

Valuation of Life Insurance Companies in India

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ABSTRACT

In this paper, we provide a broad framework for valuing life insurance companies in India. We also discuss some of the issues that are likely to be faced in valuing Indian life insurance companies in the current scenario.

KEYWORDS

Embedded Value; Appraisal Value; Goodwill; Structural Value; Estate

1 Introduction

1.1 With the possibility that the Foreign Direct Investment (FDI) cap on insurance sector could be relaxed soon, many insurance companies in India are likely to see a reorganisation of shareholding structures. In such an event, one of the questions that the two promoters may have to answer is “at what price should the shares be bought / sold?”

1.2 Despite being five years old, the life insurance sector already has some examples of a change of shareholding amongst promoters and the sale of entire stakes by the original promoters. Similarly, some companies may have plans to launch an initial public offer (‘IPO’) in not so distant future.

1.3 Many companies are also looking at monitoring the ongoing value of the business from an internal management viewpoint.

1.4 With this background, the issue of valuation of life insurance companies assumes increasing importance.

1.5 Although there is no single, universally accepted, method of valuing life insurance companies, techniques developed using “embedded value” or “appraisal value” methodologies are very common in European and Asian countries. In a merger and acquisition (M&A) scenario, although the value of a company based on the “appraisal value” of its business may not be the final value based on which the transaction may take place, it would certainly act as a theoretical basis upon which negotiations between buyers and sellers take place

1.6 In this paper, we discuss the broad framework of the “embedded value” / “appraisal value” techniques used for valuing life insurance companies. We also discuss some of the issues that are likely to be faced when valuing life insurance companies in India.

2 Valuation principles

2.1 The “embedded value” / “appraisal value” methodology discussed later in this paper are often based on the following principles:

- Going concern
- Market value of assets
- Best estimate assumptions
- Continuation of current legislation

2.2 We discuss each of the principles briefly in the following paragraphs.

Going concern

2.3 The valuation assumes that the life insurance company would continue as a going concern and would continue to write new business in future. This is an important assumption, as the derivation of “steady state” or long-term expense loadings would be affected based on whether the company is open to new business in future or not. The assumption is also important, as it allows (if required) a value to be placed on business that may be written in future.

2.4 A going concern assumption may also be necessary to derive the best estimate assumptions, for example the expected withdrawal / lapse rates under normal circumstances may be different to those expected for a company closed to new business.

Market value of assets

2.5 The valuation of a life insurance company usually assumes that its assets are marked to market, to provide a realistic valuation of its assets. Depending on the method used in valuation of assets for the purpose of regulatory submissions, this principle may require the company to re-value some of its assets.

2.6 In particular, this may require the company to carry out valuations for property. It may also require companies to calculate the market value of its fixed interest securities, if they are currently valued based on book value. Similarly, if a company holds any un-listed securities, it may need to determine their values using desktop valuation techniques.

2.7 Such an assumption for taking the market value of assets is also important as the investment return assumption used in the valuation needs to be based on the market value of assets.

Best estimate assumptions

2.8 In order to project the future cash-flows and profit stream that may arise from its existing in-force business, the life insurance company should make assumptions which are best estimate in nature, as opposed to prudent assumptions used in statutory valuation of its liabilities. Any implicit / explicit margins in such assumptions may need to be removed, as the uncertainty regarding the emergence and level of future profit stream from existing business is typically allowed for through margins in the discount rate assumed.

2.9 Such best estimate assumptions are normally derived from company specific and industry experience, where these are available and credible. Thus, the profit streams so derived give a realistic projection rather than the conservative projections obtained using the prudent statutory basis.

Continuation of current legislation

2.10 The valuation is usually carried out on the assumption that the current legislation will continue in future. In areas where the legislation is not clear (e.g. life company taxation), the assumptions will be based having regard to company’s current practice and in consultation with the various stakeholders (e.g. promoters, management etc.)

