INTRODUCTION

Depreciation on fixed assets is a burning accounting issue on which academicians, professionals and executives have been deliberating since long past. Some major areas on which discussions are held are: How should uniformity in depreciation accounting be ensured. Should suitability and simplicity of depreciation method depend upon circumstances? Does the management's discretion in the choice of depreciation method widen the diversities? Should the depreciation method be followed consistently and be changed in the altered circumstances? What are to be disclosed about depreciation accounting? Is it desirable to provide depreciation on land whose economic importance is declining or which is situated on the bank of canal or river side with the possibility of soil erosion?

Differences on these issues exist not only among the academicians, professionals and executives but also among the members within each group. The differences are based on the fact that a proper accounting treatment of depreciation requires an accurate estimation of future uncertain events. These estimations require the exercise of judgement, and where ever there is the question of individual judgement, scope for variation automatically arises. There is a wide variety in existing accounting practices on depreciation.¹

The diversities are found from person to person, time to time, industry to industry or even from country to country. As a result, the topic was necessarily included in the accounting standard setting programme of different professional bodies and recognised accounting committees to minimise the variations. This chapter seeks to study how far the accounting standards on depreciation set by different standard setting bodies have attempted to minimise the differences and attempts to find empirically what are the opinions of professionals, executives and academicians in this regard.

With this end in view, the concept of depreciation is discussed first. It is followed by an enquiry on the causes and bases of depreciation. Next, are presented the popular methods of depreciation. Subsequently the major points to be considered for selecting the appropriate method of depreciation are enquired. Since depreciation varies in size due to expenditure on repairs and maintenance, this chapter also studied the relationship between Repairs and Maintenance programme of the enterprises and depreciation. Before enquiring the need for the standard, a brief discussion on the controversies of academicians, professionals and legislatures is presented. How far these controversies help emerging the standards is examined later. A statement containing comparative analysis of accounting standards on depreciation formulated by different authorities is given afterward. Next is presented, how far the standards have minimised the differences in the accounting practices of depreciation. In order
to verify empirically the above issues and the propriety of the standards, an opinion poll from academicians, professionals and executives was conducted and findings of the same are presented subsequently. Having described the results of the empirical study the chapter concludes providing some suggestions on the possible areas of further investigation.

Concepts of depreciation

Depreciation, in literal sense, refers to "Lost usefulness, expired utility, the diminution of service yield from a fixed asset or fixed-assets group that cannot or will not be restored by repairs or by replacement of parts". Every fixed asset with limited life wears out as time passes.

The "fair wear and tear" or decline in the value of asset as it renders services to the business is called depreciation. So reduction in the value of fixed asset due to physical wear and tear through use or with the passes of time or obsolescence or similar reasons may be termed as depreciation.

Another definition used in common is that it is a "systematic or rational method of allocating costs to periods in which benefits are received".

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In this way a large number of definitions of depreciation are given by various authorities. In some aspects they are similar and in others they differ. Definitions are also laid in the accounting standards on this issue.

Although there is no unanimity about the concepts of depreciation, most of the authors support directly or indirectly the systematic and rational allocation of cost or other values. But the exact meaning of the phrase 'Systematic and rational allocation' is not presented.

In this context depreciation may be regarded as the function of use, disuse, repairs and maintenance, change in production, restriction on production, decrease in demand, progress of arts or obsolescence etc. The principles underlying the depreciation of fixed asset are :- (a) The idea that the periodic accounting statement should carry a proper share of the burden of business expense i.e. the periodic business expense should include a fair share of the burden of capital losses incurred through fair wear and tear.

b) The idea that the total loss in the value of fixed asset should be spread evenly over its life time unless there are cogent reasons for not doing so in special circumstances like loss by fire, accident etc.

c) The idea that the balance sheet should contain the proper value of fixed asset i.e. any decrease in value should be reflected in the balance sheet so that it may reveal the true and fair view of the affairs of business.
A detail and indepth consideration of various factors of depreciation and the principles underlying it suggests the following concepts of depreciation:

i) The idea of depreciation is derived from the cost of service potential expired during a period of time. The decline in service potential will reduce the value of fixed assets and hence depreciation should be charged.

ii) Depreciation is a process of allocation of cost over a period of time in terms of its expired portion which ultimately becomes an item of expense.

iii) It is charged to recover the capital invested in fixed asset and thus aims at maintaining capital intact.

iv) The other way of speaking it is also a process of matching costs with expected benefits. Periodic revenue derived by the use of fixed asset must be refined by adjusting that portion of its cost expired for earning the revenue and hence depreciation is charged.

v) Another nature of the concept of depreciation is that the current replacement cost of fixed asset should be apportioned over a period of time rather than its historical cost. Thus depreciation is the current cost of services consumed.

vi) Depreciation changes the profitability and financial picture of the business concern and it will influence the
decision making of investors and other external users of accounting statement. If depreciation is not charged then this aspect of the decision model will remain unheared.

However this concept must be supported by empirical evidence. One such statistical test suggests that reported net income figures after depreciation do not provide a better basis for decision on investment in common stock than the reported earnings without deducting depreciation.\(^5\)

The above concepts clearly indicate the complexity of the problem. All the concepts are supported by inherent logics and each of them is suffering from some deficiencies. It is very difficult to accept one concept as superior to others in all respects. Inspite of such complexities there is no other alternative but to report annual depreciation (i.e. use of fixed asset) in the financial statement for the benefit of investors, creditors and so on.

**Causes and Bases of Depreciation**

*Causes:* From the concepts of depreciation stated above it may be derived that there are varying causes attributable to charging of depreciation on fixed assets. Some of them are briefly stated below:

i) Ordinary wear and tear in the value of fixed asset due to its use from day to day is regarded as the primary

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cause of depreciation. The rate of wearing out increases with the increase in the intensity of its use.

ii) Serviceability of fixed asset reduces with the time and hence depreciation is charged.

iii) Usefulness of some plants and machineries decreases if they are kept idle for long. Such idleness may also be regarded as a cause of depreciation.

iv) If plants and machineries rapidly deteriorate due to lack of skilled use or want of adequate maintenance then depreciation need be charged at higher rate.

v) The machine and similar items may not be suitable to the changing manufacturing process due to new innovation and hence its future productivity to the owner may be reduced.

vi) Use of fixed assets may be curtailed in future due to restrictions on production imposed by limiting factors such as scarcity of raw material or decrease in demand.

vii) Some fixed assets may be found to be unsuitable due to change in the nature and structure of business. Such possibilities, which are too common, lead to make provision for depreciation.

viii) Some doubt may arise about the applicability of above causes of depreciation in case of building. Although economic useful life of building is fairly longer than other fixed asset, still it is finite. Building also wears out,
may be at a slow rate. So depreciation will be charged on building also.

ix) There is a strong case for not charging depreciation on land as because the value of land does not decline. This view is supported by various authors and professionals. Legislative measures are also taken to disallow depreciation on land. But the economic importance of land may be adversely affected due to change in business, economic or social conditions of the locality. Also the canal or river side land may wears out. In such exceptional cases, there should be arrangement for depreciation on such land.

From the above discussion it is clear that depreciation on fixed asset is the consequence of interactions among different causes. It, basically, is that part of the bundle of services stored in a fixed asset or a group of fixed assets which is consumed as originally estimated or at a higher or lower rate or has become uneconomical or obsolete and unsuited to the future needs of the present owner.

