed assets are shown in the books of accounts of a business enterprise at their cost of acquisition or construction. The determination that an expenditure relates to a fixed asset is made at the time when the expenditure is incurred by considering whether the asset or the benefit acquired by the expenditure will be converted into cash in the near future, or whether it will primarily be used for conducting the operations of the business enterprise. Only if it is the latter, that the amount of the expenditure should be capitalized and the resulting asset designated as a fixed asset.

In addition to acquisition costs, it is conventional to capitalize all other costs necessary to bring the asset to a state where it is ready to operate or to provide the services envisaged. The incidental costs which by convention are capitalised are as follows:

- **Land**: Commission to brokers; Legal fees; Clearing and grading expenses; Land development including construction of streets, levelling; Other costs incurred for taking possession, e.g., compensation paid to the present owners for constructing similar properties elsewhere.
Buildings: Permanent fixtures in the buildings; Municipal fees paid for construction etc.; Stamp fees for executing deeds of acquisition; Architects', engineers' and lawyers' fees; Supervision and administrative expenses which can be directly identified with the construction of the building.

Plant and machinery: All costs of installation such as transportation, labour and testing, e.g., fees payable to machinery suppliers for providing services of engineers and others or their staff during the period of testing.

In relation to self-constructed property, plant and equipment, the principle applicable for capitalisation is the same as that relating to fixed assets acquired from others, i.e., they are recorded at the cost incurred to bring the asset to a state where it is ready for operation or for providing the necessary services. All direct costs, e.g., material, labour, supplies etc., are booked as capital costs. In addition to such direct costs, any indirect cost which can be identified with the asset are also appropriately capitalized. However, the convention in this context is to capitalize only incremental costs (which can be directly identified with the asset) rather than allocated shares of general, administrative and supervisory expenses. The broad principle C-2 of the American Institute of Certified Public Accountants, i.e.,
"Principle C-2: Fixed assets should be carried at cost of acquisition or construction in the historical accounts, unless such cost is no longer meaningful. Cost of land should ordinarily be shown separately. Cost of construction includes direct costs and overhead costs incurred, such as engineering, supervision and administration, interest, and taxes. Items treated as fixed assets should have at least one year of expected useful life to the enterprise. Normally the life is considerably longer. Practicable yardsticks or criteria should be established so that consistent distinctions may be made between fixed assets, operating expenses and maintenance. Ordinarily, this should be accomplished by creating a catalogue of property units to be included in fixed assets, any lesser items to be charged to current expenses. Items no longer in service should be removed by charge to depreciation reserve in order that fixed assets will represent the cost of properties in service.

Those tangible assets used in operations and not intended for sale in the ordinary course of business are classified on the Balance Sheet as fixed assets provided they have an expected service life of more than one year. No one designation of this category has been accepted, and
captions such as "fixed assets", "property, plant and equipment", "general property", "properties", and numerous others are found in published financial statements. Depreciable and nondepreciable property ordinarily should be shown separately, and a further classification is often given.

The only exception to the "cost" rule takes place when over a period of time a fixed asset turns out to be of significantly greater worth than the amount paid for it. In such a situation an exception is made to the "cost" rule and the asset is recorded at the estimated current value, preferably after valuation by surveyors, architects or other experts. Assume that land purchased at a cost of Rs. 100,000 is found to contain mineral deposits and is subsequently revalued to Rs. 300,000. The revaluation will be carried out by the following journal entry:

\[
\begin{array}{c|c}
\text{Rs.} & \text{Rs.} \\
\hline
\text{Land} & \text{Dr. 200,000} \\
\text{To capital surplus} & 200,000 \\
\end{array}
\]

(Being the increase in the value of land recorded on the basis of surveyor's certificate)

Repairs and Maintenance: One of the major problems in accounting for fixed assets is that of handling repairs and maintenance costs incurred for keeping the fixed asset in operational condition. The general principle in this regard is that so long as the repairs and
maintenance expenses represent costs incurred to keep the asset in its present state of efficiency or productivity, they are treated as operating or revenue expenses. However, it is possible to renovate or carry out modifications of the assets which make it more efficient than when it was originally purchased. In such a situation, it is stipulated that a betterment of the asset has taken place though in a real life situation it is somewhat difficult to determine this precisely. In such a situation, the expenditure on betterment is determined after appropriate technical tests and the estimated value assigned to the better performance of the assets (in relation to the original cost of acquisition) is capitalized. However, the principle of conservatism demands that any such addition on the ground of betterment be done after it is reasonably clear that such betterment has demonstrably taken place as otherwise, such a procedure could lead to manipulation of current expenses as capital costs leading to overstatement of profits. The general principle regarding replacement of components is that it is treated as an operating expense unless there is clear evidence that betterment has taken place.

With the exception of land, all fixed assets have a limited period of useful life. If we assume that business enterprises acquire assets essentially to earn profits by buying raw materials, merchandise or services
and by selling such products or providing such services at a price higher than the cost of purchase or conversion, it would follow that it would be worthwhile for a business enterprise to continue to use an asset only till such time as economic surpluses accrue. Another aspect of the problem is that since different business enterprises serve different "buyer-needs" and operate at different levels or scales of operations, it is not possible to generalise as to the situations in which an asset is economic to a business enterprise. This can only be done after examining:

(i) the nature and the size of the market served,
(ii) the "buyer-needs" for such services as well as economically viable alternatives for fulfilling them,
(iii) the "economics" of raw material or services acquisition, and
(iv) sale prices of finished product or services.

It is proper to expand the concept of useful life of a fixed asset into useful economic life in relation to the specific business operations of the enterprise owning the fixed asset. The expenditure incurred in acquiring fixed assets has, therefore, to be distinguished from operating expenses in the first instance. Usually the entire expenditure for a fixed asset is incurred on a
"one-time" basis, no further expenditure being required for the rest of the useful economic life of the asset. This is in contrast with the recurring incidence of operating expenditure. It is, therefore, necessary that the acquisition expenditure of a fixed asset should be allocated over the accounting periods during which the fixed asset continues to be economically useful. The process of this allocation or amortization (or gradually converting fixed assets into current operating "expenses") is called depreciation. Obviously in any such process, the depreciation for the accounting periods will have to be computed after taking into account the following:

(i) The acquisition and incidental cost of the fixed assets,
(ii) Its useful economic life,
(iii) The salvage value at the end of the useful economic life of the asset or at the time of the retirement (on the basis of reasonable expectation), and
(iv) The method of depreciation.

The American Institute of Certified Public Accountants (AICPA) describes the process of depreciation accounting as follows:

"The cost of productive facility is one of the costs of the services it renders during its useful economic life. Generally accepted accounting principles require that this cost be spread over the expected useful life of the facility in such a way as to allocate it as equitable as possible to the
periods during which services are obtained from the use of the facility. This procedure is known as depreciation accounting, a system of accounting which aims to distribute the cost or other basic value of tangible capital assets, less salvage (if any) over the estimated useful life of the unit (which may be a group of assets) in a systematic and rational manner. It is a process of allocation, not of valuation.