2.11 If there are aspects of legislation, which are likely to change in near future, the valuation assumption may allow for the same. However, in such cases, it may be made clear to the various interested parties that the valuation is contingent upon such legislative changes being enacted.

3Valuation methodology

3.1It is important to establish the objectives of the valuation prior to carrying out any valuation. The approach adopted in the valuation may differ depending on the objectives, circumstances and parties for whom the valuation is carried out. For example, in the context of the joint venture companies in India, the foreign promoter may have risk perceptions which are different than the risk perceptions of the Indian promoters. These may result in a requirement to use different risk discount rates. Similarly, a valuation carried out for internal management purposes may need to adopt a different approach than the valuation carried out for an M&A purpose.

3.2In this section, we discuss the “embedded value” / “appraisal value” methodology in detail.

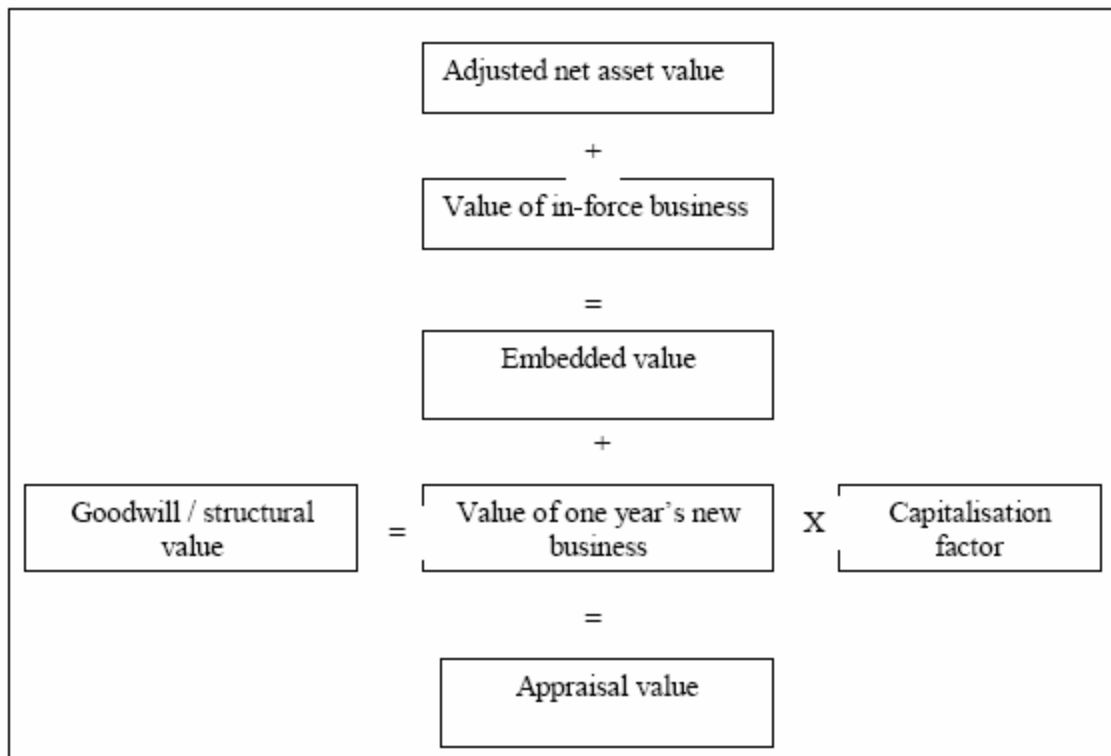
3.3Broadly, the value of a life insurance company can be assumed to consist of the following three main components:

- Adjusted net asset value
- Value of in-force business
- Value of future new business (often called “goodwill” or “structural value”)

3.4The value of future new business is usually determined based on the value of one year’s new business with the application of a capitalisation factor, to take into account the growth of new business in future, the expected profitability of the business and the period over which the performance is likely to be repeated.

3.5The sum of all the three components shown above gives the overall value of the company, which is usually termed as “appraisal value”. The sum of the first two components above is termed as the “embedded value” of the company.

