Chapter – 6

Accounting for depreciation price level Changes

➢ Arguments in support of price level changes
➢ Treatment of fixed assets under A CC Ltd and Prism Cement Ltd.
➢ Effect of Price Level changes of the A CC Ltd and Prism Cement Ltd.
➢ Arguments against the price level changes
➢ Accounting entries in the A CC Ltd and Prism Cement Ltd.
CHAPTER - 6

Accounting for Depreciation price level Changes: -

The important objective of accounting is the preparation of final accounts in such a way that they give a true and fair view at the business operations and the financial position of the concern. In other words, the income statements should disclose the true profit or loss earned by the concern during a specific financial year, while the balance sheet must show a true and fair view of the financial position of the business on a specific date. We know, that final accounts are prepared in monetary units i.e. rupee in our country. They can serve very well the basic objective if the value of such monetary units remains stable. This is possible only when there is stability in the price levels, but we know that over a period of time, the price has not remained stable. There have been inflationary as well as deflationary tendencies. The inflationary tendencies have been more frequent and since 1931 they have been dominating economy of whole the world. It is increasing being accepted that in spite of all fiscal, monetary and physical measure taken by government price level is change in very fast.

In view at the above, it has been increasingly felt that the accountant will be failing in his duties, if he continuous to remain contempt with the time honored and traditional system of accounting by historical cost. He should move with the time and evolve a suitable system at accounting to deal with the changing price levels.
With more than fifty years history, the accounting for price level changes had its inspection in India only during last decade. This revolution in the field of accounting has been satisfactorily welcomed here. The finding of an Indian council of social science research project entitled "Industry Practice in Inflation Accounting in India" assets that though in about 90% cases historical accounting continued, cent percent respondents felt the application of inflation accounting (as they called it) useful. While the debate on the accounting method to come up with price changes in continued, a sense of consensus has by now, emerged in the accounting world over the issue that monetary values, in financial statements be made more comparables by mitigating effects of changes in the value of money.¹

Conventional financial statements based on historical records do not reflect true and fair picture of trading results and financial position of a business entity under the conditions of inflation and thus they mislead internal and external users of profit and loss account and balance sheet. The profit’s show by profit and loss account under conventional system of accounting are not correct because profits are as certain by matching current revenues with current and non current cost. Besides this, monetary assets and liabilities also affect profit position during periods of rising prices. It monetary assets are held during periods at price increase, the owners will experience purchasing power losses; monetary liabilities held during such periods result in purchasing power gain. Conventional accounting in historical costs merely protects the money capital and not the purchasing

power units in the original capital. Thus, the capital invested is not maintained intact in real terms. The Unadjusted accounting information (for price level changes) is not useful for management in its decision making as the data on the basis of which decisions are made are mixture of various purchasing power of divergent times.

The existing accounting practice of preparing financial statement are based on accounting assumption, viz., the monetary postulates, which state that the value of the monetary unit is stable. Apparently, the financial position shown by position statement and profits shown by the income statements of concern may be ‘true and fair’ under the stable price economy. But in the real world, the rupee or any other monetary unit does not maintain a stable value in terms of real goods and services. One unit of money commands less goods services in the case of high inflation and vice-versa.

In case of incessant and enormous inflationary trend, the financial statements are unable to reflect the effect of such changes in purchasing power of money. As a matter of fact, the conventional financial accounts do not present the real picture of operating efficiency and financial status at a concern. Because, under the conventional accounting concept, fixed assets may be understated profit may be overstated, under charged depreciation may cripple the concern and taxes, dividends, bonus etc. may be paid out of capital, which is a clear violation of section 100 of the Companies Act, 1956, and the inventory may be unrealistically valued.
There is no way to protect a cement factory against the effect at price level changes but its consequence can be reduced through the method which would use fixed assts charges on the basis of replacement cost instead of historical costs. Thus whether depreciation charges will be based on replacement cost or not is an important accounting question. The views of accountants, economists, financial experts, industrialists and scholars can be divided into two parts i.e., for and against the price level changes.

**Arguments in support of price level Changes**

If the depreciation accounting is based on price level changes, then the cement produced with the help of such plant and machinery should bear depreciation charges based on price level changes. For example, suppose a cement producing plant is purchased for Rs. 4 Crore and we have to replace this plant after five years. We will have to pay Rs. 5 Crore. It means that capital represented by the cement plant is Rs. 5 Crore instead of Rs. 4 Crore. It also means replacement value of cement plant must be recovered out of the gross proceeds of cement company before that cement company can be said to have made a profit. It is not enough to recover historical cost of cement plant, if in the mean time that cement plants may have lost part of its purchasing power through price level changes. They argue that it is the purchasing power originally invested that has to be recovered.