Since depreciation is shown as an expense in the Income Statement or Profit and Loss Account, while fixed assets, net of accumulated depreciation, are shown in the Balance Sheet, there exists in the minds of laymen a great deal of confusion relating to the nature of depreciation expenses. Basically this confusion arises from the fact that while normal operating expenses are paid in cash, there is no such cash payment involved in the depreciation of fixed assets.

One of the basic purposes of depreciation accounting is to determine this "period costs" of fixed assets over their useful economic life. In many situations, the useful economic life is confused with the technical or operational life of an asset. It fails to meet the logic of depreciation accounting because an asset may be fully operational and yet it might be uneconomical for purposes of earning profits. In such a situation, it would have no
economic life though it might still have an operating life. Much of this problem arises because of the popular concept of depreciation due to "wear and tear". However, as mentioned earlier, depreciation is a process of allocation rather than the determination of the "wear and tear". In this context the AICPA distinguishes between the engineering concept of depreciation and the accounting concept in the following words by holding that depreciation:

"does not attempt to determine the sum allocated to an accounting period solely by relation to occurrences within that period which affect either the length of life or the monetary value of the property. Definitions are unacceptable which imply that depreciation for the year is a measurement, expressed in monetary terms, of the physical deterioration within the year, or of the decline in monetary value within the year, or, indeed, of anything that actually occurs within the year. True, an occurrence within the year may justify or require a revision of prior estimates as to the length of useful life, but the annual charge remains an allocation to the year of a proportionate part of a total cost or loss estimated with reference to a longer period.

Obviously, the term depreciation, as here contemplated, has meaning different from that given
to it in the engineering field. The broad distinction between the senses in which the word is used in the two professions is that the accounting concept is one of systematic amortisation of cost over the period of useful life, while the engineering approach is one of evaluating present usefulness."

It should be fairly obvious that if a machine does not exist it cannot earn any profits for the business. The technical or engineering life of the asset, in this sense, is relevant only as a demarcation of the other boundary of "useful" life. However, within this boundary, we are also concerned about two other things, viz.:

(i) the economic life of the asset defined in terms of ability to generate profits given the market that the business subserves, and

(ii) the technological changes which determine the competitive viability of the business related to the needs of the customers which the business seeks to satisfy. (Accountants tend to take the view that these needs are sharply different for competing business enterprises and that they have to be defined in terms of consumer needs, cost-price-profit relationship, corporate strategy defined in terms of the market and the desired levels of market share, growth and profitability).
For the purpose of summing up we can do no better than agree with the following views enunciated by the committee on terminology of the AICPA:

"Depreciation accounting is a system of accounting which aims to distribute the cost or other basic value of tangible capital assets, less salvage (if any) over the estimated useful life of the unit (which may be a group of assets) in a systematic and rational manner. It is a process of allocation, not of valuation. Depreciation for the year is the portion of the total charge under such a system that is allocated to the year. Although the allocation may properly take into account occurrences during the year, it is not intended to be a measurement of the effect of all such occurrences."

(B) Objectives of Providing Depreciation

(i) Provide a means to allocating cost of capital assets to current costs of operation: A large majority of accountants regard depreciation as an allocation of the costs of fixed capital assets over the estimated life of the assets. Under this concept, underpreciated values of capital assets assume the nature of deferred costs of operation.
(ii) **Evaluate capital assets**: The current practice is to deduct provision for depreciation from cost or other valuation of capital assets on the Balance Sheet. Net valuations shown in a Balance-Sheet may bear little relation to true worth. Some assets may be of doubtful value because of obsolescence and some assets purchased over 10 years and which are depreciated over a 20 year period may be worth considerably more than the Balance-Sheet valuations.

(iii) **Make financial provision for the replacement of capital assets**: For financial planning the chief function of depreciation is usually its role in financing replacement of plant and equipment. Depreciation allowances provide out of the operations of the business, resources for replacement of capital assets. True funds withheld as depreciation allowances may be devoted to other purposes such as acquiring inventory, but in that event, funds raised in other ways can be devoted to the acquisition of fixed assets.

If depreciation is regarded as a means of financing replacement of assets, reproduction or replacement costs especially in a period of rising prices become far more suitable than historical cost as a basis for computing annual depreciation allowance. Depreciation allowances
constitute a conversion of fixed capital assets into cash, so that it is available for reinvestment in similar fixed assets. But where the price level changes, the sum thus realised may be too great or too little for the purpose. That is because depreciation as ordinarily computed is based on historical cost.

(C) Depreciation Methods

There are at least 4 methods which are widely used for calculating the depreciation expenditure, the value of the fixed assets, its useful economic life and the salvage value:

(i) Straightline Method.
(ii) Declining Balance Method (also called Reducing Balance Method or Written Down Value Method)
(iii) Sum-of-the-Years' Digits Method, and
(iv) Units-of-Production Method.

Each of these methods determines the depreciation expenditure to be allocated to a particular accounting period. They can best be illustrated with reference to a specific example.

Suppose a machine costing Rs. 50,000 has a useful economic life of 10 years (with no salvage value). It is also assumed that the machine would produce 100,000 units during its economic useful life. Then, the depreciation to be charged under the different methods would be as per the calculations in Table No. VII.1.
<table>
<thead>
<tr>
<th>Year</th>
<th>Balance (Rs.)</th>
<th>Depreciation (10%) (Rs.)</th>
<th>W.D.V. (Rs.)</th>
<th>Depreciation for the year (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>45,000</td>
<td>5,000</td>
<td>37,500</td>
<td>12,500</td>
</tr>
<tr>
<td>2</td>
<td>40,000</td>
<td>5,000</td>
<td>28,125</td>
<td>9,375</td>
</tr>
<tr>
<td>3</td>
<td>35,000</td>
<td>5,000</td>
<td>21,094</td>
<td>7,031</td>
</tr>
<tr>
<td>4</td>
<td>30,000</td>
<td>5,000</td>
<td>15,820</td>
<td>5,274</td>
</tr>
<tr>
<td>5</td>
<td>25,000</td>
<td>5,000</td>
<td>11,865</td>
<td>3,955</td>
</tr>
<tr>
<td>6</td>
<td>20,000</td>
<td>5,000</td>
<td>8,999</td>
<td>2,966</td>
</tr>
<tr>
<td>7</td>
<td>15,000</td>
<td>5,000</td>
<td>6,674</td>
<td>2,225</td>
</tr>
<tr>
<td>8</td>
<td>10,000</td>
<td>5,000</td>
<td>5,006</td>
<td>1,668</td>
</tr>
<tr>
<td>9</td>
<td>5,000</td>
<td>5,000</td>
<td>3,755</td>
<td>1,251</td>
</tr>
<tr>
<td>10</td>
<td>0</td>
<td>5,000</td>
<td>2,816</td>
<td>939</td>
</tr>
</tbody>
</table>
### Table VII.1 (Cont....)

