

CAS Task Force on Fair Value Liabilities

White Paper on Fair Valuing Property/Casualty Insurance Liabilities

Section C - Alternatives to Fair Value Accounting

Introduction

For many, the proposals by FASB and IASC present some radically new ways to value balance sheet items and to measure income for insurers. Most of the proposed changes have a reasonable theoretical basis, but a practical implementation of the new methodology will undoubtedly present significant challenges to the actuarial and accounting professions.

For example, as discussed in the *Methods for Estimating Fair Value* section, all of the methods currently available to measure the risk margin suffer from various disadvantages. None of these methods is presently in widespread use for actual valuation of balance sheet liabilities (however, some are commonly used for ratemaking). Although it is likely that more research will evolve given an accounting standard that requires a risk margin, it is difficult to see a route that will arrive at a widely adopted standard approach. Lacking a standard approach (with appropriate guidelines for the magnitude of risk margins by lines of business), it may be difficult to enforce a reliable comparison across insurers.

It is also not clear that all the proposed changes will benefit the industry, its customers or investors. An example is the inclusion of the effect of credit risk in the fair value of liabilities. This requirement implies that an insurer experiencing a lowered credit standing will see its earnings improve. This creates an incentive for companies to increase operational risk and thereby increase the insolvency cost to customers. (For a more detailed discussion of credit risk, see the separate section of this paper on this topic.)

For these reasons, it is prudent to consider some alternatives to the full implementation of the FASB and IASC proposals. The following are alternatives that we have considered or that have been presented in the accounting literature. We do not necessarily endorse any of them, but we list them here in order to enhance the discussion of this topic.

The Alternatives to Fair Value

1. Undiscounted expected value

Use the *undiscounted expected value of the estimated liability payments* as its accounting value. This alternative is essentially the *status quo* for property-liability insurers, although some may have historically used estimates of amounts other than the mean (such as the median or mode). It implicitly assumes that the risk margin equals the discount on the liability. Note that current statutory and GAAP accounting standards allow discounting for some losses (e.g., workers' compensation life pensions). However, the vast majority of liabilities are not explicitly discounted.

The FASB and IASC proposals indicate that the proper way to view the estimation of uncertain cash flows is that the *expected value* of the cash flows is the relevant measurement. Note that the

CAS Task Force on Fair Value Liabilities

White Paper on Fair Valuing Property/Casualty Insurance Liabilities

Section C - Alternatives to Fair Value Accounting

proposals do not directly address this issue with respect to the intended accounting treatment. However, the examples in the documents clearly show the preference for expected value.

The actuarial profession has also recently adopted the expected value criterion. The new Actuarial Standard of Practice No. 36, "Statements of Opinion Regarding Property/Casualty Loss and Loss Adjustment Expense Reserves," specifically requires that the preferred basis for reserve valuation be expected value.

Section 3.6.3 of the ASOP states "In evaluating the reasonableness of reserves, the actuary should consider one or more expected value estimates of the reserves, except when such estimates cannot be made based on available data and reasonable assumptions. Other statistical values such as the mode (most likely value) or the median (50th percentile) may not be appropriate measures for evaluating loss and loss adjustment expense reserves, such as when the expected value estimates can be significantly greater than these other measures." For some, this may be viewed as a change to the previous status quo, while for others, this is merely putting in writing the current practice.

The U.S. regulators' point of view, as expressed in the NAIC Issue Paper No. 55, proposes that the reserves to be booked be "management's best estimate," although the term "best estimate" is not currently defined.

When discussing "expected value" in this paper, we define the term to be without a risk margin, unless stated otherwise.

Advantages

- This is easiest to accomplish. There is no change to current accounting procedures.
- The risk margin equals the amount of the discount, so a risk margin is implicitly included in the liability value.
- The risk margin is directly correlated with the amount of the discount. This is intuitively appealing, since many believe that the amount of risk is positively related to the length of the loss payment tail.
- It is easy to measure the runoff of the liability.

Disadvantages

- It fails to overcome the many problems associated with current accounting, including
 - a) Incentive for accounting arbitrage, or transactions undertaken strictly for a favorable accounting result, despite no economic benefit.
 - b) Misleading information for decision making, in that transactions that have a poor economic result may look better than those creating a favorable economic result.
 - c) Items with significant long-term uncertainty may appear inestimable on an undiscounted basis, even when estimable on a present-value basis.
 - d) Companies writing different types of insurance would not be comparable.

CAS Task Force on Fair Value Liabilities

White Paper on Fair Valuing Property/Casualty Insurance Liabilities

Section C - Alternatives to Fair Value Accounting

- It is a poor calculation of either the risk margin or the present value of the liability. Hence, this alternative results in an accounting value for equity that may not adequately represent the value to investors, policyholders or other parties.