3.6 Diagrammatically, this can be represented as follows:



3.7 The determination of the value of in-force business and the value of one year's new business will normally require an actuary to build models to project the future cash flows that are then discounted back to the valuation date. A key assumption in the whole valuation process is, therefore, the discount rate.

3.8 At a conceptual level, the discount rate can be derived as the risk-free rate (say the yield on suitable long-term government securities) plus a risk margin, for the inherent risks attaching to future earnings. The risk margin should allow for market, company/business and currency specific risk elements.

3.9 In an M&A situation, the buyer and seller may often have very different views on the inherent risk in the business. This may, naturally result into a different discount rate assumption that may be used by either parties involved. Given the subjectivity involved, it would be typical to illustrate results using an agreed range of discount rates, which would present a framework for informed negotiations between the parties concerned.

3.10 Each of the components of the value of a life insurance company is discussed in further detail, in the following paragraphs.

Adjusted net asset value

3.11 This is normally taken to be equal to the net assets in the shareholders' fund. As discussed earlier, assets would be marked to market. The value so placed on assets can be quite different from the value placed in the statutory accounts of the company. For example, bonds which are carried at amortised book value can be very different to market values, especially in light of the fluctuating interest rate environment in India.

Value of in-force business

3.12 This relates to the present value of future transfers to shareholders from business that has already been written ("in-force business"). There are often adjustments for expense overruns and the cost of capital (cost of solvency margin), which can be very significant for a young company.

3.13 As in the case of the adjusted net asset value, assets in the life (policyholders') funds normally need to be marked to market.

3.14 More specifically, the value of the in-force business consists of the following components:

- The present value of transfers to shareholders
- An adjustment in value due to any expense overrun
- An adjustment for the cost of the solvency margin relating to the in-force business

Transfers to shareholders

3.15 The cash-flows under the in-force business can be projected using a set of best estimate assumptions. Similarly, the policy reserves can be projected for the in-force business, on the assumption of continuation of the current reserving approach / bases.

3.16 Based on the projected cash-flows and reserves in future, the surplus arising in each of the years in future can be calculated. Similarly, the transfers to shareholders in each of the years in future can be determined based on the surplus arising.

3.17 The transfers to shareholders in each of the years in future will be subjected to the regulatory restrictions. Thus, broadly, the transfers to shareholders in each of the years in future will be equal to:

- 100% of the surplus arising in non-participating and unit-linked business;
- 10% of the surplus arising (or 1/9th of the cost of the bonus declared to policyholders).

3.18 For participating fund, we may have to project the undistributed surplus ("estate") as well. Such an estate may be assumed to be distributed to participating policyholders either:

- Through an increased regular bonus over the projection period (such that the projected estate at the end will be nil); or
- As a terminal bonus at the end of the projection period.
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3.19 The transfers to shareholders linked to the distribution of such an estate to policyholders may also then be included in the overall transfers to shareholders projected earlier.

3.20 Such overall transfers to shareholders in each of the years in future can then be discounted back to the valuation date, at the assumed risk discount rate, to arrive at the value of future transfers to shareholders.

Adjustment for expense overruns

3.21 The expense loadings used in the projection of cash-flows above would be based on “steady state” or long term best estimate expenses of the company. There may be situations, particularly for start-up companies such as in India, where the total projected expenses of the company (based on its expense budgets or bottom-up expense projections) may be higher than the projected expense contributions arising from the assumed expense loadings from the in-force business.

3.22 The excess of such projected expenses over the projected expense contributions (known as “expense overruns”) would need to be deducted from the value of in-force business. When calculating the adjustment for the value of expense overruns, care should be taken in allocating the overruns as applicable to the existing in-force business and that to the future new business. Only the overruns applicable to the existing in-force business should be valued and deducted from the overall value of in-force business.