<table>
<thead>
<tr>
<th>Year</th>
<th>Units</th>
<th>Sum-of-the-Digits Method</th>
<th>Units-of-Production Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year</td>
<td>Frac.</td>
<td>Written Depreciation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Value</td>
<td>down</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rs.</td>
<td>Rs.</td>
</tr>
<tr>
<td>1</td>
<td>10/55</td>
<td>40,909</td>
<td>9,991</td>
</tr>
<tr>
<td>2</td>
<td>9/55</td>
<td>32,727</td>
<td>8,132</td>
</tr>
<tr>
<td>3</td>
<td>8/55</td>
<td>25,454</td>
<td>7,273</td>
</tr>
<tr>
<td>4</td>
<td>7/55</td>
<td>19,090</td>
<td>6,364</td>
</tr>
<tr>
<td>5</td>
<td>6/55</td>
<td>13,635</td>
<td>5,455</td>
</tr>
<tr>
<td>6</td>
<td>5/55</td>
<td>9,090</td>
<td>4,545</td>
</tr>
<tr>
<td>7</td>
<td>4/55</td>
<td>5,454</td>
<td>3,636</td>
</tr>
<tr>
<td>8</td>
<td>3/55</td>
<td>2,727</td>
<td>2,727</td>
</tr>
<tr>
<td>9</td>
<td>2/55</td>
<td>909</td>
<td>1,818</td>
</tr>
<tr>
<td>10</td>
<td>1/55</td>
<td>0</td>
<td>909</td>
</tr>
</tbody>
</table>

**Note:**
1. Rates under straightline and declining balance methods are not comparable.
2. All written down values represent year-end balance of the assets in the books.
3. Units produced have been arbitrarily determined for the purpose of illustration.
(i) **Straightline Method**: Under the straightline method, the net acquisition cost, (i.e., acquisition or construction cost minus salvage value) is charged off in equal proportion during the useful economic life and the quantum of the depreciation is arrived at by dividing the net acquisition or construction cost by the number of years of useful economic life.

The advantages of this method are:

(a) The amount of depreciation and the rate do not change over the useful economic life of the asset.

(b) The calculation is relatively simple.

(c) It realistically matches costs and revenue.

Many business enterprises feel that if the amount of depreciation is varied from one accounting period to another, it might be viewed by the operating people as an attempt to either pressurise them for cost savings or as a liberalisation of expense standards. The "smoothing" effect which straightline depreciation has in periodic profit determination is also a factor in its widespread adoption in business. The fact that depreciation under this method is equal over the period of useful economic life provides for improved comparability.
(ii) Declining Balance Method: Under this method which is also known as reducing balance or written down value method, a depreciation percentage rate (significantly higher than a comparable depreciation rate under the straight line method) is applied to the acquisition or construction cost at the beginning of the accounting period rather than the original cost. That is, the depreciation charged off during the year is deducted from the cost of the asset (WDV). In the next year, the depreciation percentage is applied on the WDV. (This is why it is also known as the WDV method). Under this method, the asset is never completely written off the books. When the asset is sold or retired, the written down value appearing in the books is written off as the depreciation for the final period.

The declining balance method is relatively simple to compute though it involves keeping of records in order to separately determine the written down value in respect of each asset. It is claimed that the principal advantages of the declining balance method are:

(a) It matches the service of the asset in the sense that higher depreciation is charged in the initial years, when the machine is most efficient compared to later years.
(b) It recognizes the risk of obsolescence by concentrating the major part of the depreciation in the early years of the life of the asset.

(c) It equalizes the expenses of depreciation and repair charges taken together (this is based on the assumption that repairs are lower in the initial years and higher in the later years, while the depreciation under this method is higher in the initial years and lower in the later years).

Critics of the declining balance method point out that it requires elaborate book-keeping. They also mention that as the amount of the depreciation varies from year to year, intra-enterprise comparability is lost and that income is understated in early years and overstated in subsequent years.

(iii) Sum-of-the Years' Digits Method: The depreciation under this method is computed by adding up the number of years of the useful economic life (i.e., if the asset has 5 years economic useful life, the numbers 1, 2, 3, 4, and 5, are added up and the resulting sum, 15, becomes the denominator while the numerator is the number of remaining years of the useful economic life of the asset).
Accordingly, the depreciation to be provided would be:

5/15 in the first year
4/15 in the second year
3/15 in the third year
2/15 in the fourth year
1/15 in the last year

The depreciation so determined constitutes the annual depreciation expense and is applied to the cost of acquisition or construction of the asset to be depreciated rather than to the WDV of the asset. The advantages and disadvantages of this method are more or less the same as the declining balance method excepting that perhaps the process of computation under the sum-of-years' digits method is a little more complicated.

(iv) **Units-of-Production Method**: The depreciation rate under this method is determined by dividing the net acquisition or construction cost, (i.e., acquisition or construction costs minus salvage value) by the estimated number of units that are likely to be produced during its useful economic life. This rate is then applied to the number of units produced during an accounting period to determine the depreciation to be provided during that period.
This method has the following advantages:

(a) It is related to the usage of the asset, and
(b) It matches the depreciation provided with the level of the activity.

The major disadvantage of this method is that the total number of units likely to be produced during the entire economic life is rather difficult to estimate in ordinary manufacturing operations. However, it is easier to apply in the case of companies extracting natural resources, i.e., petroleum and other mining companies, where geological survey methods are used to estimate the total potential production for computing the unit rates.

There are several other methods which are used for computing depreciation, but they are far too numerous to be mentioned in detail. Furthermore, their applications are limited to a few companies. The departures from one or the other of the about 4 methods are mostly in terms of innovative variations.

Many companies consolidate the cost of assets of similar kinds with approximately similar useful economic life (e.g., air-conditioners) and apply a common rate. This process is known as group depreciation. If dissimilar assets are depreciated together, the process is called composite depreciation. For this purpose the
depreciation rate is computed as a weighted average, the weights being the monetary costs of the assets in each category.

If group of composite depreciation methods are used, no gain or loss is recognized when the assets are sold or retired. The relatively simple entry for group or composite depreciation on sale or retirement of assets is to credit the asset account and debit the accumulated depreciation account, as it is assumed that gains on sale of some assets are balanced by losses in others.

A survey conducted by the National Industrial Conference Board of the United States in 1969 in respect of the depreciation practices of 229 companies indicated that more than half the companies had applied the straightline method. The findings of the survey are set out in Table VII,2.
Table VII. 2

<table>
<thead>
<tr>
<th>Method of Depreciation</th>
<th>No.of companies using for Reporting purposes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straight line</td>
<td>125</td>
</tr>
<tr>
<td>Sum-of-the-years-digits</td>
<td>12</td>
</tr>
<tr>
<td>Declining balance</td>
<td>11</td>
</tr>
<tr>
<td>Combination of straight line and declining balance</td>
<td>27</td>
</tr>
<tr>
<td>Combination of straight line and sum-of-the-years-digits</td>
<td>24</td>
</tr>
<tr>
<td>Combination of straight line, sum-of-the-years-digits and declining balance</td>
<td>20</td>
</tr>
<tr>
<td>Combination of straight line and units of production</td>
<td>3</td>
</tr>
<tr>
<td>Combination of declining balance, and sum-of-the-years-digits</td>
<td>2</td>
</tr>
<tr>
<td>Combination of declining balance, straightline, and units of production</td>
<td>2</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>229</td>
</tr>
</tbody>
</table>