If price level changes are not taken into consideration:

(i) The real financial position and real earnings from operations would
not be brought out in annual accounts, in other words, while these annual reports might be ‘true’ they would not be fair to the shareholders for whom these were meant.

(ii). Dividend might some time be paid out of capital, which was against the Company’s Act of India.

(iii) The Financial report at one year would not be comparable with those of another and even more important, the financial report of one unit would not be comparable with those of another.

Price level changes are helpful in the appraisal of managerial effectiveness of cement companies in terms of the preservation of current rupee equivalent to the capital invested in the business. It is helpful in the analysis of earning power of cement company in terms of current economic back drop .It is also helpful in the determination and justification of sound wage policy and negotiation with labour unions.

It is the duty of the management to match revenue and cost of the same time dimension. The only correct evaluation of the service of capital equipment in any time period should be on the basis of price level changes prevailing in that period.

A unit cannot be regarded as operating successful in a particular year unless the current flow of revenue from customers is sufficient to cover cost of materials consumed and the current cost of plant capacity consumed as well as taxes and other charges it provides a capital
attracting level of net earning for stock holders. In addition to this, it price level changes are not taken into consideration it falls into inefficiencies because of the appearance of good profit when price are rising. It price are failing the accounting treatment makes managerial effort increasingly ineffective. It can further be added that if the price level changes are not taken into consideration the result is that the best choice of products may be over looked.

Effect of price level changes of depreciation in the published accounts helps to establish a realistic price for a unit’s equity capital and there by tends to reduce the danger of takeover bids. It is also an accepted convention that the cement industry should finance its own re-equipments. Therefore, unless the individual accumulated sufficient sums in its provisions for depreciation to finance re-equipment it would in any prolonged period of rising prices find it self-unable to carry on operations on the same scale or at least it would be in an unsound financial position.

Price level charge are important in planning property utilization, in making departmental comparison, in pricing policy, in determining insurable value, in setting up maintenance standards, in deciding when to retire and so on. Indeed in any period of repaid technological change and sharply moving prices, it is imperative that date of replacement cost should be available as a basis for administrative decisions. Adding to this, most lenders seek replacement of loans made to finance equipment purchases over period shorter than the estimated economic service life of the fixed assets. In other words, if current costs for consumption of fixed assets are not matched against revenues, accounting
profit will be overstated. The profit is further overstated for the recovery of other costs, such as salaries, rents etc. Besides these, depreciation and cost of materials are also made out of revenue at a lower rate i.e. at historical cost instead of higher current cost.

Price level changes are necessary for the determination of Government long range policy for the control of the economy through profits, taxation etc. It is also necessary for the determination of managerial policy with respect to pricing, credit, dividends etc. In the case of cement industry, the stockholders interest is not merely in certain amount of money but in the yield from going cement factory and this could be done with the price level changes.

With the help of price level change, revenue statement bears a charge for services of the fixed asset. The balance sheet is more representative of the actual state of affairs. Showing costs at current figures and sales at current value is the only logical method of calculating the results of a year’s operation. Management should show clearly and precisely what has happened and it should be able to formulate policy and make plans with no misunderstanding regarding the result shown in the accounts further, the current values of the fixed assets show the true value of investment in the cement company.

Treatment of Fixed Assets under Price Level Changes: -

Generally, four methods are popular to disclose the effect of
price level charges upon fixed assets. These are stated below:

(i) **Replacement cost method of dealing with fixed assets:**

The object of the replacement cost method of dealing with fixed assets is to make charges to profit and loss account to provide the amount needed to meet the cost of replacement. Considerable uncertainty is attached to the calculation required by the replacement cost method unless an asset is to be replaced with in a very short period. The replacement cost cannot be estimated with any accuracy and the method, therefore leaves wide a scope for extremes of personal opinion is determining each year the charge to be made in computing profits.