Adjustment for the cost of solvency margin

3.23 Each company is required to set aside capital in the form of a statutory solvency margin. As the after tax investment return on the assets backing the solvency margin is usually lower than the rate of return required by the shareholders (as measured by the risk discount rate), there is an economic cost of holding capital as the statutory solvency margin.

3.24 It would be normal to allow fully for the cost of capital in the valuation. In the event a company has significant retained earnings (i.e. estate), it may be possible to allow for this in the calculation of the adjustment for the cost of solvency margin.

3.25 It is necessary to allow for the run down of the required solvency margin, as the in-force business runs down. However, we may also need to allow for the absolute minimum solvency margin required (e.g. Rs.50 crores in India) while calculating the adjustment for the cost of such solvency margin.

Goodwill / structural value

3.26 This relates to the ability of a company to generate future stream of profitable new business. It is often taken to be the value of one year’s new business multiplied by an appropriate capitalisation factor. However, it can also be directly derived by projecting several years’ of future new business.

3.27 As for the value of in-force business discussed above, appropriate adjustments are made to the structural value for the cost of the solvency margin and expense overruns (related to new business).

3.28 The value of one year’s new business represents the present value of future transfers to shareholders that are projected to arise from the sale of one year’s new business.

3.29 Key issues regarding the determination of the structural value are the following:

- Which is the “typical” year of new business to be considered?
- What is the profitability of the new business?
- What capitalisation factor should be used?

Typical year of new business

3.30 While taking value of one year's new business, the choice of a typical year is an important one. Although usually one may value the new business sold in the twelve months preceding the valuation date, such an approach may not be appropriate for a young company, wherein the business mix, product mix etc. are evolving rapidly. The product suite may also be rapidly expanding, which may make the profile of the last twelve months' business unrepresentative of the future.

3.31 For example, the new business of most of the private sector life insurance companies has shifted to unit-linked in recent years. On hindsight, taking the year prior to such a shift of new business to unit-linked products as "typical" would not have been appropriate.

3.32 In such circumstances, we may need to make appropriate adjustments to the new business data / products.

Profitability of new business

3.33 New business profitability will obviously be driven by the assumptions chosen. The demographic assumptions may be chosen having regard to the company's own experience, industry experience (suitably adjusted) and the financial assumptions may be chosen having regard to the external economic environment.

3.34 The resulting profitability of new business should be reasonable in the context of the profitability experienced on similar products in the market. Any expected future trends in profitability of future new business may also be allowed for.

3.35 As with many other aspects of the valuation, the profitability of new business should also be looked into in a holistic manner.

Capitalisation factor

3.36 A capitalisation factor estimates the number of years over which the new business performance and its profitability over the typical year may be repeated in future. It reflects the shareholders' expectations regarding future growth of the business.

3.37 The capitalisation factor is usually a commercial decision, especially in a M&A transaction, and is negotiated between the parties involved, having regard to future profitability, likely growth in business and the additional risks attaching to business not yet sold.

3.38 Where possible, it may also be set with regard to other life insurance company valuation precedents. Any estimate of structural value is, therefore, highly subjective and a significant range of values could be considered appropriate.

3.39 New life insurance companies, with a rapidly growing distribution network, may try to negotiate for a high capitalisation factor. Similarly, a maturity company may demand a higher capitalisation factor, provided the productivity of its distribution channels is high.

3.40 An example of the capitalisation factors implicit in some of the M&A transactions in other insurance markets is included in Appendix A.

4 Issues likely to be faced in India

4.1 Having discussed the conceptual framework for carrying out the valuation of a life insurance company, we now discuss some of the issues that are likely to be faced by life insurance companies in India.

4.2 At present, life insurance companies in India are required to produce only one set of accounts – based on statutory approach. Unlike in other countries, the internal systems of some of the Indian insurers may not be geared to produce multiple sets of accounts. Although some companies may be producing accounts on more than one basis to meet the requirements of their foreign promoters, they are not required to publish them in India at the moment. As such, companies may need to gear themselves to be able to adopt the valuation methodology based on the “embedded value” approach discussed earlier.