Treatment of gains or losses on sale of assets: An illustration will be discussed in this regard. Suppose, the asset for which depreciation was computed earlier has been used for 8 years and that at that time, it was sold for Rs. 25,000.
At the time of the sale the asset would have appeared in the financial books of the company as follows, if the straight line method was used:

**Plant and Machinery** Dr. Rs. 50,000  
**Provision for depreciation** Cr. Rs. 40,000

When the money is received on sale, the relative journal entry would be:

<table>
<thead>
<tr>
<th>Description</th>
<th>Dr.</th>
<th>Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision for depreciation</td>
<td>40,000</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>25,000</td>
<td></td>
</tr>
<tr>
<td><strong>To plant and machinery</strong></td>
<td></td>
<td>50,000</td>
</tr>
<tr>
<td><strong>To gain on sale of plant and machinery</strong></td>
<td></td>
<td>15,000</td>
</tr>
</tbody>
</table>

(Being the gain on sale of fixed assets recorded at the time of the sale of the asset)

Note that when the asset is sold or retired, the entries relating to the fixed assets and accumulated depreciation are reversed for purposes of closing: the amount of the original cost is credited to the fixed assets and accumulated depreciation is reversed for purposes of closing, i.e., the amount of the original cost is credited to the fixed asset account and the total depreciation is debited to the accumulated depreciation account. Since the net acquisition cost in this illustrative case finally amounted to Rs. 50,000 minus Rs. 25,000 = Rs. 25,000, it can be argued that the profits in the earlier accounting period were understated through excess
provision of depreciation in the amount of Rs. 15,000. It is for this reason that many accountants argue that the gain on sale of assets should be directly credited to the retained earnings account. However, unless such gains or losses are very unusual and non-recurrent in nature, it would be more appropriate to treat them as non-operating revenue in the current period income statement in accordance with the generally accepted accounting principles which apply in this regard.

Suppose the above asset was sold only for Rs. 5,000 at the end of the 8th year. Then, the corresponding journal entry at the time of the sale would be as follows:

<table>
<thead>
<tr>
<th>Rs.</th>
<th>Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision for depreciation</td>
<td>Dr. 40,000</td>
</tr>
<tr>
<td>Cash</td>
<td>Dr. 5,000</td>
</tr>
<tr>
<td>Loss on sale of fixed assets</td>
<td>Dr. 5,000</td>
</tr>
<tr>
<td>To Fixed assets</td>
<td>50,000</td>
</tr>
</tbody>
</table>

(Being the loss on sale of fixed assets recorded at the time of the sale of the asset)

For the same reasons stated in the earlier paragraph, the loss on sale of fixed assets is not directly debited to the retained earnings account but treated as non-operating expenses in the current period income statement.
Increase in useful life due to preventive maintenance and other reasons: Sometimes companies spend very large amounts in maintenance purportedly to increase the useful economic life of the fixed assets. It is sometimes contended by some people that such amounts should be debited to the accumulated depreciation on the ground that the life of the asset has been increased. The logic behind this argument seems to be fallacious. In such cases, it would be appropriate to redetermine the useful economic life and recompute the prospective depreciation to be charged based on the modification in the useful life. If there are reasons to believe that the salvage value has definitely disproportionately increased, as compared to the original estimate, it would be permissible to make a fresh computation to bring the future depreciation in line with the revised net acquisition cost. However, in order to ensure that this does not lead to manipulative practices, changes in salvage value should be made only when it is beyond any doubt that:

(i) the salvage value has changed firmly, and
(ii) the amount of the change is very considerable and that unless it is taken into account, it would vitiate the depreciation computation.

(D) Depreciation as a Source of Finance

Depreciation can be regarded as an unencumbered source of finance. Depreciation fund can be treated as Quasi-proprietorship source of finance. It is available
to the management of a unit so long as assets are not replaced. It is, in fact, destined eventually to replace the fixed assets. This does not mean that depreciation fund generated in case of buildings cannot be used in a particular year to buy a new machine. In the short run, depreciation is the most flexible source of discretionary spending of money at the disposal of a finance manager. However, if a series of new machines are financed by depreciation - flows from a building, eventually the building itself will need replacement. Unless some provision has been made to generate the necessary funds, the company will encounter financial trouble.

Under depression conditions, a flow of cash to the company may come from depreciation. When depreciation deductions are not balanced by new investment in fixed assets, as is often the case during depression periods - when additional plant capacity is not required - an increase in depreciation fund will result in an additional source of finance, where such funds are not used for paying off loans or distributing dividend to shareholders. Working capital can be obtained only temporarily by deferring the acquisition of fixed assets during depression. In the ensuing period of prosperity, when additional plant capacity will again be needed, the investment in fixed assets may exceed current depreciation and inroads will be made into working capital to acquire
new fixed assets unless funds are obtained from some outside sources. Hence, the management must prepare for a conversion of working capital into fixed assets within a period of business expansion.

Provision for depreciation in the earnings statement, whether based on historical or replacement cost, does not itself assure funds for the purchase of new capital assets when required. Provision for depreciation is tantamount to conversion of fixed assets into current assets (Cash). At any particular moment, however, the current assets of a business may consist of bills receivable, inventories, securities, etc. Depreciation allowances do not assure that they will be held in the form of cash until used for replacement of particular assets. A business may, thus, find it necessary to resort to outside financing to acquire fixed assets, despite adequate depreciation allowances for the purpose. Some concerns maintain a replacement fund consisting of cash or securities equal to the amount of the periodic depreciation allowance to ensure that they will have the means for financing the acquisition of new capital assets.

The effect of depreciation on working capital may be illustrated as follows:
X company limited had in the beginning of an accounting year, current assets of Rs. 1 lac, and fixed assets of Rs. 2 lacs, solely financed by an equity capital of Rs. 3 lacs. Its results of operations on cash basis for the year are:

Rs. (Lacs)

| Sales | 1 |
|-------|
| Less costs: |
| Depreciation | 0.25 |
| Others | 0.75 | 1 |
| Profit | Nil |

The Balance Sheet of the X company limited at the end of the year would then show:

Rs. (Lacs) Rs. (Lacs)

| Equity share capital | 3.00 | Current assets | 1.25 |
|----------------------|------|---------------|
| Fixed assets | 2.00 |
| Depreciation | 0.25 | 1.75 |
| Total | 3.00 | Total | 3.00 |

Although the results of the company show no profit or no loss, the book value of fixed assets has declined by Rs. 0.25 lacs and those of current assets have increased.
by Rs. 0.25 lacs. As a result of gradual conversion of fixed assets into current assets, many companies have been able to take the benefit of using annual depreciation provision to cover the operating deficits or to provide funds for other purposes, when profit is earned.

