

VALUATION OF ASSET FOR THE PURPOSE OF INSURANCE

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Introduction

The purpose of insurance as an effective mechanism of protection will lose its meaning if the insurance policies do not respond in full measure in case of claims because of inadequacies in scope of coverage and sum insured. There is therefore a need to properly understand the relation between the indemnity provided and the sum insured. The indemnity provided in an insurance policy can be on market value, reinstatement value or agreed value basis. The principle of average will apply if the sum insured does not correctly reflect the value of assets and the same is under insured. Proper valuation of asset for the purpose of fixing sum insured is therefore very important.

Why insurance?

Insurance provides protection and physical assets are insured for one of the following two reasons.

- 1) The replacement of asset or income or both lost through the occurrence of specified contingencies
- 2) Relief from legal liabilities incurred through the occurrence of specified contingencies

In the first category falls all property insurance e.g. fire, motor, marine, etc. and in the second category fall all liability coverages. For the purpose of this article we shall be concentrating on the asset valuation for fixing sum insured, under fire and engineering insurances for building, plant & machinery and stock.

The sum insured and its adequacy

The sum insured under an insurance policy serves three purposes:

- 1) It is the amount on which premium is charged
- 2) It is the maximum liability of the insurer within the policy
- 3) It is basis for the calculation of under insurance in the event of claim

Insurance can provide full protection only when the sum insured is adequate both when the insurance is first purchased as also at every subsequent renewals. Thus the adequacy of sum insured is very critical to the insured if the policy is “subject to condition of average.” The following implications should be noted.

- a) If the sum insured is too low (under insurance) and if there is a big claim, the insured would end up receiving a settlement which would be substantially less than the full settlement of the claim thereby defeating the very purpose of taking insurance.
- b) Over insurance would only mean over payment of premium. No benefits will accrue at the time of claim. Hence this is over payment without corresponding benefit.

The adequacy of sum insured is thus very important and critical for the insured. It is important for the insurer also in the sense that the insured feels cheated if he

does not get adequate indemnity because of under insurance and it may strain the insurer's relationship with clients. Clients expect necessary advice on this account from the insurer who they believe are experts and must exhibit professionalism. However, there is tendency on the part of the insured also to save on premium. But the insurers must do their part of the duty on rendering advice on sum insured to avoid stress in relationship at the time of claim.

Asset Valuation

The assets are valued for different purposes e.g. for taxes, balance sheet, merger and acquisition, etc. They are also valued for the purpose of insurance. There are various methods of valuation. Choice of appropriate valuation method depends upon the purpose of valuation as also on the nature of assets involved. Let's briefly examine the various methods employed for valuation purpose and then examine the current practices being followed in respect of valuation of assets for the purpose of insurance. The various methods used for valuation are as under:

- 1) Valuation based on replacement cost basis: Here the cost of a new machine of similar nature, make and capacity if available is found out. This cost will represent the value on replacement cost basis.
- 2) Good as new: There are situation where machine / plant is working satisfactorily because of good maintenance. In such situation, this valuation method is used which represents the original actual cost less depreciation but adding back the maintenance cost.
- 3) Sum of part valuation: This method of valuation is used where the equipment is not of composite nature. In this method all the different units / component are valued separately and then added up to arrive at the composite value. But this method has the inherent risk of

technological process in that if one part is damaged but not available, the entire assembly becomes scrap. The loss in such situation is not limited to that part only.

- 4) Fair value method: This represents the value in exchange. This method of valuation is applicable to assets that can be currently exchanged in the market for value e.g. whatever may be the cost of production of LPG, its value in the market for sale in exchange for cash is the fair value.
- 5) Depreciation method:
 - a. Book Value: This represents the written down value of the assets in the books of accounts. In this first year, this represents the actual cost of the asset and with each passing year appropriate depreciation is charged and the value of the asset is accordingly reduced. Over a period of time, the asset value become so low that it will not reflect the true worth of asset.
 - b. Market Value: In this method depreciation is allowed on current replacement value of the asset for the number of years it has been in use to arrive at market value.

Asset valuation for fixing sum insured

For insurance purpose generally market value concept is employed. However, it should be noted that in its first year the book value and the market value may be the same. Market value represents the amount at which assets of the same age and specification can be bought and sold. It generally takes into account both depreciation because of use and appreciation because of inflation.