4.3 Barring the Life Insurance Corporation of India (“LIC”), all other private sector insurance companies are barely five or less years old and as such, have not gathered sufficient experience to base many of the assumptions that would be required, for the purpose of the valuation. Such a scenario makes a valuation less credible than if it were supported by good operating experience. Until the companies reach a “steady state”, many of the assumptions may require continuous review. As such, the valuation itself may be subject to a level of volatility, if carried out in different periods.

4.4 The lack of company’s own experience may also mean that the negotiations between the buyers and sellers in an M&A transaction or in the event of equity re-structuring may become more subjective and difficult.

4.5 Many of the new private sector insurers are likely to be in an expense overrun situation. Depending on the level and profitability of the in-force business, the expected future overruns may lower the overall value of the company. The level of future expense overruns themselves may depend on the future expansion plans of the company. For such a young company targeting an aggressive expansion plans, the value of in-force business may turn out to be negative, as depressed by the huge adjustment for expense overruns.

4.6 There may be several other issues that are likely to be faced in valuation of a life insurance company in India. Some of these include:

Taxation

- What allowance for tax should be made?
- The current tax laws are not clear – e.g. whether the 12.5% tax rate applies to profits in the shareholders funds as well?
- What constitutes “valuation surplus” (as specified in the Income Tax Act) – is it the surplus shown in the IRDA forms (which is after declaration of policyholder bonuses) or is it the surplus before such a declaration?
- Should a higher rate (30%) be applied to the profits in the shareholders’ funds, in anticipation of the implementation of the Eradi Committee recommendations?

Allocation of expenses / overruns

- Given that the insurers have not reached a “steady state”, the allocation of overall expenses / overruns between different funds would also be much more subjective.

- Different entities (e.g. Indian vs. foreign) may have different views regarding the extent and treatment of expense overruns in valuation.
- Depending on the sophistication of the expense projection model adopted, one may argue that possible future expense under-runs (if any) may also be allowed for in the valuation.
- Should one make adjustments for the tax on the value of expense overruns?

Solvency margin

One may need to consider if the absolute minimum solvency margin should be allowed for throughout the run down period of the in-force business or only up to a certain year. This would affect the valuation, as it may result in a different adjustment for the cost of solvency margin.

Capitalisation factor

- What capitalisation factor to use, given that many companies have not yet established themselves fully? How to derive the capitalisation factor?
- At what rate would the future new business grow for the company?

Inter-dependent assumptions

- Would there be any inter-dependent assumptions that may need to be allowed for in the calculation? For example, would an aggressive future growth strategy (resulting into a high capitalisation factor) also result into a high adjustment of value of future expense overruns and result into possibility of a high lapse rate for such business? Would the aggressive future growth also warrant usage of a high risk discount rate?

Bonus rates

- Given the direct link between shareholders' profits and bonuses declared to the policyholders for with-profits business, the assumption for the bonus rates is very important in a company valuation. What would be a suitable bonus rate that can be supported into the future?

4.7 Despite such issues, companies may still put in place systems to be able to track the value of the company and changes therein. Such an analysis would help companies monitor its performance more closely and identify "problem" areas at an early stage. As and when a company reaches a mature stage and feels more confident about publishing such values, the systems already put in place and refined over the years would help publish the required information in the shortest possible time.

5 Conclusions

5.1 With the likelihood of changes in the shareholding pattern in several of the life insurance companies in India rising, the valuation of a life insurance company has become a topic of increasing interest for the promoters of such companies.

5.2 In this paper, we have outlined the valuation framework highlighting the subjectivity inherent in the valuation process and touching upon some of the likely areas of contention, especially in the valuation of young companies with limited operating track record.

5.3 It is, therefore, not surprising that perceptions of value can often differ widely between buyer and seller particularly in emerging markets like India, where there is a great degree of uncertainty. It is critical, therefore, that actuarial input is sought as early as possible in the tricky

process of valuation so that the parties concerned have an understanding of the possible ranges of value and the key assumptions driving the valuation.