**Bases**

Determination of the proper amount of depreciation and formulation of a rational basis of allocation require ex-ante measurement of some future uncertain events. These estimations are the bases upon which, depends the periodic

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amount of depreciation. Prior period estimation with reasonable degree of accuracy should be made about the following factors:

i) Value:

The value on which calculation for depreciation will be based must be determined. This may be the original cost or a restatement of this at a subsequent date. Suitable adjustment to this value may be necessary for change in price level or any other contingencies. The amount of original cost is ex-post measurement but re-statement of the same on a later date depends upon various happenings.

ii) Life:

The effective life of the assets during which they will provide services to the business should be estimated. There are various concepts of life like physical or mechanical life and economic life. The life of leasehold asset is predetermined which may cease to work at an earlier date due to some other causes like obsolescence. The life of natural resources like forests, minerals etc. may be directly governed by extraction or consumption. The number of days during which asset will be useful may be affected by the intensity of its use. The concept of physical life is derived from biology in which context the life ends at a fixed and clearly recognisable point of time called death.7

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But in accounting context life of fixed asset means its economic useful life. Here the life is terminated on management decision to replace it when the asset is no longer economically useful to the business.

iii) Scrap value:

The estimated scrap value or liquidation value at the end of service life of the asset should be ascertained. Because depreciation must be calculated on the basis of depreciable value of the fixed asset. Again depreciable value means cost or re-stated value of fixed asset as reduced by scrap value.

In some cases present value of the scrap value to be realised after a long period of time may be considered instead of its cash resale value. It is at best a difficult problem to estimate the scrap value and also its present value as the rate of interest may change during this period.

If the estimated scrap value is negligible then it may be ignored. In some cases the related disposable cost may exceed realisable value and there will be negative net scrap value of the asset. This negative scrap value should be added with cost or restated value of the fixed asset to find out the proper basis of depreciation. Some academicians opine that the estimation should preferably be based on multiple probabilities. Finding out a single value on the basis of so many interacting factors is undoubtedly a difficult problem.
Again the probabilities are subject to change over time and necessary adjustment should be made to these estimates from time to time to ensure the reliability of the estimated values.

Despite such difficulties the procedure of depreciation cannot be abandoned unless a better alternative reporting method emerges. But such possibility is far away. The procedure of depreciation is to continue on the basis of economic interpretation and behavioural grounds primarily relating to relevance and materiality of the depreciation figures for decision making.

Methods of depreciation

All fixed assets, barring land has limited useful life and they can render only a limited service. The cost of fixed asset as reduced by estimated scrap value is a kind of prepaid expenses benefits from which are mostly derived over more than one accounting period.

This expense must be spread over its operating life by some accounting method. Nowadays most of the authorities consider depreciation as a systematic and rational allocation of cost or other value over the economic useful life of the asset.

There are various factors affecting the value of fixed assets with varying degrees. These are interrelated and inseparable.
Hence it is very difficult to find out the proper amount of annual depreciation charge. To avoid this problem depreciation is calculated on average basis and often for a group of assets instead of individual item. In the process of averaging and consideration of group of assets, some over estimation may be compensated by some under estimation about future contingencies.

In business accounts, depreciation is considered the estimated cost of expired usefulness. Suitable rate must be applied on the cost of fixed asset to determine the cost of service which the asset will no longer produce. Such amount should be treated as depreciation.

Some of the important methods of depreciation in use are stated below:

i) Straight line method.

ii) Reducing balance method,

iii) Annuity method.

iv) Sinking fund method or compound interest method.

v) Sum of the years Digit method.

vi) Double declining balance method.

vii) Insurance policy method.

viii) Revaluation method.

ix) Depletion method.

x) Machine hour rate method etc.
Elaborate discussion on all these methods are not made here. It may be mentioned, each method is based on some logic and it is applicable to specific cases of accounting.

Various methods of depreciation can again be classified in the following broad categories according to the pattern of allocation of cost or other value of limited life fixed assets:

i) Allocation varying according to activity or use.

ii) Straight line or constant charge methods.

iii) Increasing charge methods and

iv) Decreasing charge methods.\(^8\)

Whatever the method of depreciation may be, it must ensure a systematic and rational allocation of cost or other value of fixed asset or assets group over its economic life. But the method suitable for one asset may be unsuitable to another, rational to one firm may be irrational to another and systematic in one situation may be unsystematic in a changed situation. There is no depreciation method which can be defended in preference to other or others in a general way. So selection of suitable method of depreciation requires careful consideration.

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Factors to be considered for selecting the suitable method of depreciation

Systematic and rational allocation of cost or other value of asset or assets group depends upon the suitability of the method applied in determining the annual amount of depreciation. The method selected should reflect the estimations regarding the following factors (i) Relationship between decline in market value and passage of time.

ii) Relationship between diminution in value and use of asset.

iii) Effect of obsolescence.

iv) Repairs and maintenance program of the business.

v) Decline in operating efficiency of the asset or asset group.

vi) Relationship between decline in value of asset and emergence of revenue.

vii) Length of the life of asset.

viii) Rate of interest.

ix) Degree of accuracy of the estimation of different factors.

x) Degree of uncertainty regarding the later periods of the asset life.

xi) Relevant legislation like income tax act, company act etc.

Selection of suitable depreciation method should be made after due consideration of all the above mentioned factors. But in some cases one or two will be the governing factors and the effect of other factors may be negligible and should be left out of consideration for convenience and simplicity.
Conditions under which a particular method may be suitable

Actual depreciation method to be used should be selected on the basis of relevant factors as far as possible. Some of the conditions and the related suitable methods are discussed below:

**Inventory method**

Now a days, inventory method is considered obsolete. Still it is used for valuing loose tools and other assets of comparatively small value.

**Replacement method**

This method is not generally used by the accountants now a days. However it may be suitable for railway or gas company for ties, rails, tie plates, ballast, gas pipe, water line etc.

**Variable charge method**

Variable charge method may be considered suitable if the following conditions are fulfilled:

i) The value of asset declines as a function of use rather than passes of time.

ii) Obsolescence is not a dominant factor.

iii) Repairs and maintenance program is subject to change depending on the extent of use.

iv) Revenues attributable to asset are proportional to its use.
For example plants and machineries may be used for double or triple shift. Similarly a motor car may have an operating life of 2,00,000 kilometers. These assets may be depreciated under this method.

**Straight line method**

Straight line methods are considered relevant under the following conditions:

i) Discounted value of future benefits declines as a function of time rather than use.

ii) Interest-factor can be ignored or assumed to be offset by other factors.

iii) Repairs, maintenance, operating efficiency and revenues are more or less constant over the life of the asset.

Depreciation on building, plant and machinery having life of a fixed period of time may be charged under this method.

**Increasing charge method**

Conditions under which increasing charge methods may be suitable are:

i) The cash flow or net revenue contributions are constant over time but the asset value in each year represents the discounted value of remaining contribution.
Repairs and maintenance expense decreases with the passes of time or it remains constant.

Revenues and operating efficiency increase over the life of the asset.

Use of the asset is relatively more in the later years.

Conditions for use of increasing charge methods are rarely fulfilled in real world. For example, road or bridge may be constructed for handling anticipated traffic load after 5 to 10 years which may be depreciated under this method.

Decreasing charge methods

Decreasing charge methods are considered more suitable under the following conditions:

i) Extent of the use of asset in the earlier years are more than in the later years.

ii) Repairs and maintenance charges increase with the life of the asset.

iii) Operating efficiency and revenue contribution decreases as the asset become older.

iv) Uncertainties of revenue of the later years are high.

For example furniture of hotel business may be depreciated under this method.

All the above criteria for selecting the suitable method of depreciation are primarily based on the assumed relationship between depreciation and net revenue contribution. Also
Matching theory is not always applicable. The above listed conditions are more or less based on estimates and accordingly they are not measurable with some reasonable degree of accuracy.

Despite such criticisms selection of proper depreciation method should be based on the above factors and the specific circumstances. The rate of depreciation so determined should be used for allocating the cost or other value of asset or assets group so long as the alternative reporting method generally acceptable to all does not emerge.