It should be appreciated that the purpose of insurance is to get complete indemnity in case of claim and hence any valuation method of assets used for insurance purpose (i.e. fixing of sum insured) must take this important concern into account. The basis of indemnity under fire and engineering class of business is generally provided on either of the following two methods.

- (1) Indemnity basis
- (2) Re-instatement value basis

Under certain circumstances and if agreed upon by the insurance company the indemnity is also provided on “Agreed Value” basis.

Indemnity Basis: The value here is related to the age, present condition and suitability for use of the asset and hence depreciation because of age and use is taken into account. In case of claim, there will be financial strain on the insured.

Reinstatement value basis: No depreciation is deducted and the settlement of claim is on “new for old” basis. It will reflect the cost of replacing the existing asset by a new asset of similar type, capacity and utility. The insured here will have least financial strain.

Agreed value: Under special circumstances, policies are issued on agreed value also e.g. residual value insurance. We shall discuss this in more details subsequently.

The insurance companies are reluctant to issue policies on reinstatement value basis / agreed value basis because of moral hazard concerns.

For the purpose of valuation of assets for fixing sum insured's, let's divide assets into the following groups:

- 1) Building, furniture, fixture, etc.
- 2) Plant & machinery
- 3) Stocks

This division is useful because each group has its own peculiarities & characteristics and hence need a separate treatment for valuation purpose.

Building, Furniture Fixture, etc.: For insurance of building –

- Value of the land is to be excluded.
- The plinth and foundation do not get damaged in fire and hence may be excluded. Value of compound wall is to be included.
- But for earthquake extension, the same is to be insured as a separate item without corresponding insurance against fire perils.
- Sum insured for above the ground level building should be the same for both earthquake extension and the main fire policy.
- The value of embedded items either underground or in the walls / roofs should form part of the valuation and by way of suitable wordings in the policy this intent should be reflected and made clear.

The building are generally insured on one of the following basis by the insured

- 1) Original cost basis
- 2) Book value basis

- 3) Market value basis
- 4) Reinstatement value basis

Sum insured will be different under each basis.

Original cost basis:

This is the historical cost at which the building was acquired / constructed and capitalized. This can be the basis of sum insured during the first year of its acquisition / construction. With the passage of time this value has to be adjusted for depreciation due to its age and appreciation in value due to inflation.

Book value basis:

The book value represents the written down value of assets after providing for depreciation on the original cost from year to year basis. This will lead to heavy under insurance with the passage of time except in case of new building in its first year of insurance.

Market value basis:

This represents the amount at which property of the same age and condition can be bought or sold. This value takes into account both depreciation to the physical asset and appreciation due to inflation. The current cost of construction of similar building is taken and to this is applied depreciation for age, usage, maintenance, wear & tear, etc. The generally accepted method currently in use for building is to apply unit cost rate to the gross external areas of the building or cubic measurement of building and adjust subsequently to suit particular circumstances (built up area and construction specification).

Reinstatement value basis:

This represents the value of similar new property – No depreciation is charged and hence if the fire policy is taken under “reinstatement values” clause the property will be replaced without financial strain to the insured.

From the above it is clear that for a new building during its first year any valuation method would do for the purpose of insurance. But in subsequent years, it has to be preferably on reinstatement value basis.

Plant & machinery: working out the sum insured for plant and machinery specially old one pose serious problems. For brand new plant and machinery for its first year of insurance, the original capital cost may be adequate. But this cost may require up-word revision at the time of renewal of the very first insurance. However in case of very large industrial risks, which takes years to complete, the capitalized cost in the first year itself may not be sufficient to cover the replacement cost in case of claim. Insurance companies generally insure plant and machinery on either “market value basis” or “reinstatement value basis.”

Market value: This method is suitable for machines of common type, used for general purposes, freely available in the market for sale / purchase. On the current replacement cost of the machines / plant is applied suitable depreciation (for age, use, wear and tear, etc.) to arrive at market value. The market value, thus, refers to the cost at the current price level of the asset of similar type and nature. Obviously this method is not suitable for plant and machinery of special nature that are not regularly bought and sold in the market.