5.4 It is also important that companies should start gathering the required data and preparing internal embedded value systems at an early stage so as to be able to carry out such valuations on a regular basis as and when required.

Appendix A: Examples of capitalisation factors

Companies	Capitalisation factors
<p>Scottish Life (October 2000) Medium sized mutual with AUM worth Sterling 10bn. UK new business market share placed the company outside the top 20. The low multiple reflects a weaker brand and less favourable market assessment for the sector as a whole.</p>	10 – 15 (estimated)
<p>Scottish Provident (September 2000) Medium sized mutual with AUM worth Sterling 10bn. UK new business market share placed the company just outside the top 20. Again, the low multiple reflects a weaker brand and less favourable market assessment for the sector as a whole.</p>	20
<p>St. James' Place Capital (March 2000) Direct sales unit-linked office established in 1994, marketing its products under the brand name of J. Rothschild. Considered a successful company in developing the distribution channel. The high multiple reflects the strong brand and high business growth.</p>	30 – 35 (estimated)
<p>Legal and General (September 1999) Strong brand and a successful multi-channel distribution strategy. However, the market view was that the new business multiple was high.</p>	49
<p>Great Eastern Life/OAC Singapore/Malaysia A restructuring of related companies with common shareholders. A friendly transaction. No tender process. Practically decided to choose a number of 10 having reviewed the few transactions in Asia in public domain.</p>	10

Source: Published reports / Industry sources / Watson Wyatt estimates

About the Authors:

Sanket Kawatkar

Sanket graduated from Sydenham College, Bombay University in 1995 and qualified as a Fellow of the Institute of Actuaries in 2000. He is also the Fellow of the Actuarial Society of India.

Sanket has worked for AIG for several years. He joined American International Assurance (AIA) in Singapore in 1995. He was involved in various tasks including product development & launch –including unit linked products, experience analysis, statutory reporting and monthly valuations. Reporting to the Appointed Actuary, he was also involved in a few high profile projects such as the review and reduction in bonuses and the subsequent communication to policyholders, and the repricing of products etc.

Sanket returned to India in 1999 and worked first with AIG India Liaison Office in Mumbai and then with Tata AIG Life as an actuary, responsible for analysing the regulatory developments, developing Tata-AIG's product strategy and providing guidance to other members of the team. He was also heavily involved in designing the Agency Compensation Structure for his Company. Since joining Watson Wyatt in May, 2002, Sanket has been involved in all projects in India, including product development and implementation, statutory peer review, market entry and business planning, embedded value review, strategy development etc.

He has been involved in professional activities of the Actuarial Society of India and has also been an examiner/marker for the examinations by the Actuarial Society of India as well as by the Institute of Actuaries in the past. Sanket is also the member of the Life Insurance Board of the Actuarial Society of India.

Richard Holloway

Richard graduated from New College, Oxford University in 1987 and later qualified as a Fellow of the Institute of Actuaries in 1990.

Richard has spent his entire career of over 18 years working with Watson Wyatt. He is currently Managing Director of Watson Wyatt Insurance Consulting Pte Ltd. During his time in Asia Pacific, he has worked extensively on insurance projects in all countries in the region, with a greater focus on South East Asia and the Indian sub-continent. Assignments have included statutory valuations, mergers and acquisitions (due diligence and company valuations), embedded value reporting, reserve reviews, product pricing, product development, business planning, entry strategies, distribution, training, etc., for life and non-life companies.

Richard has been a Fellow of the Actuarial Society of India since 1999. Richard established Watson Wyatt Insurance Consulting Private Limited in India. He now acts as the Managing Consultant.

Richard has been re-elected to the Council of Actuarial Society of Singapore since September 2004 and he has been a member of the Monetary Authority of Singapore working group on life risk-based capital since December 2000.

Richard's responsibilities extend to managing our insurance and financial services work in South East Asia including India, Sri Lanka, Indonesia, Singapore and Malaysia.