**Repairs and Maintenance program and depreciation**

Repairs and maintenance program of the enterprise should be carefully considered while allocating the cost or value of the fixed asset. It is so because some clear relationship is discernible between repairs and maintenance expenses and the degree of wear and tear, effective life of asset, its operating efficiency etc. Effect of these expenses on depreciation allocation process requires a careful scrutiny. They are discussed below:

i) Economic useful life of an asset is directly related with repairs and maintenance. It's life can be extended by spending more on repairs and maintenance or it can be shortened by curtailing such expenses. In some cases obsolescence may prevent from spending on repairs and these may lead to a

situation where the asset is to be retired and replaced earlier. If this expenditure is below the optimum level the asset may not survive up to its expected economic life and in such case rate of depreciation should have to be increased abnormally.

ii) In some cases repairs and maintenance expenses include cost of replacing small parts of the asset. Such cost of replacement is considered to be revenue expenditure and is charged against profit. Depreciation is computed on the basis of cost or other value including the cost of such small parts. It is not calculated for such components separately. Life of the asset is generally determined on the basis of major components. Naturally depreciation charge includes portion of the cost of small parts also. So there is scope for double charge - one for replacement and the other for depreciation. Necessary adjustment should be made to avoid the double charge.

iii) Operating efficiency of the asset can be increased or maintained intact through proper repairs and maintenance. Fuel and labour cost and other operating expenses may increase if repairs and maintenance expenses are delayed or curtailed. Again frequent repairs and maintenance work may result in longer idle time and consequent reduction in the effective productive time and production. These factors should also be duly considered in this context.
Academic, professional and legislative controversies

Academicians differ widely as to the exact meaning and concept of the term depreciation. They have carried on a long discussion on the possible accounting treatment of depreciation. Variation exists as to definition, concepts, methods and the proper accounting treatment of depreciation. "It is a subject of much controversy" as stated by Glaubier and Underdown. Recent controversy about the depreciation allocation of land and building is very high. The process of depreciation inherited some arbitrary elements and academicians have tried to place them on logical footings unsuccessfully in most cases. It is at best difficult to unify the diversified arbitrary elements in a logical way. Most of the bases of depreciation are predetermined and estimated. Different authorities have explained and estimated them in different ways and no single view can be defended as superior to the other or others.

Whatever the diversities may be, there are something in common among different academic views. For example similarities are found in principles and concepts of depreciation stated by different authorities. Again, same set of depreciation methods are suggested by many of them. Although unanimity does not exist as to the choice of a particular

method they agreed that the most widely used methods are the straight line method and reducing balance method". So, compilation of the common elements and necessity of setting them to an uniform depreciation allocation process was strongly felt. Because it is difficult to incorporate all the academic views in actual accounting practices.

Accountants and professionals are occasionally found to exercise their personal views in the computation of depreciation. They do not accept all the arguments of the academicians regardless of the underlying logics. For example, noted writer E.S. Hendriksen's suggestion to consider repairs and maintenance programme of the enterprise in calculating the periodic depreciation charge is not generally followed by the accountants. In the same way critical analysis by the academicians on various other points like concept of negative scrap value, possibility of depreciation on land etc. are ignored by the accountants. Professional bodies so called idea is that the academicians are more theorists and their diversified views and suggestions are often impossible to apply in practice. Accountants vary widely among themselves about accounting practices for depreciation. Methods are choosen arbitrarily in many cases, scrap value and depreciable amount is determined independently and without giving

much thought. Professional bodies do not provide any handy rules to its members to be used in accounting practices. Acceptable methods of depreciation are many with wide variation among themselves and different methods are used by different accountants under different circumstances. Suitability of the method is not always considered. To minimise these variations attempts should be made to formulate some standard rules for depreciation.

Legislative views should also be considered in determining the proper and logical principles and practices of accounting for depreciation. Legislative measures may be adopted through Company Act, Income Tax Act etc. Indian Income Tax Act 1961 has provided specific rules and rates for computation of periodic depreciation to be charged for finding out taxable profit of business concern. These rules and rates are mandatory and must be followed. It is a fine example of how uniform depreciation allocation process can be suggested for accounting for depreciation. Indian Electricity Act has prescribed definite methods for depreciation of fixed assets of Electricity Companies. Suitable legislative measures are also taken for depreciation of fixed assets of Railway Companies. So, the relevant legislative measures must be kept in mind at the time of formulating an uniform accounting practice for depreciation.

13. The Electricity Supply Act, 1948, 6th Schedule, Para-VI.
Need for Accounting Standard on Depreciation

Depreciation is probably the most controversial area of accounting. Diversities exist in every aspect of the item. Accountants are often confused about the proper accounting treatment of depreciation. There is no scientific way of selecting the bases and choosing the suitable method of depreciation. Different authorities have suggested different methods under different conditions. Every authority tried to defend its suggestion on some logical grounds. But unanimity cannot be attained for any of the depreciation allocation process. No compromising attitude is shown by any authority to unify the different views. Academic views have been over ruled by legislative measures in some cases and professional bodies have frequently instructed its numbers to follow a particular style of accounting of its own.

Due to these diversities, formulation of accounting standard on accounting for depreciation has become unavoidable. Various standard setting authorities felt it necessary to include the item in their standard setting programme. With a view to ensuring uniform accounting practices on depreciation, different standard setting bodies have set accounting standard on accounting for depreciation. Such standards are not the sudden result but are the cumulative effects of continuous actions and reactions of various opinions on depreciation over a long period of time. So, accounting standards on depreciation emerged out of the necessity to minimise the area of differences and to prescribe an uniform depreciation allocation process and its proper accounting treatment.

Accounting standards on depreciation accounting are formulated by various standard setting bodies with some similarities and differences. A comparative analysis of the accounting standards set by some prominent authorities along with academic views are given below:
Statement of similarities and differences among Accounting Standards on Accounting for Depreciation set by some major standard setting bodies and the related academic views on the issue.

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**Allocation of fixed asset**

1. The depreciable amount of a depreciable asset should be allocated on a systematic basis to each accounting period during the useful life of the asset. This standard is same as that of international in form and substance. It may be noted that like other standards, it prescribes the standard accounting practice for depreciation without mentioning various depreciation methods. Moreover it does not guide as to how an appropriate method should be selected. English standard also relies heavily upon the management in selecting and using the appropriate method of depreciation.

**Academic Views**

1. Academicians have suggested a systematic and rational basis of allocation of cost or other value of fixed assets over their economic useful life long ago. They have made detail and critical analysis of various methods of depreciation prevailing in accounting practice. Circumstances under which a particular method may be appropriate are also indicated. But they have not preferred one method to the other in all cases and left the matter to management. So, academic views and recommendations of the standards followed the same trend.
The academicians have considered consistency as a basic doctrine for the whole process of accounting. Consistent use of the same depreciation method is seldom dealt with by them separately. They have made a proper evaluation of various methods and suggested to use any particular method depending upon the circumstances. With a change in the internal or external industrial environment, various factors involving depreciation changes and hence depreciation method may also be changed.

Unlike the accounting standards academicians make no specific suggestion as to whether change in depreciation method be treated as change in accounting policy or whether prior year adjustment is required. When SSAP-12 recognises that in the light of experience and consideration of technical or other factors, a company may change the method of depreciation for a fairer presentation of the results and financial position, it does not enforce consistency so rigidly. If change takes place, the unamortised amount should be written off over the remaining useful economic life. It should be noted that such a change constitutes a change in previous estimate rather than a change in accounting policy.

Accordingly no prior year adjustment is required. When an undepreciated asset owned for several years by the company is to be depreciated for the first time, this standard does not consider the requirement of prior year adjustment and also provides no guidance as to the process of depreciation of the unamortised value of the asset. Although it recommends a change in method if a change in accounting policy or change in accounting estimate is required, it does not specify whether prior year adjustment is required.
The useful life of a depreciable asset should be estimated after considering the following factors:

a) Expected physical wear and tear.
b) Obsolescence.
c) Legal or other limits on the use of the asset.

The useful life of an asset is considered more important than its economic useful life. Here useful life of an asset is considered more important than its economic useful life. The useful life of an asset is the maximum useful life which may be terminated at an earlier date due to other factors.

The standard does not require that the reasons for change in depreciation method should be stated. In sharp contrast with SSAP-12, this standard specifically states that change in depreciation method should be treated as change in accounting policy. The causes of change in the method of depreciation can be changed. It also makes provision for discretion of the management. Here the reasons for change need not be stated.