It is sometimes argued that depreciation is charged primarily as a mechanism for providing funds for the replacement of the assets at the end of asset's life. This point of view can be considered logical, if a company saved cash equal to the depreciation and could use such funds to buy new assets when the old assets are retired or sold. This would be feasible only if prices are constant. However, we all know that during the last 20 years, there has been continuing inflation, particularly in the prices of fixed assets like land, buildings, machineries, etc., and, accordingly, if the business enterprise was to rely entirely on depreciation as a source of funds for replacement of assets, it would gradually become sick and die because of lack of assets.

The annual charge of depreciation may be treated as a source of long term funds since such a charge does not involve an outflow of funds. However, the cumulative depreciation on the assets will involve an outflow of funds in the year in which the relevant asset is to be replaced.

Depreciation is certainly an item of cost. It does not, however, involve any outgo of cash. The annual
depreciation leaves therefore, corresponding amount of cash at the disposal of the business. The amount of cash accruing from depreciation every year is available for the use of additional fixed assets or for repayment of any borrowings. If it remains in the business either in the form of current assets or fixed assets it becomes a part and parcel of the capital employed in the business. Further, where business makes a profit, whatever is the rate of return (after tax) earned on gross assets employed, that much rate of return is also earned on depreciation accruals used in the business. Thus, in a profit making business cash accruals on account of depreciation become available to the business in two ways. Firstly, in terms of relevant amount of annual depreciation and secondly, in the shape of return or profit (after tax) on accumulation of the annual depreciation together with the accumulated profit thereon that has remained invested in the business. Implications of this two fold nature of financial resources available from depreciation of fixed assets are that if allowance of depreciation upto 40 per cent of the cost is optionally made available, a concern capable of writing off this sizable depreciation gets virtually a greater amount of working capital free of interest from Government. It is well known that, many a company cannot afford to provide depreciation even at the existing rates under the tax laws. In the case of such companies and particularly in the case of new
industrial concerns, the Chokshi Committee has suggested an option of making no claim of depreciation in any year. In actual practice therefore, the real beneficiaries of this suggestion of claiming depreciation upto 40 per cent of the cost would be a small number of the prosperous concerns belonging to the existing established industry which is able to absorb this greater amount of depreciation against profits from established business. This option will, therefore, result in a kind of interest free loan from the Central Government to the prosperous among established industry, enabling such units to bypass the commercial banks or financial institutions for requirements of their working capital or term loans. While checking of concentration of economic power is the often declared government policy, option of claiming depreciation upto 40 per cent of cost would tend to promote such concentration and erode the government policy.

Consider the size of funds accruing from depreciation in the case of a medium scale industry, where cost of plant and machinery is Rs. 20 lakhs. In the three years period, a prosperous unit could obtain funds of Rs. 15.68 lakhs from depreciation accruals at the rate of 40 per cent (Vide : Table VII, 4). The not so prosperous can get funds of Rs. 5.42 lakhs, Rs. 7.71 lakhs and Rs. 9.76 lakhs, if it can afford to provide depreciation at the percentage rate of 10, 15, and 20, respectively.
These funds accruing from depreciation will remain invested in the business. If the business were to earn a return after tax of 10 per cent on net worth, depreciation accruals of Rs. 15.68 lakhs will earn a return of Rs. 2.16 lakhs in the two years. (1650 large public companies in the R. B. I. Sample report an average rate of return after tax exceeding 10 percent on net worth). The total cash accruals to a prosperous unit in a period of three years would thus amount to Rs. 17.94 lakhs, as compared to Rs. 6.02 lakhs, Rs. 8.50 lakhs and Rs. 10.92 lakhs in the case of not so prosperous units. It is true that greater the amount of depreciation in earlier years the lesser it will be in later years and correspondingly, amount of tax also will be greater in later years. Meanwhile the prosperous unit can use this large cash flow as an interest free loan from Central Government. (Vide: Table VII. 4).

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost of Asset, Rs. 20 lakhs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V, D, V. Rate of depreciation (%)</td>
</tr>
<tr>
<td></td>
<td>40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8.00</td>
<td>2.00</td>
<td>3.00</td>
</tr>
<tr>
<td>2</td>
<td>4.30</td>
<td>1.80</td>
<td>2.55</td>
</tr>
<tr>
<td>3</td>
<td>2.88</td>
<td>1.62</td>
<td>2.16</td>
</tr>
<tr>
<td>Total Rs.</td>
<td>15.68</td>
<td>5.42</td>
<td>7.71</td>
</tr>
<tr>
<td>Return at 10% for two years</td>
<td>2.16</td>
<td>0.60</td>
<td>0.88</td>
</tr>
<tr>
<td>Total Cash Accruals</td>
<td>17.84</td>
<td>6.02</td>
<td>8.59</td>
</tr>
</tbody>
</table>
The Companies Act requires every company to prepare a Profit and Loss Account which shall give true and fair view of the profit or loss made by it during the financial year. It is not necessary for it to make provision for depreciation of an amount equal to depreciation available in computing business income for the purpose of income-tax. The Companies Act is more concerned with ensuring that dividend is paid only from out of the profits arrived at after providing for due depreciation. A company is given latitude and option to provide for depreciation either with reference to written down value of the asset as shown by the books at the rates specified under the Income-Tax Act or a fixed amount every year in respect of each item of depreciable asset so that 95 per cent of the original cost of the asset will be written off during the same period in which 95 per cent of the original cost is written off under the written down value method prescribed by the Income-tax Act.

It is common experience that in the case of new companies or in respect of new assets, depreciation is charged in the company's books under a straight line method permissible under the Companies Act. In the initial years the charge under the straightline method is smaller than the depreciation under W. D. V. method (which is generally at a higher rate) and greater amount becomes available for distribution of dividends.
In this context, the Chokshi Committee has made the following suggestions:

(i) The existing practice of allowing depreciation on the reducing balance method, which provides for a faster depreciation in the earlier years should continue, except in the case of ocean going ships, where the existing straight line method of depreciation should be retained.

(ii) The present multiplicity of rates of depreciation and calculation of double shift and triple shift allowance involve complexity of calculation and maintaining of a separate record for each year for a variety of assets. As a measure of simplification, it is suggested that for the three categories of depreciable assets, taxpayers should have the option to claim depreciation upto a maximum rate of 10 per cent in the case of buildings, upto 20 per cent for furniture and fixtures and upto 40 per cent in the case of plant and machinery. Depreciation can be claimed at only one single rate for all assets falling within the respective categories. Different rates for different items within the same category will not be allowed. The total latitude in the choice of depreciation rates such as claiming upto 100 per cent of the cost in any year is not considered desirable as that might disturb budgetary position of the Government.
(iii) The tax incentive obtained from faster depreciation should not be frittered away by the taxpayers but be retained in the business for further development. To ensure this, depreciation claimed for income-tax purpose should be allowed only where it is actually debited to the Profit and Loss Account of the relevant year.

In the case of taxpayers who would like to avail of the option to claim depreciation at varying rates in different years to suit the working results of the business, they should be allowed to claim such depreciation in any year when an equal amount is debited to Profit and Loss Account of the relevant year.