In conditions where prices continue to rise, the uncertainty of the method is emphasized because the estimated replacement cost of assets increases year by year. If each year’s charges are calculated on the basis of one year’s proportion of the replacement cost estimated at the time of making the calculation, then the aggregate of the amounts so provided will not be sufficient to meet the actual cost of replacement. In order to meet this difficulty, if the calculation for each year is made on a cumulative basis so as to make up the deficiency in past provisions, the effect would be to place undue burdens upon particular years. On the other hand, if the deficiency were not met well, the amounts shown as profits would not have been arrived at after providing for the replacement of fixed assets. In the letter event, the effect of applying the method would be to show the profits as
each year amounts, which are neither monetary profits nor profits after providing fully for the replacement of fixed assets.

(ii) The writing up of fixed assets:

The writing up of fixed assets has the effect of treating the business as ceasing and starting afresh on a new basis as for the date of writing up and this is why it is in practice considered to be appropriate and desirable in certain special circumstances such as where a subsidiary is acquired and the assets are writing up to reflect the cost to the acquiring company or where subscriptions for new capital are invited on the basis of a current valuation of the assets. If fixed asset are written up the subsequent charges for depreciation will be the amount required to amortize the written up amount of the assets over their remaining life.

The figures shown, as profit for years subsequent to the writing up will therefore be arrived at after charging depreciation on amounts, which are neither the historical cost nor the estimated replacement cost of the fixed assets. If the writing up where not based on a legally established or generally accepted index there would be wide be wide scope for the factor of personal opinion in so computing depreciation charge. The method also involves an inconsistency similar to that arising under the replacement cost method. At the time of writing up, the excess of the written up amount over the historical cost of the assets concerned would be treated, in balance sheet as a capital reserve, later when the written up amount has been fully amortized by subsequent depreciation charges, the reserve could become available for distribution to proprietors although it will never have appeared as profit in the profit and loss account.
(iii) The **Current value methods**

The object of the current value method is to express charges for consumption of fixed assets in current values and not in terms of the monetary cost of the assets consumed.

Charges for fixed assets would not be regarded as the spreading of historical cost or as provisions for future replacement. They would be regarded as a measurement of asset consumption during the year, calculated by applying the depreciation rates to the estimated current value of the fixed assets instead of their historical cost. Broadly, the effect would be that the charges in any particular year for depreciation of fixed assets would be adjusted to approximately what they would have been, if the assets had been purchased at prices ruling in that year instead of when they were in fact purchased. Some advocates of this basis of ascertaining profit suggest that the method by which the current value of fixed assets is estimated should be that best suited to the particular type of business, for example valuation by company’s engineering staff of current insurance value or price indices accounting to the year of purchase. Such a proposal serves to emphasize the dependence of the method upon personal opinion.

In a period of rising prices when current values are greater than historical cost, the depreciation charges calculated on current values would exceed depreciation calculated on historical cost and the method requires this excess to be shown in the balance sheet as a capital reserve. This would involve the inconsistency that an amount, which is treated as a deduction in computing profits, is recognized in the balance sheet as forming part of the
interest of the proprietors and could even become available for distribution to them in the event of the reserve being regarded as no longer of a capital nature. In a period of falling prices when current values are less than historical cost, the method would not be capable of application unless an additional charge were made to provide for the full amortization of capital expenditure actually incurred.

As already indicated the current value method does not purport to be a means of providing for the replacement of fixed assets. Therefore, if prices continue to rise and it were desired to accumulate the full amount required to replace fixed assets, it would be necessary to set aside additional sums over and above the depreciation charges calculated on current values. These additional sums would to treat in the profit and loss account as transfers to reserve. The total reserve shown in the balance sheet under the current value method would then be the same as that which can be achieved under existing accounting principles, but where as under existing principles, the creation of that reserve would be shown in the profit and loss account as having been made out of profits, under the current value method part of the amount taken to reserve would be treated as stated in the preceding paragraph as a charge in arriving at profits.

(iv) The index method of adjusting accounts to reflect change in the purchasing power of money

This method is not strictly a proposal for change from accounting based on historical cost; it is more in the nature of a proposal for adjusting accounts which have been prepared on the basis of historical cost. The theory of the index method is that if there has been a change in the
purchasing power of money between the time when a transaction was entered into and the date as on which the account's are prepared the currency in which the transaction took place was a currency different from that how in use and must be converted into the new currency. For the conversion process an index of purchasing power would be used.