The useful life of an asset is considered more important than its economic useful life. Here useful life of an asset is considered more important than its economic useful life. The useful life of an asset is the maximum useful life which may be terminated at an earlier date due to other factors.
c) legal or other limits on the use of the asset.

Here, although legal limit refers to be lease-holds, other limits on the use of asset have not been specified. It is stated in the background analysis that experience with similar asset should be considered in such estimation. While considering obsolescence, technological change, improvement in production, change in market demand etc. must be borne in mind. Unlike English standard, extraction or consumption has not been specified as a factor governing the life of asset like mines, quarries etc.

### INTERNATIONAL

Regarding the estimation of useful life of asset, nothing new has been contributed in the Indian standard in addition to what is stated in the international standard. All the factors contained in SSAP-12 are pointed out, but extraction or consumption being a factor affecting the life of asset like minerals is not included in this standard. Although the term legal limit cover the pre-determined life of leaseholds, such pre-determined life may be terminated earlier. This point is not clearly indicated here.

c) The useful life is normally dependent on the physical deterioration of asset through use or effluxion of time. The extent of use must be kept in mind in estimating the life of asset.

d) It may be reduced by depreciable amount i.e. whether it is cost or revalued amount and if cost, whether it is historical cost or cost adjusted for price level change. Involution of more efficient asset, change in consumer's taste etc. Danger of obsolescence is high in times of rapid technological advancement and change in consumer habits and tastes. Remarkable difference with other standards is not noticed here if background analysis of IAS-4 and AS-6 are considered in the context.

### India

Consumption, as for example mines, quarries.

### UK

Physical life. The factors to be considered, as recommended by the standards, are merely the concrete form of academic views. Economic useful life of asset is occasionally found to terminate at management decision rather than its physical decay. Again life should be estimated irrespective of the depreciable amount i.e. whether it is cost or revalued amount and if cost, whether it is historical cost or cost adjusted for price level change.
Academicians have always recommended to give due effect of any change in circumstances in the accounting treatment. So periodical review of useful life of asset and necessary revision should be made. Nature of adjustment in accounting treatment has been suggested by various author in different ways. However the ultimate change in accounting treatment depends upon the management decision. Whether such revision should be given retrospective effect from an earlier date or necessary adjustment should be made only during the revised remaining useful life should be decided by the management. Concept of materiality should always be considered in making any change or adjustment. Academic views are mostly reflected in the standards set by
Indian standard requires a) Indian standard requires 6. British standard requires 6. Academicians have made a detail discussion about the various bases for determining the amount at which depreciable assets may be stated in the books but no specific guidance is available about its disclosure requirement.

Disclosure of valuation bases
5. The valuation bases used for determining the amounts at which depreciable assets are stated should be included with the disclosure of other accounting policies as required by IAS-1. This requirement is not generally found in the accounting standards set by other authorities.

Disclosure requirement
6. IAS-4 requires that followings should be disclosed for each major:

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<td>not stated distinctly.</td>
<td>for the prior period is suggested to be adjusted as an alternative to the writing off of the unamortised cost over the revised remaining useful life of the asset. Both the treatments are simultaneously required and they are not alternatives.</td>
<td>treatment for the period both before and after the revision. Here, each major class of fixed assets will be estimated to have a common useful life.</td>
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Disclosure of valuation bases
5. Disclosure of valuation bases used for determining the amounts at which depreciable assets are stated along with disclosure of other accounting policies is not specifically required by Indian standard. However, such requirement may be covered by AS-1.

Disclosure requirement
5. Disclosure requirement of English standard does not include any such provision that valuation bases for determining the amount at which depreciable assets are stated in the books should be disclosed.

Academic Views
5. Academicians have made a detail discussion about the various bases for determining the amount at which depreciable assets may be stated in the books but no specific guidance is available about its disclosure requirement.

Academic Views
6. a) Indian standard requires that for each major class of depreciable assets the depreciation methods and all
Other related factors. They have specified the conditions under which a particular method should be considered more suitable and appropriate. Unlike the standards set by different authorities they do not attach greater importance to detail disclosure. Because mere disclosure will not make any accounting treatment appropriate and suitable. In some sense reliance of the standard setters on the management of the business enterprises are more than the academicians. Academics are surprised to note that the accounting standards do not recommend any particular method or methods and provide no guidance as to the selection of appropriate method, instead rely heavily on detail disclosure.

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<td>class of depreciable assets:</td>
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<td>following information should be disclosed:</td>
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<td>a) the depreciation method used,</td>
<td>i) the historical cost or other amount substituted for historical cost of each class of depreciable assets,</td>
<td>a) the depreciation method used,</td>
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<td>b) the useful lives or the depreciation rates used,</td>
<td>ii) total depreciation for the period for each class of depreciable assets and</td>
<td>b) the useful economic lives or the depreciation rates used,</td>
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<td>c) total depreciation allocated for the period and</td>
<td>iii) the related accumulated depreciation.</td>
<td>c) the total depreciation charged for the period and</td>
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<tr>
<td>d) the gross amount of depreciable assets and</td>
<td>b) The standard requires that the following information should also be disclosed in the financial statements along with the other disclosure:</td>
<td>d) the gross amount of depreciable assets and the related accumulated depreciation.</td>
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<tr>
<td>the related accumulated depreciation.</td>
<td></td>
<td>It is further required that the effect, if material, of any change in depreciation method should be disclosed, together with reasons for the change. The effect of revaluation on the depreciation charge of assets should, if material, be also disclosed in the year of revaluation. Disclosure of the effect of such changes are in addition to those required by Indian and International standard.</td>
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<td>The standard considers the selection of appropriate method and other related factors to be the matters of judgement by the management. Instead of providing any guidance on the suitability of different methods, it concentrates on detail disclosure. It is assumed that such detail disclosure will provide users of financial statements, information which will allow them to</td>
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<tr>
<td>INTERNATIONAL</td>
<td>INDIA</td>
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<td>Academic Views</td>
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<td>review the policies</td>
<td>assets until the actual rates differ from the principal rates specified in the statute governing the enterprise.</td>
<td>other standards, SSAP-12 does not state whether such disclosure should be made along with other accounting policies or in the financial statement or in any other place.</td>
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<td>adopted and enable comparison with other enterprises.</td>
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<td>7. International standard provides no guidance as to the accounting treatment of deficiency or surplus arising at the time of disposal, discard, demolish or destruction of fixed asset.</td>
<td>7. If any depreciable asset is disposed off, discarded, demolished or destroyed, the net surplus or deficiency, if material should be disclosed separately. But whether such deficiency or surplus should be shown in revenue statement or disclosed in any other place is not stated specifically.</td>
<td>7. English standard also remains silent on the accounting treatment of such deficiency or surplus and about the way of its disclosure. However there is a provision that where the unamortised cost of the asset is not recoverable in full, it should be immediately written down in the profit and loss account to the recoverable amount which is a matter of revaluation and not disposal.</td>
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<td>8. IAS-4 provides no guidelines as to charging depreciation on addition or extension with fixed asset. If such addition or extension which becomes an integral part of the existing asset should be depreciated over the remaining useful life.</td>
<td>8. Indian standard suggests that any addition or extension which becomes an integral part of the existing asset should be depreciated over the remaining useful life.</td>
<td>8. There is no provision in British standard regarding depreciation on addition to or extension with fixed asset. How such asset will be considered, whether separate depreciation method and rate will</td>
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<td>8. Academic view is that any addition to or extension with fixed asset will have the effect of raising the carrying amount of the asset. Accordingly the depreciation</td>
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creates asset which maintains separate identity and is capable of being used even after the retirement of existing related asset, no separate guidelines are required, because it will be treated as a separate new asset and treated as such.