(iv) At present, in the case of machinery and plant whose actual cost does not exceed Rs. 750, full 100 per cent deduction is allowed in the year when such item is first put to use. It is suggested that further simplification be made by allowing 100 per cent depreciation in the case of all assets (not only machinery and plant) where the actual cost of any asset does not exceed Rs. 10,000. It is not specifically stated that this 100 per cent write off should be allowed only where it is debited to the Profit and Loss Account.
Under the existing method, when any asset is sold or discarded and the written down value is more than the moneys receivable on sale together with the amount of scrap value, the deficiency is allowed as a deduction (terminal allowances) in computing business income. In cases where the moneys receivable together with the scrap value happen to be greater than the written down value, excess of the proceeds equal to the depreciation already allowed is considered as business income (balancing charge) and the balance amount of realisation is liable to tax as capital gain. Under the method of claiming depreciation at any one single rate for the year but at a different rate or nil rate for the year as suggested by the Committee, depreciation is not calculated separately for the different items of assets falling within respective three categories of assets, viz., building, furniture and fittings and plant and machinery. A lumpsum amount of depreciation for the entire block of depreciable assets in case of the three categories is claimed by reference to the written down value of the block.

This procedure involves not more than three calculations at three different rates applicable to the three categories. The suggested method does not require and call for maintaining particulars
for ascertaining the written down value of any particular asset. Any attempt to find written down value of an asset which is sold, discarded, demolished or destroyed would be too laborious and time consuming as depreciation may have been claimed at different rates for different years. Consequently, it is suggested that there should be no terminal allowance or balancing charge in the event of sale or discarding of an asset. It is suggested that the entire sale proceeds (including scrap sale, insurance and savings money realised) should be deducted and the written down value of the asset block of the relevant category be determined accordingly. Just as any acquisition of asset would tend to increase the written down value of the asset block, sale proceeds in the event of sale would reduce the written down value of the block. In this process, it is only when the sale proceeds exceed the written down value of the block of assets of a particular category that the excess should be taxed as business income. Until the value of the block of assets is written down to zero, there would be no separate calculation for deduction of any terminal allowance or addition of income by way of balancing charge.

(vi) As a corollary to the adoption of a single rate, it is suggested that provisions for double shift and triple shift allowance are not necessary.
(vii) The Committee has recognised that over the long run every kind of business expenditure is a revenue expenditure. It recommends, therefore, that all items of expenditure that are not deductible as revenue expenditure and are not eligible for depreciation should be amortised against business profits over a period of 10 years.

Let me discuss the above suggestions. The Committee has advocated continuance of the existing practice of allowing depreciation on a reducing balance method. The outstanding merit of reducing balance method for the purposes of income tax is that the total claim for depreciation over the entire life of the asset never exceeds the actual cost. Although the amount of depreciation allowable every year goes on diminishing, it never reaches zero in mathematical terms and there is thus no possibility of the total deduction by way of depreciation exceeding the original cost of the asset. Taxpayers may or may not maintain records of the previous years when the assets were acquired and of the depreciation claimed in earlier years. In the absence of such records reducing balance method of allowing depreciation clearly affords a satisfactory safeguard to the revenue authorities against the grant of any excessive allowance by way of depreciation. This method is, therefore, eminently satisfactory for the purpose of computing taxable income.
Reducing balance method usually with a higher rate makes however, the charges for depreciation significantly greater in the earlier years than depreciation under the straight line method permitted under the Companies Act. Straight line method seeks to write off 95 per cent of the cost of asset in uniform amounts every year during the same time period as 95 per cent of the cost is written off under the reducing balance method. A smaller deduction by way of depreciation results in smaller amount of loss or a greater amount of profit available for distribution of dividend. This is of particular advantage in early years when market for the product is to be fully developed and capacity of the plant is not sufficiently utilised. The greater amount of profit available for dividend enables the investors to expect receiving of dividends fairly early and makes financing of the enterprise feasible. In India where rates of depreciation for tax purposes generally range between 10, 15, and 25, per cent, many a company adopt straight line method of depreciation for annual reporting of working results.

Reducing balance method provides faster depreciation in earlier years. In the case of companies where depreciation is charged in the books on a straight line method and on reducing balance method for purposes of computing taxable income, a greater amount of depreciation is allowed in earlier years tending thereby to reduce the taxable income and the tax payable. This reduced amount of tax is taken into account by the company for ascertaining
distributable profits, without taking into account the correspondingly greater depreciation allowed for tax purposes. As observed by Chokshi Committee, this tax advantage which flows from the faster depreciation allowed in early years should not be permitted to be frittered away in the payment of dividends but should be retained within the business for further development. This view seems prima facie reasonable. In order to secure this objective the Committee recommends that the quantum of depreciation claimed for tax purposes as recommended by it should be actually debited to the Profit and Loss account of the relevant year. This stipulation creates a dilemma because reducing balance method remains acceptable for computing taxable income; but this tax depreciation appears excessive from commercial considerations. Both the methods appear suitable for their respective purposes; and yet it is desirable to ensure that the tax advantage is not frittered away.

It should be possible to reconcile both these viewpoints by ascertaining the element of tax incentive obtained from the greater amount of depreciation claimed for tax purposes. This element of tax incentive should be separately reckoned by the company by a debit to Profit and Loss account and credit to Taxation Reserve Account. In later years depreciation for tax purposes will fall short of depreciation in the books on a straight line method. The differential amount of tax applicable to the
greater amount of profits for tax purposes should be withdrawn from taxation reserve created in earlier years. Although excess depreciation claimed in earlier years will be equivalent to shortfall in later years, taxation reserve created in earlier years may or may not be sufficient to meet the excess tax payable in later years. This would be so because the tax advantage claimed in earlier years and tax suffered in later years may not be the same owing to changes in the tax rates applicable from year to year. However, undeserving tax advantage could be eliminated to a significant extent in this manner. The process is illustrated in Table VII. 3.

Table VII. 3

<table>
<thead>
<tr>
<th>Year</th>
<th>W.D.V. at the beginning of the year (Rs.)</th>
<th>Tax Depreciation (15%) (Rs.)</th>
<th>Book Depreciation (5%) (Rs.)</th>
<th>Difference (Rs.)</th>
<th>Tax Advantage (Rate 60%) (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10,000</td>
<td>1,500</td>
<td>500</td>
<td>1,000</td>
<td>600</td>
</tr>
<tr>
<td>2</td>
<td>8,500</td>
<td>1,275</td>
<td>500</td>
<td>775</td>
<td>465</td>
</tr>
<tr>
<td>9</td>
<td>2,726</td>
<td>410</td>
<td>500</td>
<td>(90)</td>
<td>(54)</td>
</tr>
<tr>
<td>15</td>
<td>1,026</td>
<td>153</td>
<td>500</td>
<td>(347)</td>
<td>(208)</td>
</tr>
<tr>
<td>19</td>
<td>538</td>
<td>81</td>
<td>500</td>
<td>(419)</td>
<td>(252)</td>
</tr>
</tbody>
</table>

Suppose that the cost of machine is Rs. 10,000 and applicable rate of depreciation under the reducing balance method is 15 percent and the approximate rate on straight line method comes to 5 per cent. Where a company decides
to provide depreciation in its books on straight line method, depreciation allowed in computing taxable income exceeds book depreciation by Rs. 1,000 in the first year and by Rs. 775 in the second year. Tax advantage obtained by the company, if the tax rate is 60%, is Rs. 600 in the first year and Rs. 465 in the second year, tending to decline in every following year. Actually, in the ninth year, book depreciation will exceed tax depreciation by Rs. 90, and the company will have to fork out greater amount of tax by Rs. 54 in relation to book profits. In the fifteenth and nineteenth year the extra tax would be Rs. 208 and Rs. 252 respectively.