Application of the theory underlying the index method would require an index, which represents charges in the purchasing power of money and not indices of change in the prices of particular articles. If an index of purchasing power were not used, it would be necessary to use different indices for various items in the account of any one business, this procedure would be means of applying the current value method to stock in trade and depreciation but it would not measure the effect of change in the general purchasing power of money which is the object of the index method. The view might be taken that the use of an accurate index of changes in general purchasing power is not important and that any reasonable index could enable the effects of such changes to be measured with sufficient accuracy, provided the same index were used by all business. On the other hand, prices do not move uniformly for all articles and commodities so that the application of a general index to particular business could well be inappropriate.

If it were established that the theory of a general purchasing power of money is valid and a satisfactory index could be prepared, there would remain the important question of the purchase for which the index method is to be applied. If it were used merely as a means of measuring the effects on the affairs of a business of changes in the purchasing power of

223
money, for the purpose of giving this information in statements supplementary to accounts prepared on the basis of historical cost, if might give information which would be of interest to the management and proprietors. If however, the index method were accepted as a means of introducing a new conception of profit, it would carry implications, which extend for beyond accounting matters.

**Arguments against the Price Level Changes:**

It is extremely difficult to forecast the effect of price level changes. Depreciation charges based on price level changes give no assurance of the recovery of money adequate to make replacement at such figure which will prevail at the date of replacement. If the effect of price level changes is incorporated in books of accounts it is necessary either to tax the capital gain accrued in the revalued fixed assets or to let this capital gain escape from taxation. This special type of capital gain is not realized through sales but from use of more valuable plant and machinery.

Replacement of fixed asset is an important financial policy in decision- making. It is however, different from the problems relating to fixed assets accounting. Any concept, which recognizes these two as the same thing is illogical, because it means that charges of the fixed assets are unrelated to the expiration of the usefulness of the fixed assets.

Any attempt to predict the price level changes in the future could not be more than intelligent guesswork. How can we calculate yearly
charges relating to fixed assets are on an unknown future amount? If we incorporate effect of inflation in books of account, it will involve tremendous difficulties of knowing whether or not; fixed assets will intimately be replaced in same kind. Another problem is to distinguish between in what manner replacement of fixed assets and expansion of fixed assets will be made.

In a world of fast technological changes when fixed assets is replaced, it is not likely to be replaced by an exactly the same assets. It is generally known that new asset will always be improved with new features and it will be more efficient than the predecessors. However, it is very difficult to say how much of the price of the new assets is because of the more efficiency and improvement and how much strictly for the assets in its old form. Because there is no generally accepted method of ascertaining what replacement cost should be? Secondly, it is not at all necessary that when the life of assets is over an asset of the same category should replace it. It the firm may decide to discontinue its business altogether, the question of the replacement of asset certainly does not arise and therefore there would be no such thing as replacement price. Further more; it would be a mistake to consider the financing of a new asset as the prime function of keeping records of an old asset. Expiration of the service capacity of an old asset is a matter of financial policy.

The concept of price level change fails generally because of the doubt as to the validity of subjectivity of determination of future cost and because of the steady progress in technology. The vast body of common and statutory low and legal precedent innumerable contractual and business
relationships and many regulatory provisions are presently founded on existing accounting practices. The upward movement of price have occasional an increasing general awareness of the instability of the rupee as a unit of value measure. There is no clear indication that the business, stockholders, employees and the general public either desire or can now accept it without considerable confusion and departure from historical cost.

Application of the logic of price level changes in time of depletion has created very typical problem because it would mean depreciation is charged lower and the profit would be higher and payment of profit to the shareholder in from of dividend will be also be higher. This will not be permissible in any case because such profit is not real profit and such dividend deemed out of capital.

Income tax authorities did not recognize the new assets values and will not permit depreciation to be allowed on the present day value except on strict cost basis. In the Indian Companies Act 1956, depreciation has to be charged on cost basis and any excess over the amount thus calculated was to be treated as on accumulated profit and to be shown as such. The cement units linked to charge depreciation on price level changes when price was rising, it was doubtful whether they would agree to the use of the method when prices were falling because the financial statement were prepared only on basis of cost which is likely to present a true & fair picture of the financial state of affairs of the concern. It may note that if the costs of fixed assets are being shown at cost, which is far below the present day value, the depreciation charge allowed by income tax authorities will also be low and the company would be paying higher income Tax. Companies
do not accept this. Government has also not taken care of this chronic problem.