But some recommendations were highly expected regarding depreciation on addition to or extension with asset which becomes an integral part of existing asset. The standard is incomplete in this respect. However, the persons responsible in setting the standard may think that no fresh recommendation is required even if the addition constitutes an integral part of existing asset, because in that case existing depreciation procedure will be sufficient.

The specific recommendation of the standard regarding depreciation on addition to or extension with fixed asset either as an integral part of existing asset or maintaining separate identity will undoubtedly be helpful to the existing accounting practice. Although important academic views are more or less same, the standards make the views more specific. These are issued to the accountants in the form of directives.

However, it must be noted that the depreciation be used or not, should a fresh estimate be made for such addition or extension, all these points are not dealt with in this standard. Standard setters may have the idea that if the addition or extension is made as an integral part of the existing asset, it will be depreciated in the same way as that of existing asset. If the addition retains separate identity then it will be dealt with as a separate new asset. So in no case separate recommendation is required.

But some recommendations regarding depreciation on such addition or extension may also be provided at the rate applied to the existing asset. Where an addition or extension retains a separate identity and is capable of being used after the existing asset is disposed off, depreciation should be provided independently on the basis of an estimate of its own useful life.

The specific recommendation of the standard regarding depreciation on addition to or extension with fixed asset either as an integral part of existing asset or maintaining separate identity will undoubtedly be helpful to the existing accounting practice. Although important academic views are more or less same, the standards make the views more specific. These are issued to the accountants in the form of directives.

On the other hand if such extension constitutes an integral part of the existing asset, it will be depreciated along with the existing asset according to the existing procedure. Alternative views are also available which are considered insignificant and left out of this discussion.
Academicians always suggest change in historical cost of asset as a consequence of multiplicity of causes like revaluation, price adjustment, exchange fluctuation, change in duties, value to the enterprise, breakup value and similar other causes. Depreciation should be charged on the basis of revised figure.

Change in historical cost due to change in long term liability caused by exchange fluctuation, price adjustment etc. is not specifically considered here. But some references are available regarding carrying amount which refers to the value placed on the fixed asset within the accounts for carrying over to the subsequent accounting period. This amount may be either historical cost or a revalued amount. Depreciation is required to be calculated on the basis of this carrying amount.

Effect of revaluation on depreciation

10. No separate provision is inserted in IAS-4 regarding where the depreciable amount of a depreciable asset has undergone a change due to increase or decrease in long term liability on account of exchange fluctuations, price adjustments, change in duties or similar factors, the depreciation on revised unamortised depreciable amount should be provided prospectively over the residual useful life of the asset.

Here revision of depreciable amount due to revaluation is distinguished with that of other causes such as exchange fluctuation, price adjustments, change in duties etc.

10. Indian standard requires that where fixed assets are written down as a result of revaluation or other causes, the adjustment should be reflected by a corresponding adjustment in the carrying amount of the fixed asset.

10. SSAP-12 contains a provision that where fixed assets are written down as a result of revaluation or other causes, the adjustment should be reflected by a corresponding adjustment in the carrying amount of the fixed asset.

10. There is a considerable number of opinions and practi-
### Areas of application of the standard

**International**
- Revaluating assets after revaluation of fixed assets. But in the explanatory note it is stated that depreciation should be charged in each accounting period on the basis of depreciable amount irrespective of an increase in the value of the asset. This explanation was given to counter the view of some persons that it is unnecessary to provide for depreciation if the value of assets increase. Now the depreciable amount may be the revalued amount substituted for historical cost of the asset.

**India**
- Assets are revalued. The provision for depreciation should be based on the revalued amount and on the estimate of the remaining useful lives of such assets. In case the revaluation has a material effect on the amount of depreciation, the same should be disclosed separately in the year in which revaluation is carried out. The standard does not specify how and where the effect of revaluation on the amount of depreciation should be disclosed in the year of revaluation.

**UK**
- Revalued in the financial accounts, the depreciation provision must be based on the revised estimate of the remaining useful life. By an amendment in 1986, it is further required that the whole of the depreciation charge based on revalued figure of asset should be charged to profit and loss account. This revision was made to put a stop to the practice of distorting profits by splitting the depreciation charge between the applicable to historical cost which was charged to profit and loss account and that applicable to the excess of revalued amount over historical cost which was charged directly against the revaluation reserve.

**Academic Views**
- The standard does not specify how and where the effect of revaluation on the amount of depreciation should be disclosed in the year of revaluation.
- Revaluation surplus may be directly set off against the reserve. But, ordinarily the whole amount of depreciation is charged to profit and loss account. In that case an amount equal to additional depreciation is transferred from capital reserve to revenue reserve in order to stop reduction in divisible profit. No such guidance is provided by the accounting standards in respect of depreciation on revaluation surplus.

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11. In the introduction, it is stated that IAS-4 states that the statement deals with depreciation accounting of fixed assets. According to academic views all depreciable assets must be charged directly against the revaluation reserve.
INTERNATIONAL  
UK  
Academic Views

Deals with depreciation accounting and applies to all depreciable assets except:

a) Forests and similar regenerative natural resources,
b) Expenditures on the exploration for and extraction of minerals, oil, natural gas and similar non-regenerative resources,
c) Expenditures on Research and Development and
d) Goodwill.

Nothing is stated regarding the inclusion or exclusion of investment properties from the purview of the standard. Live Stock is also not specifically excluded in the International standard.

With depreciation accounting and applies to all depreciable assets except the following items to which special considerations apply:

i) Forests, plantation and similar re-regenerative natural resources,
ii) Wasting assets including expenditure on the exploration for and extraction of minerals, oil, natural gas and similar non-regenerative resources,
iii) Expenditures on Research and Development,
iv) Goodwill,
v) Live Stock and
vi) Land unless it has a limited useful life for the enterprise.

Here also no discussion is given regarding the depreciation of investment properties. However live stocks are specifically excluded.

Assets other than investment properties, good will, development cost and investments but including amounts capitalised in respect of finance leases.

The statement makes an elaborate discussion on the requirement of depreciation for investment property.

There was a great controversy over this point and application of SSAP-12 was deferred initially for all investment properties. Subsequently a separate standard, SSAP-19 was set for it. The statement does not specifically excluded forests or similar regenerative natural resources and expenditures on minerals, oil and similar non-regenerative resources.

Be depreciated during the useful life of such assets. Any capital expenditure providing enduring benefits to the enterprise must be split over the period of getting the benefit. Although procedure of depreciation may be different depending upon the nature of assets, depreciation or amortisation of fixed asset is a must.
Identifying the depreciable asset

12. According to Indian Standard, 12. SSAP-12 requires that depreciable assets are assets which are expected to be used during more than one accounting period and b) have a limited useful life and c) are held by an entity for use in the production or supply of goods and services, for rental to others or for administrative purposes.

The definition is given in the background analysis of setting the standard. The definition does not specifically exclude resaleable assets in the normal course of business form depreciable assets. However it is implied that assets acquired for sale will not be treated as depreciable asset.

12. International standard defines depreciable assets as the assets which (a) are expected to be used during more than one accounting period and (b) have a limited useful life and (c) are held by an entity for use in the production or supply of goods and services, for rental to others or for administrative purposes.

This definition is given in the explanatory notes to the standard. This definition specifically states that assets acquired for resale in the ordinary course of business will not be treated as depreciable asset.

12. The definitions of depreciable asset given by accounting standards are in the same line as that of academicians. The assets which are to be depreciated over a period of time are the depreciable assets. These assets should be owned by the company, should have a limited useful life and should not be used as trading goods. Definitions of the standards are the just form of various academic definitions.
be treated as depreciable asset and as such these assets are not to be depreciated but are treated as ordinary trading goods.

**Treatment of residual value**

13. In the explanatory note to the statement, AS-4 considers the determination of residual value of asset as a difficult task. It states that if the residual value is insignificant then it is normally regarded as nil. On the contrary, if the residual value is likely to be significant, it is estimated at the date of acquisition, or the date of any subsequent revaluation of the asset on the basis of the realisable value prevailing on that date for similar assets which have reached the end of their useful lives and have operated under conditions similar to the asset. British standards also suggest the realisable value to be the basis for determining the residual value of asset. It is stated clearly that the residual value of asset is often insignificant and can be ignored in the calculation of depreciable amount. If the residual value is likely to be significant, it is estimated at the date of acquisition or revaluation.