Reinstatement value basis: the reinstatement value is represented by the cost of replacing the asset by new items of similar nature and capacity. Thus it gives new price of an old machine if available as new today. In case of old plant and machinery, we have serious problems in working out the reinstatement value i.e. the price cost of the original plant and machinery on current day replacement cost of a new similar plant and machinery. Obviously original cost of capitalization can not be a basis for sum insured. The problems associated with such exercise are:

- 1) Manufacturer stopping production of such machines
- 2) Manufacturer could have gone out of existence
- 3) Technological improvements taking place in the machines resulting
 - a. Higher output / productivity
 - b. Lesser manpower requirement
 - c. Lesser fuel consumption and operating cost
 - d. Additional range of function / compactness of machine, etc.
- 4) The machinery and technology may have become obsolete
 - a. Functional obsolescence: Improved and efficient new version of the machine replaces the older machines that suffer from functional obsolescence.
 - b. Economic obsolescence: External factors (such as government planning & industrial policy, legal environment, indigenous developments, etc.) which brings about absence of demand for products / machine thereby creating economic obsolescence.

Working out reinstatement value when

- 1) The current price of similar machine / plant is available
- 2) The current price of similar machine / plant is not available

- 1) **When available:** Suitable adjustment to be made for technological advancements from the current price of similar machine / plant to which is added current landed cost plus installation costs, etc.
- 2) **When not available:** In such situation, use is made of what is called escalation method. If the insured's capital block account is maintained up-to-date, the appropriate replacement cost of the entire plant and machinery can be computed by applying a rate of escalation which is in tune with RBI index and which takes care of concerns on account of custom duty / rate of exchange, etc.

Insurance on Residual Value:

For very old plant & machinery, which has run its life as per manufacturers prescription may have reached zero value. But because of good maintenance the plant and machinery is performing its duty. In such situation the insurance is sometimes done on residual value, which represent 25% to 50% of the actual cost, the balance being treated as depreciation. Such policies in insurance parlance are treated as agreed value basis. There can also be agreed value policies covering work of art, etc.

Stocks:

Valuations of stock for insurance do not pose much difficulty. Stocks may be of

- Raw material
- Stock in process
- Finished goods

Raw materials are valued at net cost of acquisition at which the raw material is available to the insured.

Stock in process is valued at – the maximum value of stock in process - the cost of raw materials, other inputs and processing cost at any given time.

Finished goods – Net manufacturing cost including factory overheads.

From the above, it is clear that asset valuation for the purpose of insurance is a complicated and tricky affair. While theoretically it is easy to work out an algorithm for calculating the sum insured and its revision at every renewal, in practice it is a time consuming complicated job calling for acumen and specialized skill.

Fire insurance policies are generally sold on either market value (indemnity) basis or reinstatement value basis. As far as insurance company is concerned, it only wants the sum insured figure to be declared by the insured. In any case, the onus of proof lies with the insured in the event of the claims. Inadequate sum insured, therefore, has serious implication for the insured.

In case of old plant of high value and specialized nature fixing of sum insured, is of critical nature and should be handled carefully. There is therefore a need to engage a trained professionally approved valuer for this job. It has many advantages.

- Confirmation that it has been assessed in accordance with good practice and sound methodology.
- The valuation will provide an accurate basis for adjusting the sum insured at subsequent renewals of policies.

- Take care of the avoidable outgo of premium because of over insurance and inadequate compensation because of under insurance in the event of claim.
- While carrying out the valuation exercise, measurements, details of construction, important information about machinery and installation and other critical details are recorded which can be of great use in the event of claim.
- Valuation done by a professional valuer becomes a sound basis for negotiation of claims.
- Valuation of each building separately provides basis for calculation of fire premium which depends upon type of construction and occupancies.

Assets revaluation: It is desirable that organization have a programme to revalue assets every five years and review those at every renewal. Review should include assessment of the assets current condition, required maintenance and estimated remaining useful life. This is an exercise which should form part of the risk management approach of the organizations. Inflationary trend should be kept in mind while adjusting sum insured.

Conclusion:

An attempt has been made in this article to highlight the importance of sum insured adequacy which has serious implication for the insured. The insurer would be failing in their professional duty towards their client if they do not educate and inform them on this account. The various methods of valuation in general have been discussed and those relating to valuation of asset for the purpose of insurance have been discussed in detail. Insurance policies are issued on market value i.e. indemnity basis or reinstatement value basis. These concepts

have been introduced again in a generalized manner. Special situation will require specific special approach. There cannot be “fit-all” approach for all eventualities and situation. Attempt has been made to highlight the method of approach in keeping with principle of indemnity. In complex situations, it has been suggested to go in for “valuation” by an outside professional expert. The advantages of such an approach have also been discussed.