In the earlier years when the company derives tax advantage by adopting straight line method of depreciation, this tax advantage can be neutralised by reducing net profit through debiting Rs. 600, Rs. 465 etc., to Profit and Loss Account and credit to Taxation Reserve Account. In the later years when book depreciation happens to be greater than tax depreciation, this Taxation Reserve can be utilised for increasing the net profits by crediting Rs. 54, Rs. 208, Rs. 252 etc., to Profit and Loss Account and debiting correspondingly Taxation Reserve Account. It is possible in this manner to satisfy tax authorities that tax incentive obtained through faster depreciation for tax purposes is not frittered away by taxpayers. Neither would it be necessary to charge in the books the same amount of depreciation as is claimed for tax purposes.
The Chokshi Committee has needlessly prescribed a rigid approach of insisting on actual debit to Profit and Loss Account of the amount of depreciation claimed for tax purposes. This it did with a view to preventing companies from taking advantage of the provisions concerning depreciation of lower amounts and distributing dividends to shareholders. But the illustration in Table VII. 3 would help clarify that it is not the whole of additional amount of depreciation claimed for tax purposes that need be debited 'below the line' in the Profit and Loss Account but only the relevant amount of tax advantage derived by the company.

It is also necessary to discuss the views of the Sachar Committee at this point. The Committee is against frequent changes being made by companies in the method of charging depreciation, and observes that "it is inconceivable that there should be different methods for different purposes for determination of profit". It has suggested that a company shall have an option to provide depreciation with reference to Written Down Value of the assets as shown by the books at the rates specified by the Income-Tax Act and the rules thereunder, or on any other basis approved by the Central Government which has the effect of writing off by way of depreciation 95 per cent of the original cost to the company during the same time period as is taken under the W.D.V. method. It has further recommended that, "provision for depreciation including arrears
of depreciation should be compulsorily provided and not by way of notes on accounts*.

These recommendations run counter to those of the Chokshi Committee. While the Chokshi Committee declares that basic concept of depreciation as a charge in determining the true and fair profits under the Companies Act should not be disturbed, it advocates, at the same time, that a tax payer may choose not to claim depreciation at all in any year or choose to claim depreciation in any amount up to the amount arrived at the maximum rate specified in law, which in the case of machinery and plant can be 40 per cent. The Chokshi Committee appears to consider claims of depreciation for tax purposes as a matter of expediency. The tax payer may vary the rate of depreciation from year to year as he chooses and as suits his convenience.

A single composite rate for all assets in each of the three categories, buildings, furniture and machinery does bring about simplification. It reduces the number of calculations involved in charging depreciation at various applicable rates for different groups of items of machinery and plant. It also makes the task of ascertaining separately written down values in respect of an asset group carrying different rates of depreciation quite brief. This simplification, however, cannot be had without its side effects. Firstly, if a single composite rate is to be adopted consistently from year to year,
the task of devising such a rate is not easy. A composite rate which would adequately cover shortlived assets such as rollers, moulds, dyes, heavy duty equipment and assets with a variously longer range of life is difficult to fix. Further, it would utterly miss to reflect changes in the asset mix between shortlived and longlived assets. Fixing of a reasonable composite rate becomes far more important if it is also intended that tax advantage obtained from faster depreciation is to be neutralised. Moreover, in actual practice, majority of business firms do not own assets of every kind where all the existing different rates of depreciation have to be applied. It is primarily in the case of certain big industries where there exists considerable diversification of products that several rates of depreciation come into play. While a lesser number of rates will indeed reduce the number of calculations, a wide range between the lives of different kinds of assets does not leave a great room for making any significant changes.

(F) Provision for Depreciation and Cotton Textile Mills of Ahmedabad

A reference to Table XIII and Table XIX indicated that the share of provision for depreciation in total funds had declined marginally from 30.60% during 1966-70 to 29.30% during 1971-75. A similar decline was noticed in the variability factor from 24.59 during the former
period to 23.19' during the latter period. This means that the policies in relation to depreciation on fixed assets followed by the cotton textile mills of Ahmedabad were fairly uniform during both the periods and the degree of uniformity had improved a little during the latter.

Exceptionally in the case of unit Nos. 4, 40, and 49, the share was above the overall average during both the periods. It had declined in all such cases during the latter period. As against this, the share of unit Nos. 3, 25, 28, and 37, was below the overall average during both the periods. The share of unit No. 3, had declined further, whereas, that of the other three units had increased during the latter period.

In the case of unit No. 3, the share had declined by 43.30%, from 17.39% during 1966-70 to 12.13% during 1971-75. In fact, the annual rate of growth in depreciation fund on plant and machinery (Vide : Table XV) had declined from 14.31% during 1966-70 to just 3.76% during 1971-75. The corresponding annual rate of growth in plant and machinery (Vide : Table XIV) during 1966-70 was about 32.35%. However, the same had declined at a fantastic rate to just 0.036% during 1971-75. This means that during the latter period, there was practically no addition to plant and machinery in this unit.

The absence of proper provision for depreciation, repairs and maintenance and lack of modernisation, appeared
to be some of the factors responsible for the low profitability in the case of this unit. In fact, on account of losses, it was closed and was declared a 'sick' unit to be ultimately taken over by NTC, Gujarat.

As against this, in the case of unit No. 40, the share of provision for depreciation in total funds was above the average during both the periods. However, the same had declined from 40.40% to 30.15% during the latter period. In fact, the annual rate of growth in depreciation fund on plant and machinery (Vide: Table XV) had declined from 19.48% during 1966-70 to 16.93% during 1971-75. This is surprising since the annual rate of growth in plant and machinery (Vide : Table XIV) had increased from 5.84% during 1966-70 to 13.83% during 1971-75. This means that plant and machinery doubled during the latter period of this study but in the case of other items of fixed assets, the rate of growth was marginal only.

There seemed to be two reasons for this position:

(i) The rate of depreciation seemed to be higher than the average as adopted by other textile units of Ahmedabad.

(ii) The management appeared to be conscious about the need for replacement in future. The earning record of this unit was fairly good. It had earned profits at the rate of about 22.41% of net worth.
throughout 1966-75 on an average. It seemed to have followed a policy of providing for depreciation keeping in mind the requirements of replacement and modernisation.

The study of Table XV relating to rate of annual growth in depreciation fund on plant and machinery indicated the following:

(i) The number of textile units of Ahmedabad having an annual rate of growth of 20% or more had declined from 9 during 1966-70 to 5 during 1971-75.