13. SSAP-12 suggests that where the residual value is likely to be low it may, for practical purposes, be treated as nil. The standard defines residual value as the realisable value of the asset at the end of its useful economic life, based on prices prevailing at the date of acquisition or revaluation, where this has taken place. Realisation cost should be deducted in arriving at the residual value. British standards also suggest the realisable value to be the basis for determining the residual value of asset. It is stated clearly that the residual value may be ignored. They suggest various methods for determining the residual value of fixed assets. Accounting standards have minimised the number of alternative methods and most of the standards recommended the use of realisable value method. But standards do not mention the point that if the realisable value is less than corresponding disposal cost then net residual value will be negative. Some method
to those in which the asset will be used. The gross residual value in all cases is reduced by the estimated cost of disposal at the end of the useful life of the asset.

Here the basis for determining the residual value is specified. The realisable value is suggested to be one of the various bases for determining the residual value and hence the basis to be used has not been specified. Also, cost of disposal is not considered in this statement. It leaves no scope to the management for determining the residual value on any other basis.

Depreciation on Land and Building

14. Explanatory notes to the statement consider the question of depreciation on land and buildings in the following line:

a) Land normally has an indefinite useful life and is not usually regarded as a depreciable asset. However, land which does have a limited useful life for the enterprise have operated under conditions similar to those in which the asset will be used. The gross residual value in all cases is reduced by the estimated cost of disposal at the end of the useful life of the asset. Here the basis for determining the residual value is specifically stated to be the realisable value. It leaves no scope to the management for determining the residual value on any other basis.

14. Indian standard does not provide any explanation regarding depreciation on land and building. However, introduction to the statement states that AS-4 is not applicable to land unless it has a limited useful life for the enterprise. From this part of the introduction it may be assumed that Indian standard cost of realisation should be deducted in arriving at the net residual value.

14. SSAP-12 suggests that building has a limited useful life (although the life may be longer than other assets) and should be depreciated like other assets. Depreciation on land is considered to be dependent on the circumstances. If the land is leasehold then the amortisation should be made during the period of lease. If it is freehold land and subject to those in which the asset have operated under conditions similar to those in which the asset will be used, the amortisation should be found for providing for negative residual value over the useful life of the asset. This statement does not provide any scope for use of alternative method for determining the residual value of asset.

14. Academicians are not unanimous about the requirement to provide depreciation on land and building. They consider that land and buildings are two separate items of assets and should be considered separately. Land having an unlimited life time generally does not require to be depreciated. Suitable legislation like Income Tax Act, Company Act are found to disallow depreciation on land.
15. A number of definitions are formed by the academicians to reflect the various concepts of depreciation. However, land having limited useful life to the owner must be depreciated. Buildings are also subject to depreciation over its long life by a suitable method.

### Definition of Depreciation

In setting the Indian standard, depreciation is defined as the measure of reduction in value by, for example, mineral extraction, changes in the desirability of its location, or value of land should be amortised using similar criteria as for other fixed assets. If freehold land is not subject to depletion or reduction in value, then no depreciation is required. However, there was a detailed background analysis and great controversy over the requirement to provide depreciation on land and buildings.

**Definition of Depreciation**

15. In setting the Indian standard, depreciation is defined as the measure of reduction in value by, for example, mineral extraction, changes in the desirability of its location, or value of land should be amortised using similar criteria as for other fixed assets. If freehold land is not subject to depletion or reduction in value, then no depreciation is required. However, land having limited useful life to the owner must be depreciated. Buildings are also subject to depreciation over its long life by a suitable method. So, academic views on depreciation on land and buildings are fully reflected in the accounting standards.

- In addition to residential buildings, some enterprises have treated buildings as depreciable assets because the aggregate value of land and building does not decline. But the statement spells out that as land and buildings are separate assets, recognition for accounting purposes, of any increased value of the land is a different issue from the determination of the depreciable amount of the buildings.

**Academic Views**

- Definitions of depreciation vary, and 15.4 definitions are formed by the academicians.
Depreciation is the measure of the loss of value of a depreciable asset arising from use, effluxion of time or obsolescence through technological or market changes. Depreciation is allocated so as to charge a fair proportion of the depreciable amount in each accounting period expected to benefit from the use of the asset. Depreciation includes amortisation of assets whose useful life is predetermined. The definition also states that depreciation should be allocated so as to charge a fair proportion of the cost or value to each accounting period expected to benefit from the use of the asset, whether arising from use, effluxion of time or obsolescence through technological or market changes. In this chapter, other definitions are also important from the viewpoint of their respective definitions and concepts. Academic Views.

Depreciation is defined as the allocation of the depreciable amount of an asset over its estimated useful life. Depreciation is referred to only as a system of allocation of depreciable amount. Other aspects of the depreciation concepts are not reflected in this definition. Although the definition refers to loss of value rather than write-off of cost, the statement is not based on that definition. The definition of AS-6, fixed assets, and SSAP-12 are almost similar, and standards are more specific and unique. The definition given in this statement is relatively broad-based. The statement also states that depreciation should be allocated so as to charge a fair proportion of the depreciable amount in each accounting period expected to benefit from the use of the asset. Depreciation is referred to only as a system of allocation of depreciable amount. Other aspects of the depreciation concepts are not reflected in this definition. Although the definition refers to loss of value rather than write-off of cost, the statement is not based on that definition. The definition of AS-6, fixed assets, and SSAP-12 are almost similar, and standards are more specific and unique.
How far are the differences minimised by the standards?

Existing accounting practices on depreciation vary widely and accounting standards are promulgated with a view to minimising such diversities. Surprisingly, the standards are silent about the methods of depreciation. According to their provisions, the management shall be completely relied upon in selecting an appropriate method of depreciation to allocate the depreciable amount of asset over its life as fairly as possible. Management has to determine the suitability of the method of depreciation depending upon the type of the asset and the circumstances in which the asset is used in the business. The magnitude of yearly depreciation depends upon the method used, and in this respect management is given wide discretionary power. Naturally, such discretion reduces the scope for minimising the area of diversities. Had it not been possible to recommend a single method of depreciation, the standards should have spell out the conditions under which a particular method of depreciation might be suitable. Complete silence in the standards in this respect raises doubt about materialising the very objectives for which the standards are formulated.

However, the standards concentrate, instead of the methods, on the circumstances in which depreciation should or should not be provided and the way in which detail disclosure should be made in the financial statement. Such detail disclosure about the method of depreciation and other aspects of depreciation accounting will undoubtedly provide some meaningful and relevant information to the users of accounting statement. Although
variations will persist, the users will be in a position to assess them more accurately and the purpose of unification will be fulfilled at least partly. Accounting standards also contain a number of important requirements relating to accounting practices to be adopted for depreciation. If these requirements are followed sincerely, unification, at least to some extent, will automatically emerge.

Standards provide some important definitions of the terms depreciation, depreciable assets, useful life and depreciable amount. They, it may appear, give a unified concept of depreciation to the accountants. In the explanation to the standards, detail discussion is made regarding the way of estimating the useful life and depreciable amount. Specific guidance is also provided for determining the residual value of the asset. Problem of depreciation on land and buildings is also discussed and recommendations are given whether depreciation should or should not be provided on these items in specific circumstances (Vide comparative statement, Page no.111, Point-14). The standards have provided for revaluation of fixed assets and also prescribed the ways of adjusting the depreciation due to revaluation.

From the above discussion it is clear that standard setting bodies have provided definitions and concepts on all the relevant aspects of depreciation i.e. depreciable assets, useful life, scrap value, depreciable amount etc. The common intention of all the standards, it is found, is to minimise the areas of diversities in ideas in these respects. This will guide the accountants adopt uniform measures of depreciation. If the requirements of
the standards are followed with their contents and spirits, it is expected, the existing areas of variation will not extend further.