2. Present value at a risk-free interest rate

Use the *present value of the estimated liability payments* as the accounting value. This alternative is equivalent to the fair value, except for the risk margin and adjustment for credit standing. Some would view this as the best practical alternative to fair value, given the difficulties in estimating the risk margin and credit risk adjustment. For some lines of business, such as workers compensation, actuaries routinely calculate present values of the liabilities (although typically using a conservative discount rate). For other lines, the loss and LAE payments patterns needed for present values are usually a by-product of normal loss reserving or ratemaking practices.

This approach is equivalent to *effective-settlement measurement*, discussed on page 22 of the FASB document "Using Cash Flow Information and Present Value in Accounting Measurements" (3-31-99). The effective-settlement method gives the liability value as the amount of assets, which when invested at a specified interest rate, will produce cash flows that match the expected liability cash outflows.

Advantages

- This method is feasible with current actuarial skills and practices. Many insurers currently discount loss reserves for some lines of business. Also, the requisite cash flow patterns are commonly produced in estimating the undiscounted reserves.
- Discounting has widespread acceptance and is fundamental to the life/health industry.
- There is no dispute over how the risk margin should be calculated and applied to individual companies.
- Measuring and displaying the runoff of the liability is not difficult.

Disadvantages

- It will require more work and therefore, expense compared to not discounting.
- A risk margin is not calculated, so the fair value of the liabilities will be underestimated.
- The transition to discounted reserves will expose insurers who have carried inadequate undiscounted reserves that are implicitly discounted (an example is environmental liability). When they are forced to explicitly discount all reserves, some insurers will further discount an already implicitly discounted reserve, rather than admit that the original reserve was inadequate.

CAS Task Force on Fair Value Liabilities

White Paper on Fair Valuing Property/Casualty Insurance Liabilities

Section C - Alternatives to Fair Value Accounting

- Earnings will emerge closer to the time when the policy is written. (i.e., they are front-ended). This may provide incentives to writing risky long-tail business for companies that have weak earnings.

3. Present value using an industry-standard risk-adjustment

This alternative is similar to #2 above. It uses the present value of expected liability payments as its accounting value, but the present value is taken using a *risk-adjusted* interest rate. Here, *risk-adjusted rate* is defined as a rate that produces a present value *higher* than the present value obtained using the appropriate risk-free interest rate (as in #2 above). To accomplish this, the risk-adjusted rate must be *lower* than the risk-free interest rate. The difference between the two interest rates is called the risk adjustment. For some short-tail liabilities such as catastrophe loss exposure (embedded in unexpired contracts) an adjustment to the interest rate may not be appropriate. In these instances, a *risk margin*, as a percentage of the present value of expected loss, can be added to the present value.

This method is conceptually equivalent to the fair value (with no credit risk adjustment), except that the risk adjustment is determined on an industry-wide basis. Thus, in many cases, the circumstances of the individual insurer would be ignored in favor of accounting simplicity.

There are several approaches that could be applied to determine the industry-standard risk adjustment. A standard-setting organization (such as the AAA or NAIC) could promulgate risk adjustments by line of business or for all lines taken together. The organization might apply some of the methods discussed in Section D and then use judgment to weigh the results in producing the risk adjustment(s). The adjustment could also be set to be the same for all lines, or to vary by line.

Advantages

- It is as nearly as easy as #2 above and it has all of the same advantages plus others.
- It produces a fair value for a typical company's liabilities, since (an) appropriate industry-wide risk margin(s) are (is) provided.
- Comparability between companies may be enhanced, since the risk margins (per unit of like liability) would be the same for each insurer.
- Given the difficulties in accurately estimating risk margins at the industry level in this alternative, it remains questionable whether company-specific fair value estimates would be reliable enough for accounting purposes. Hence, this may be the most practical approach to implementing something akin to fair value.

Disadvantages

- It has the same disadvantages as #2 above except for the omission of a risk margin.
- It may not be a very accurate or reliable calculation of the risk margin for an insurer with atypical liabilities. If risk margins vary by line of business and a single risk margin is

CAS Task Force on Fair Value Liabilities

White Paper on Fair Valuing Property/Casualty Insurance Liabilities

Section C - Alternatives to Fair Value Accounting

applied to all lines, then insurers writing different types of insurance would not be comparable.

- In the case where line-by-line standards are set, new lines may develop for which no standards yet exist. The standard setters may forever be trying to catch up to market developments.
- There is no formal process to determine the standard-setting body.

4. Mixture of fair value and alternatives

Use *fair value for some liabilities* and one or more of the alternatives for other liabilities. Categories that possibly may require this treatment include unexpired risk (loss embedded in the unearned premium reserve, or UPR), catastrophe losses, environmental losses, ceded losses and loss adjustment expense.