(ii) The number of units with an annual growth rate in depreciation fund of less than 5% p.a. had declined from 15 during the former period to 8 during the latter. Whereas the number of units having an annual growth rate in depreciation fund between 5% to 20% had increased from 26 to 37 during the latter period.

(iii) On the whole, the annual rate of growth in all the cotton textile units of Ahmedabad had increased marginally from 10.10% during 1966-70 to 11.90% during 1971-75.

Some exceptional cases are noteworthy. In the case of unit No. 23, the annual rate of growth in depreciation fund on plant and machinery was above the overall average during both the periods. It was 23.52% during 1966-70, but had declined to 14.62% during 1971-75. One reason for this seemed to be the decline in the annual growth
rate in plant and machinery from 12.93% during 1966-70 to 8.11% during 1971-75. The management possibly might have adopted a policy of relying on long term loans for this purpose. However, the share of secured loans from banks and other financial institutions in total funds had reduced almost to half from 48.25% during 1966-70 to just 22.45% during 1971-75. Another possibility was that during the latter period, the management might have decided to rely on ploughed back profits and the retained earnings might have fallen short of in terms for need for expansion.

In the case of unit No. 37, and annual rate of growth in depreciation fund for plant and machinery was above the average during both the periods of this study. It was 24.56% during 1966-70 and had increased to 25.49% during 1971-75. The annual rate of growth in plant and machinery was 63.43% during 1966-70. However, the same had declined to 12.60% during 1971-75. An increase in the annual growth rate of depreciation fund and a fairly large reduction in the growth rate in plant and machinery seemed to indicate that the unit had adopted a higher than average rate of depreciation on the plant and machinery. The investment in fixed assets including plant and machinery had declined during the latter period. The share of reserves in total funds had declined from 39.92% during 1966-70 to 28.50% during 1971-75, and therefore, it seemed that the unit had to depend on secured loans for working capital purposes. This explained an
increase in secured loans from 10.99% during the former period to 32.53% of total funds during the latter. It may be inferred that the unit did not have any plan of expansion during the latter period, most probably on account of scarcity of long term funds.

In the case of unit No. 50, the annual rate of growth in depreciation fund on plant and machinery was below the overall average during both the periods. It was just 0.006% during 1966-70 and had increased to 5.38% during 1971-75. The annual rate of growth in plant and machinery was also below the average in case of this unit during both the periods. It was 2.13% during 1966-70 and 4.57% during 1971-75. The profitability record of this unit was not satisfactory. The unit had earned less than 3% on net worth by way of profit during 1966-70 and the average figure of net profit was negative during 1971-75. This explained the fact that it did not require any large increase in fixed assets including plant and machinery. There was no case for any expansion of the unit.

My study of Profit and Loss Accounts and Balance Sheets of the fifty cotton textile units of Ahmedabad and the reference to Table XIV relating to annual growth in plant and machinery indicated that:

(i) The number of textile units with an annual rate of growth in plant and machinery of less than 10% had declined from 36 during 1966-70 to 32 during 1971-75.
(ii) The number of units with an annual rate of growth between 10% and 30%, had increased from 12 during the former period to 16 during the latter.

(iii) The number of units with an annual rate of 30% and above had remained unchanged, i.e., 2 in each period of study.

(iv) The average rate of annual growth for all the fifty units had increased marginally from 9.40% during 1966-70 to 10.20% during 1971-75.

Exceptional cases of unit Nos. 3, 7, and 33, are noteworthy. In case of the unit No. 3, the annual growth rate was 32.36% during 1966-70 and had declined significantly to 0.036% during 1971-75. It seemed that during the former period, the unit had over-invested in fixed assets like plant-machinery and could not utilise them to the full capacity. The over-investment of funds in plant and machinery and other fixed assets seemed to have resulted in a shortage of working capital funds, which was one of the major factors responsible for the closure of the unit and ultimately it was taken over by NTC, Gujarat.

The annual rate of growth in the case of unit No. 37, was above the overall average during both the periods. However, the annual growth rate had declined significantly from 63.43% during 1966-70 to 12.60% during 1971-75. A sharp increase in the prices of plant and machinery seemed
to be one of the factors for the decline in the rate of growth in plant and machinery.

In the case of unit No. 7, the annual rate of growth during both the periods of study was below the overall average. It was just 1.80% during 1966-70 and had increased to 7.27% during 1971-75. It seemed that the unit had adopted some plans of expansion during the latter period only. It may be noted that the share of secured loans in total funds had declined from 38.40% to 33.48% during the latter period. However, it had obtained unsecured funds under Deferred Payment Guarantee Scheme equal to 3.73% of total funds during 1966-70, which had increased to 4.52% during 1971-75. It seemed to have financed a part of the increase in plant and machinery with the help of DPG funds and ploughed back profits. It did not seem to rely on banks or financial institutions for the purpose and that may be the reason why it had below the average rate of growth in plant and machinery.

In the case of unit No. 33, the annual rate of growth in plant and machinery was very poor during both the periods. It was just 0.70% during 1966-70 and had increased marginally to 0.88% during 1971-75. This unit had not adopted any scheme of expansion as it could not be justified. Its profitability record had remained unsatisfactory during both the periods. The share of reserves in total funds had declined from 4.22% during 1966-70 to just 2.93% during 1971-75. The share of secured loans in total funds had also declined during the
latter period. It seemed that it did not have the need for expansion and did not have necessary finance for the same. This unit being declared 'sick' and taken over by NTC, Gujarat could have found no difficulty in getting the necessary assistance from the Government financial institutions on economical rates. It seemed that the management had failed in taking the benefit at the right time. In addition to this, sufficient provision for depreciation was not made by the unit especially during the latter period; i.e., The annual rate of growth in provision for depreciation in the case of plant machinery had actually declined from 6.51% during 1966-70 to 4.00% during 1971-75.

It may be concluded that:

(i) The provision for depreciation was a major source of finance for the fifty cotton textile units of Ahmedabad during both the periods. However, the share of depreciation fund in total funds had declined marginally during the latter period.

(ii) The overall annual rate of growth in depreciation fund on plant and machinery had increased marginally during the latter period as compared to the former.

(iii) The average rate of annual growth in plant and machinery had also increased marginally during the latter period as compared to the former.

(iv) This leads one to believe that the respective rates of depreciation on plant and machinery had remained almost unchanged during both the periods.
(v) Non-provision of sufficient depreciation seemed to be one of the factors responsible for the sickness in cotton textile industry of Ahmedabad.

(vi) Very few units seemed to have adopted plans for replacement or modernisation. The inflationary escalation further aggravated the situation. One of the major factors responsible for this state of affairs was the paucity of long term funds.

It may be suggested that:

(i) The basis for calculation of depreciation may be changed from historical cost to current replacement cost.

(ii) Additional provision for depreciation should be made in order to fill the gap between the amount of depreciation as per historical cost and that as per current replacement cost. In so far as the cost-escalations for the past years are concerned, a phased programme of annual provisions needs to be adopted.

(iii) Such an additional amount of depreciation should be invested in earmarked securities and be allowed as admissible deduction for the purpose of computing taxable profits.