The observations stated above about the standards are subject to empirical verification. From the results of empirical study it is evident that while standards have settled some of the aspects of depreciation accounting, some related issues are still unsettled. Thus there is a mixed reaction about the outcome of the standards. While further investigation may be conducted on the debatable issues, those settled by the standards and verified by empirical study will undoubtedly help the accounting profession. The findings of the empirical study are given in the next paragraph.

Empirical findings as to the propriety of the standards

Study of the recommendations of accounting standards on depreciation and their propriety from the point of view of various groups concerned with the standards require empirical verification. For this purpose an empirical study was conducted by questionnaire method. The object of this study was to see how far the points raised in the accounting standards on depreciation are being settled and to identify the issues which are still debatable. The questionnaire (vide Appendix - I) was designed to find out the extent to which the views expressed by various academicians, professionals and executives are in agreement with the recommendations of the standards. Empirical findings on accounting standard on depreciation are discussed below question wise.

1. This question asks whether or not accounting standards on
depreciation have ensured uniformity in accounting practices. 58% of the respondents think that uniformity has been ensured while 37% hold the opposite view and 5% remain silent. Most of the respondents giving negative answer come from academicians and professionals. It may be due to the fact that they consider that something more to be introduced in the standards to ensure uniformity. However, more than half of the respondents uphold the objective of the standard that it will minimise the differences in depreciation accounting.

2. On the question dealing with the magnitude of reduction in diversification in the accounting for depreciation due to introduction of the standards, 41% of the respondents opined that they have reduced the diversities greatly, 52% opined for a moderate reduction while 7% of them opined that such reduction, if any, is insignificant. It can be inferred that (41+52) i.e. 93% of the respondents agreed that standards have reduced the diversities either greatly or moderately.

It is interesting to note in this connection that 37% respondents of question No.1 stated that uniformity cannot be ensured by the adoption of standard. There may, it is presumed, have misunderstanding about the fact that uniformity increases with a decrease in diversity.

3. On the question whether the straight line method of depreciation is simple or not, 95% of the respondents
agreed that this method is most simple while 5% disagreed. Thus observation of the English standard that straight line method is most easy to apply is empirically tested to be true (vide page no. 97, point-1).

4.a) On the issue that suitability of depreciation method depends on the circumstances, 88% of the persons interviewed stated that it depends upon the circumstances, 10% of them considered that it does not depend upon circumstances and 2% remained undecided. The reason for not recommending any particular method of depreciation in most of the standards (vide page no.97, point-1) may be that no single method is suitable in all cases. The method depends upon the circumstances and that is supported by the empirical result.

b) 73% of the respondents to the question on the issue whether the management be allowed to select the appropriate depreciation method answered in affirmative, 14% stood against it while 13% thought that it will be decided by the then authority. Most of the standards recommended to rely on the management in this respect. Thus majority of the opinions are in favour of the standards (vide page no.97, point-1).

5. In reply to the question pertaining to the issue whether management's discretion on the selection of depreciation method widens the diversities in depreciation accounting, 70% opinions supported such diversity, 2% did not support it while remaining 28% also supported this only to a
limited extent. Thus most of them are of the opinion that management's discretion widens the variation in depreciation accounting, to some extent large or small.

6. Whether or not the straight line method of depreciation is most appropriate is the issue which divides the academicians, professionals and executives. 31% of the respondents considered it to be appropriate, 41% considered it inappropriate while 28% are still undecided. Standards also remain silent on this issue (vide page no.97, point-1). Thus there is complete disagreement on the matter and it requires further investigation.

7. In response to the question dealing with the issue of consistent use of depreciation method, 88% respondents answered in affirmative, 10% in negative and only 2% are undecided. The accounting standards also recommended consistent use of method (vide page no.98, point-2). Thus barring a very few, all respondents are of the same view that depreciation method once adopted should be consistently followed so long as it is possible.

8. In reply to question relating to change in depreciation method in the altered circumstances, 85% of the respondents recommended such change, 10% of them are against it while 5% are undecided. Accounting standards also recommended a change in depreciation method if the altered circumstances justify a change (vide page no.97, point-1). Thus almost all are of the opinion that depreciation method can be changed only in the altered circumstances.
9. Should the effect of change in depreciation method be quantified and disclosed is the issue on which 100% respondents are in favour of such quantification and disclosure. However, 60% of them favoured this to be made in all cases while 40% recommended it to be done only when the effect of change is significant. Standards also recommended this to be quantified and disclosed (vide page no.98, point-2).

10. Academicians, professionals and the executives are widely divided on the issue that whether the change in depreciation method should be treated as a change in accounting policy. 65% of the respondents treated it as a change in accounting policy while 35% did not consider it so. While comparing various standards on the issue, it is found that Indian standard treated it as a change in accounting policy and English standard specifically rejected the idea. Thus the matter still remains a debatable issue.

11. On the issue that whether the economic life or physical life of an asset should be accepted for depreciation calculation, 88% of the respondents favoured for the use of economic life while only 12% of them are in favour of using the physical life for calculating depreciation. All the standards considered the economic useful life of the asset as its useful life (vide page no.99,point-3). A very few academicians and professionals suggested the use of physical life for the purpose. But that may be due to their
apprehension that the assets may not exist physically in some cases. However, majority views are in favour of the recommendations made in the standards.

12. On the issue of desirability of frequency of reviewing the asset life, 46% of the replies favoured annual reviewing, 46% of them wanted review in every 5 years while 8% of them did not consider such revision necessary. International and Indian standards recommended a periodical review without specifying the frequency while English standard stated that such revision should take place at least once in every 5 years or more frequently (vide page no.101, point-4). So, nearly 92% of the respondents favoured the revision of asset life as recommended in the standards.

13. (a) On the question of usefulness of disclosing the basis of asset valuation, 88% of the respondents considered such disclosure useful while 10% of them did not find it to be useful. International standard is in favour of disclosing the basis of asset valuation along with other accounting policies (vide page no.102, point-5). That is supported by this empirical study.

b) On the question whether or not such disclosure increases the usefulness of the financial statements, nearly three fourth respondents found it to be useful to a great extent, while the remaining one fourth opined that it is useful only to a certain extent.
14. Question No. 14 deals with the desirability of disclosing the following aspects of depreciation accounting:

(i) Regarding disclosure of depreciation method used, 93% of the respondents favoured such disclosure while only 7% did not favour it.

(ii) As regards the disclosure of useful lives of the assets, 73% answered in favour of its disclosure while 24% are against it. Majority of the people against such disclosure come from the professionals. These practitioners may think that disclosure of asset life or rate of depreciation and other details may make the accounting statement unduly large.

(iii) Regarding the desirability of disclosing the allocated annual depreciation, 80% of the replies are in favour while 18% are in negative. So, majority of them supported the disclosure of total depreciation allocation for the period.

(iv) On the issue that whether the gross value of the assets and the accumulated depreciation should be disclosed, 93% of the respondents are in favour while only 7% go such disclosure.

(v) As regards the disclosure of reasons for change in depreciation method as required by standards, 50% of the respondents favoured its disclosure in detail while 45% recommended only a brief disclosure and 5% did not require it. Thus almost all are in support of the view expressed in the standards.
Accounting standards recommend the disclosure of all the above factors (vide page no.102, point-6 and page no.98, point-2). Thus it can be inferred that all are of the view that the above information should be disclosed in the financial statements.

15. In response to the question on the way of disclosing that whether the difference between the book value of asset and the amount realised from its disposal be disclosed in the revenue statement or in the balance sheet or in the foot note, 72% respondents suggested that such deficiency or surplus should be shown in the revenue statement while 17% favoured it to be shown in the balance sheet and only 11% recommended the item to be disclosed in foot note. Although standards provided no specific guidance in this respect, it appears from the explanation that the surplus or deficiency should be shown as a separate item (vide page no.104, point-7).