For example, estimating the fair value of UPR runoff can be very difficult when the valuation date occurs as a storm or major catastrophe is threatening, but the public release or reporting of that value is after the event, when the storm either did or did not hit. In this case, an accurate fair value as of the balance sheet date has little relevance at the time losses are reported. Note that retaining the current UPR calculation, and not reflecting fair value until the loss is incurred, would be a “mixture” that retains the current “deferral and matching” paradigm of GAAP accounting.

Under this alternative, either the accounting standard-setting body would establish which categories get which treatment, or the insurer would decide on the basis of a materiality criterion.

Advantages

- This may be the most practical solution to the problems associated with full implementation of the fair value concept.
- This alternative is flexible. It could be amended as actuaries, accountants and other professionals became more adept at measuring the proposed fair value components.

Disadvantages

- It may be difficult to decide which items should get the full fair-value treatment and which items should continue to be valued as they are now.
- It could lead to inconsistent accounting of like items.
- There would be a possibility for accounting arbitrage, or “gaming” the system.
- This alternative could lead to “cliff” changes in liabilities, if a given liability could change valuation standards over its life (such as when the loss component of the UPR becomes incurred).

CAS Task Force on Fair Value Liabilities

White Paper on Fair Valuing Property/Casualty Insurance Liabilities

Section C - Alternatives to Fair Value Accounting

5. Entity-specific measurement

Use *value-in-use* or *entity-specific measurement*. These measurements substitute the insurer's assumptions for those that the marketplace would make. This measurement would be similar to fair value, but would use an insurer's assumptions regarding interest rate and risk margin. It could also reflect the entity's taxes, servicing cost, affiliate structure and financing costs. Assuming that credit risk were contemplated in the accounting standard, this measure could also incorporate the entity's estimate of the value of its expected default on its obligations. This type of measurement is equivalent to assessing the value at which the entity would be indifferent between running off the liability and settling the liability in a current cash transaction. This value is not necessarily the same as the value that the market would accept for settling the transaction.

In assessing market value of a liability exchange, an important economic effect, called *information asymmetry*, is relevant here. In financial markets, the values of many transactions depend on the amount and quality of information regarding the transaction. Both parties to a market exchange do not always have access to the same information. An example is mortgage lending, where the originator of the loan may have more detailed data on the credit-worthiness of the homeowner than an institution that has purchased the loan. If offered a small portfolio of loans, the loan purchaser will discount the price to guard against anti-selection. However, if the original lender offers its entire portfolio for sale, there is less risk of anti-selection. Therefore, the market value of a single loan chosen at random will depend on how many loans are sold. The same phenomenon will be present for insurance liabilities. In this case, we view the market transaction as an exchange to a reinsurer.

Therefore, in order to satisfy value-additivity in estimating fair value of an insurance liability (where an active market does not exist), one must assume that either the hypothetical market transaction occurs under *symmetric information*, or that the insurer's entire portfolio of liabilities is traded in a market large enough to absorb it. Otherwise, the entity-specific measurement will most likely give a better market value than one obtained by an actual market transaction having a limited size in relation to the entire portfolio.

Advantages

- The insurer would have the most control with this approach.
- An insurer with unique liabilities would be able to use the proper risk margin.
- The method recognizes the current lack of a market for many insurance liabilities, including the large information asymmetry that impedes the existence of an active market. Given this information imbalance, the "market" price is either not transferable to similar liabilities (due to individual portfolio differences), or is a naive price.
- It focuses on the marginal contribution of the item to the total value of the firm, not the exit price for an item for which exit is not a viable alternative. Hence, it may be a more relevant measure to the firm.

CAS Task Force on Fair Value Liabilities
White Paper on Fair Valuing Property/Casualty Insurance Liabilities

Section C - Alternatives to Fair Value Accounting

Disadvantages

- It might place an additional burden on individual insurers, who would need to derive their specific risk margins.
- It would tend to produce liability values that are not comparable between companies. This would partially defeat the purpose of fair value.
- The method would likely be subject to manipulation by the reporting entity to a greater extent than other alternatives.

6. Cost-accumulation measurement

This approach is discussed on page 22 of the FASB document "Using Cash Flow Information and Present Value in Accounting Measurements" (3-31-99). This method attempts to capture the incremental cost that the insurer anticipates it will incur in satisfying the liability over its expected term. This method typically excludes the markup and risk premium that third parties would incorporate in the price they would charge to assume the liability.

For insurers, these items are the reinsurer's expenses and profit load associated with reinsuring the liabilities. In practice, measurement should be similar to that of the present value alternative (#2) above. Insurers would estimate the liability cash flows and discount them using a prescribed interest rate.

Advantages

- Same as #2.

Disadvantages

- Same as #2.
- It can be dependent on the current corporate structure. For example, it may assume that existing affiliates providing services at marginal cost (to the affiliate) will always be around. This could result in substantial changes in value if the corporate structure changes (e.g., breakup of the parent conglomerate).
- It may not adequately represent what the market would require to transfer the liability.