Fixed assets accounting and effect of price level change on cement industry

For well over five decades the subject of price fluctuation in fixed assets accounting has raised doubts about the validity of the assumption that fluctuation in value of money is ignored. The most important of this basic principle now a serious challenge is the recording of fixed assets charges based on historical cost without any additional amount to cover the increased cost of replacement based on current price level.

The changing value of the rupee distorts the profit and loss account so that the reported net income ceases to be synonymous with profit. The success of the whole accounting system depends upon the truthfulness of accounting the value of money. In the field of physical measurement, the need of conversion of unlike unit to a common denomination is universally recognized. Thus, no one would dream of adding short terms and long terms or meter and yards-without conversion and in the field of financial measurement conversion is old story in measuring changes in real wages, in exports and imports, in gross national products and so on.

The capital represented by fixed asset must be recovered out of the gross proceeds from the business before that business can be said to have made a profit, And it is not enough merely to recover the same amount
of money as was spent on the original asset, if in the meantime that may have not lost part of its purchasing power through a rise in the price level. If the amount of purchasing power that was originally invested, has to be recovered.

We can divide the field of accounting in four categories, i.e., financial accounting, cost accounting, management accounting and tax accounting. One can try to judge the application of price level changes for each category. All the three cement companies under this study are following historical cost basis for tax accounting purposes. For financial accounting purposes two cement companies are charging depreciation on historical cost basis, while one company is providing depreciation on revalued figure of the fixed assets in other words, we can say that there is no such cement company in my study, which is following replacement cost principle for tax and financial accounting purposes. For cost accounting purposes A.C.C. Ltd. and Birla Corp. Ltd units are following replacement cost basis, Prism cement Ltd is following revaluation basis, For management accounting purposes Birla Corp. Ltd Prism cement Ltd are following replacement cost basis. ACC is following historical cost basis.

Table No.6.1

<table>
<thead>
<tr>
<th>Basis</th>
<th>Units follow historical</th>
<th>Units follow revaluation</th>
<th>Units follow replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax accounting</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Financial accounting</td>
<td>2</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Cost accounting</td>
<td>-</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Management accounting</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
</tbody>
</table>
Accounting Entry in Selected Cement Companies.

Depreciation in the various cement companies of Madhya Pradesh requires revision from time to time in the light of changes in present position, maintenance, expenditure and curtailment due to excessive use or obsolescence not allowed at the time of original estimated fixed assets. The companies Act of our country should be show amended as to enable our cement industry to revise its depreciable assets policy at least one third of their fixed assets every year. It will thus lead to revision of whole depreciable policy at least once every three year. ACC & Birla Corp. Ltd. periodically reviews their depreciable assets policy regular.

All selected Cement companies adopted straight-line method (SLM) of depreciation. The straight-line method of depreciation is very popular in financial, cost and management accounting in Cement companies of M.P. under study. The application of straight-line method is not valid for the purpose of tax accounting because written down value method is the only recognized method under Income Tax Act of India.

The management of two cement companies are of the view that excess amount of depreciation over historical cost should be charged to profit and loss appropriation account rather than be charged to profit and loss account on the ground that the additional charge to cover price changes is an unusual or exceptional item of expenditure. The associated cement companies Ltd. and Birla Corp. Ltd are of the view that an estimated amount required for replacement over the historical cost should be
transferred to the fixed asset replacement reserve account as a charge against profit. The management of the one remaining cement company. When depreciation would be provided debiting depreciation account and crediting provision for depreciation account would make the entry. When fixed assets would be scrapped or sold the allocation, which had previously been made to the revaluation reserve of these assets, would be transferred to special reserve not available for dividend.

The cement industry stands in need of rehabilitation and modernization owing to severe strains it had to face over a long period particularly during the Second World War and immediately thereafter when even well managed industries found it difficult to obtain necessary spare parts and components required for proper maintenance of plant & machinery.

The cement manufacturers association has observed that as internal resources, reserve and depreciation would not be sufficient, a major part modernization should be found by means of loans. The association had offered its opinion regarding the bases for calculating depreciation as an element of cost. It has suggested that in respect of machinery which has still some economic life left, depreciation should be calculated on the replacement cost basis and the amount required spread over the residual useful life of plant and machinery. In respect of obsolete plant and machinery the association has suggested the difference between replacement cost and the original cost must be spread over a number of years. It is recognized by the association that these suggestions may
encounter certain practical difficulties in their implementation since the various units in the country differ in respect of their equipment.