16. On the question, whether the provision for depreciation on additions to or extension with the existing assets becoming their integral part be treated as per the existing depreciation procedure or should be depreciated separately or that should be charged against revenue, 76% of the respondents recommended the use of existing depreciation procedure, 14% required these to be depreciated separately, while 10% favoured the expenditure on such additions or extensions be charged against revenue. Indian accounting standard specifically recommends that any additions or
extensions which become an integral part of the existing asset and having no separate identity should be depreciated over the remaining useful life of the asset and at the existing rate of depreciation (vide page no.104, point-8). Thus more than three fourth of the replies shared the views expressed in the recommendation of Indian standard.

17. In reply to question relating to the desirability of revising the historical cost of asset for depreciation purpose because of increase or decrease in long term liability arising out of exchange fluctuation, price adjustment, change in duties etc., 68% of the respondents answered in affirmative, 24% in negative while 8% of the respondents replied that they are not aware of it. Respondents giving negative answers, come mostly from academicians and professionals. It may be due to the fact that they consider such revision not worthwhile or such revision cannot be made only for depreciation purpose but should be done for overall accounting purposes. While Indian standard contains specific provision for revision of historical cost of asset due to above noted causes, International and English standards are not so specific on this issue (vide Page no. 106, Point - 9). Thus, the overall view on this issue is found to be in favour of the revision of historical cost of asset.

18. On the issue that whether the periodic depreciation should be based on historical cost or market value or on its
replacement cost, 54% of the respondents are in favour of charging it on historical cost, while 14% of them are in favour of using market value of the asset for the purpose and 32% of them recommended the use of replacement cost. The accounting standards recommend the use of historical cost or other revalued figure (vide page no. 106, point-9). Thus, the standards make the scope for use of historical cost or the figure as per the market value or replacement cost. Accordingly there are differences of opinion among the respondents. However, majority favoured the use of historical cost. Standards also do not prohibit it.

19. Regarding the issue that whether the residual value of fixed asset be deducted from cost or that should be ignored or that should be ignored only when that is insignificant, 68% of the respondents recommended it to be deducted from the cost, while 7% recommended it to be ignored in all cases. The remaining 24% suggested that it may be ignored only when it is insignificant. Accounting standards also recommend it to be deducted from cost (vide page no. 106, point-9). Thus all are of the opinion that residual value of fixed asset should be deducted from cost of asset in arriving at its depreciable value.

20. Regarding the desirability of charging depreciation on land whose economic importance is declining for
Various reasons including soil erosion as mentioned in the standards, 65% of the respondents are in favour of charging of depreciation, 23% of them go against it while 12% of them remained undecided. Analysis of the accounting standards made earlier explored the possibility of charging depreciation on land having limited useful life or which is subject to reduction in value (vide page no.111, point-14). Any way, almost two-third respondents are in agreement with the standards while 23% of the respondents, mostly coming from the academicians and professionals, do not favour depreciation on land. They may hold the view that depreciation is not usually charged on land because it is not wastable. The argument supporting the opinion may be that if increase in the value of land due to rise in its economic importance or favourable location (for example, due to setting of a new rail line or constructing new road by the side of the factory) is not accounted for, why depreciation be allowed on land which is subject to reduction in value. However, majority opinions are in favour of the recommendation of the standards that land having limited useful life or which is subject to reduction in value should be depreciated.

Areas of further investigation

Accounting standards on depreciation accounting are formulated with a view to minimising the existing diversities in practices through introducing uniform accounting treatment of depreciation. It helps maintaining capital
intact. Standards undoubtedly help in achieving the end to some extent. But a lot is still to be done. It may be inferred from the empirical study that a number of specific recommendations are upheld by a cross section of expert opinions i.e. academicians, professionals and executives. In some cases they agree, in some cases they differ. They agree on recommendations on the simplicity of straight line method of depreciation, consistent use of depreciation method, substituting the method in the changing circumstances, selecting the suitable method depending on situation and management's discretion thereon, disclosure requirements etc.

But opinions are found to vary widely on issues like most appropriateness of straight line method, accepting change in depreciation method as a change in accounting policy, desirability of charging depreciation on land etc. These controversial issues require immediate investigation. Besides, the standards did not explain specifically how to select the suitable method. Similarly, how the recommendations can be introduced in specific areas like in local business, multinational corporations etc. is not mentioned. In the same way, effects of local and international law like Income Tax Act, Company Act etc. are not considered in the standards. With a view to overcoming these deficiencies and for improving the
standards, further investigation should be carried out in the following areas:

i) A critical review of various methods of depreciation and recommendation of the method to be adopted in general and under particular situation.

ii) Possibility of selecting a single criteria to be adopted for selecting the appropriate method of depreciation.

iii) Finding out the circumstances under which change in depreciation method, revision of useful life and reviewing the other bases of depreciation may be permitted.

iv) Evolving a systematic procedure of periodic or continuous review of accounting standards on depreciation.

v) A study of accounting for depreciation on land.

vi) Impact of repairs, maintenance and replacement of fixed asset on depreciation.

vii) Method of ensuring uniformity in the formulation of accounting standards on depreciation by various standard setting bodies.

viii) An investigation on whether or not the accounting standards on depreciation are uniformly complied with all over the countries under the jurisdiction of the standard setting bodies.

ix) Whether or not it is desirable to consider a change in depreciation method as a change in accounting policy.
Conclusion

Accounting standards on depreciation accounting have come forward with the object of solving a long standing problem in the field as it is indispensable for maintaining capital intact.

Regarding the important questions arising in this context, empirical study shows that according to the majority of respondents, uniformity in depreciation accounting can be ensured by the accounting standards. They are in complete agreement with the spirit of the standards that straight line method is most simple to apply and suitability of a particular method of depreciation depends upon the circumstances. Almost all the respondents in the empirical study hold the view that the management's discretionary power as to the choice of method widens the variation in depreciation accounting. On the issue of consistency, all the academicians, professionals and executives are in agreement with the standards that depreciation method should be applied consistently year after year and change in the method may be allowed only if the changed circumstances justify it. Provision of the standards that adopted depreciation method, useful lives of the assets, total amount of depreciation allocated, gross value of depreciable asset and reasons for introducing change in method should be disclosed in the financial statement is widely accepted by the respondents. On the issue of depreciation on land, majority of the respondents supported the view
established earlier in this chapter (vide page no.125, point-20) that depreciation should be provided on land only under special circumstances, although a sizable section of them strongly opposed it indicating that the issue is still debatable.

The main objective of the standards is to minimise the diversities in accounting practices for depreciation. For this purpose the standards have issued a number of specific directives to be followed by the professionals. Too much resource and energy have been spent for formulating the standards at national and international levels in this respect.

These attempts are very much promising but the results are not so much satisfactory. The standards have not been able to settle the debate on all the issues of depreciation accounting. While the standards did not consider some relevant points as stated earlier (vide Areas of further investigation, page no.126), directives of the standards on some other issues are strongly opposed by a cross section of experts in the line (vide Empirical findings, page nos.116 to 126). Diversities are found to exist even among the followers of the standards. In many cases compliance with the standards, it appears, is not ensured. Thus, standards suffer from various lapses as indicated earlier.

In spite of the above criticism it can be claimed that the emergence of standards is a step forward and it creates
a breakthrough in the area. A number of directives contained in the standards are empirically found to be supported by many experts. Academicians, professionals and business executives have accepted these recommendations as found in the empirical study (vide page nos. 116 to 126). Thus, the accountants are provided with some generally accepted guidelines for depreciation accounting. If the standards are made free from the lapses stated above and are improved from time to time according to the changing necessities and the uniform compliance with the standards is ensured, it may be expected, problems of minimising the diversities in accounting practices in this respect will be minimised.

Anyway, another critical area of accounting deals with the valuation and disclosure of Inventories in financial statement. Accordingly, standards on the same pronounced in various countries and their justification are studied in the following chapter.