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# Life Insurance Valuation Models for IFRS Insurance Phase II

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## IFRS Phase II Overview

The IASB's recent Phase II discussions have been on nonlife, but the life side has hardly taken a break. The IASB's Insurance Working Group (IWG), established to analyze insurance accounting issues has been recently carrying the ball. The IWG brings together a wide range of interests and includes senior financial executives. The IWG's project plan is to identify appropriate accounting treatments by contract type. Then later, in another round of discussions, it will review and resolve any inconsistencies between the treatment of contract types.

The IWG discussed models for the contract type, term insurance, in the second quarter. This summary of the current models will acquaint you with the key points of the models and a range of open issues. The IWG noted that its discussion on term should be relevant for several other types of conventional nonparticipating

contracts, specifically, whole life, immediate life annuities and pure endowments.

## What Makes Models Different

Before diving into a discussion of different models, we should at least review a basic checklist of what makes them different. The most basic issues for term plans are profit timing and volatility, which are of course bound-up with reserve adequacy. A few pointed questions will illustrate possible perspectives.

Regarding profit timing, especially whether there is an impact on the income statement at issue:

- Should issuing business cause a loss? If we get the business, were we possibly a bit underpriced? Shouldn't we be on the safe side early in the life of the contracts?
- Should some profits be booked at issue, on our watch, since we priced profitably and took the trouble to build a solid risk management framework?
- If we make a fair exchange with another party, for example, making an insurance commitment for a premium, didn't we just trade items of like value? Wouldn't that mean we should not show a gain or a loss, i.e. have no income impact?

Regarding profit volatility due to revising reserve interest, mortality, lapse or other assumptions:

- Doesn't volatility just distract us from the business fundamentals since these jumps will probably just reverse anyway?
- If we reflect volatility, couldn't we show how we've managed the company's risk profile?
- If outside parties (analysts, credit agencies, etc.) will make their own assessment of current status, shouldn't company insiders publish an explicit status update?

Of course, there are other issues besides profit timing and volatility, such as comparability and verification. Also, the IWG made clear that it excluded from the discussion, without prejudging future outcomes, topics including insurance liability credit risk, unit of account, reflection of favorable lapses, and segmentation into revenue versus changes in liabilities.

## Models Discussed

Four models were presented to the IWG, plus two others that the IWG sees more as variants within the main four. The four principal models are the lock-in, amortized cost, entry value and exit value models. For purposes of discussion and presentation, the IWG is using risk-free interest rates, but it is not committing to recommending risk-free rates.

## The Lock-In Model

The lock-in model will be familiar to FAS 60 users, because assumptions are locked in at issue and only reset for loss recognition. It is also like FAS 60 in that acquisition costs are deferred and amortized and premiums are recognized as revenue. A key difference from FAS 60 is that the lock-in model recognizes no gain at inception by using a margin on unbiased assumptions, either explicit or implicit. The margin is recognized as the insurer is released from risk.

No specific basis has been recommended yet for recognizing margins in profit and for amortizing DAC. One criticism of the model is that it could be difficult or arbitrary to select the appropriate basis, whether premiums, FAS 97-style expected gross margins, a combination or something else.

Liability adequacy is to be tested at each reporting date. If liabilities are inadequate then the loss of increasing liabilities goes through income. The level of aggregation is an obvious issue that will be familiar to FAS 60 users. Other issues that would have to be resolved before implementation include whether the reset assumptions, like the initial assumptions, should include a margin (i.e. whether a current loss should cause future profits), whether the

interest and lapse discount rates should be reset, and whether losses should be reversed if experience recovers.

Other open DAC issues are whether DAC should be an asset or reduction in liability, and which costs should be deferred. The IWG noted that deferring only incremental costs would be consistent with IFRS precedents.

A clear advantage of the approach is its familiarity and general fit with much existing valuation. But locking the assumptions in reduces the method's value as an early warning system; accounting mismatches could arise depending on asset valuation, and the measurement is inconsistent with IFRS valuation of other liabilities in IAS 37 (provisions) and IAS 39 (financial instruments).

## Amortized Cost

The Amortized Cost model is IAS 39's amortized cost for financial instruments, which clearly would bring the advantage of consistency between insurance and other financial liabilities at amortized cost. In short, the insurance liability is the present value of future best-estimate cash flows, discounted using the internal rate of return of the initial best-estimate cash flows. The cash flows include the marginal costs of producing business (i.e. incremental transaction costs). So from the model's mechanics, the liability at policy issue is premium less incremental transaction costs. This liability is the cash that the insurer just got for making the commitment, so it could be considered an observed market price. Also note that there is no profit or loss at issue.

No liability adequacy test is required because best-estimate cash flows are used each period. However, the locked-in discount rate precludes a loss recognition mechanism for inadequate returns on the assets backing the liability. A second actuarial issue with locked-in discount is the possible distortions of measuring interest-sensitive insurance cash flows.

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continued on page 30

### Current Entry Value

A policyholder could lapse at any time and enter into another policy with the same remaining benefits. For example, three years into a 20-year term policy, the policyholder could lapse the current policy and enter into a 17-year term policy to replace the remaining benefits. We can think of the replacement policy's present value of premiums as a best-estimate present value of the remaining benefits and costs, because presumably the policy would not be sold if the insurer did not expect to cover all costs. And please don't forget profit. So the reserve is the present value of the replacement policy's premiums less the present value of the real policy's premiums.

This model would defer acquisition costs and would have no initial income impact. The profit margin in the premiums is then released over time, since the present value of the replacement policy's premiums should include a profit margin. Assumptions, including discount, are consistent with the insurer's pricing model. A variation similar to Australia's Margin on Services method would use current cash flow estimates and market discount rates.

An advantage of the method is its calibration to a market price. A disadvantage is the potential lack of observable price after inception: do you know insurers with terms one through 20 in their portfolios? Also, the pricing basis may not be appropriate if the insurer has inadequate risk management or an outdated pricing basis, is selling a loss-leader, or is subject to distorting regulatory restrictions. Reserving as an early warning system could fail where needed most.

### Current Exit Value

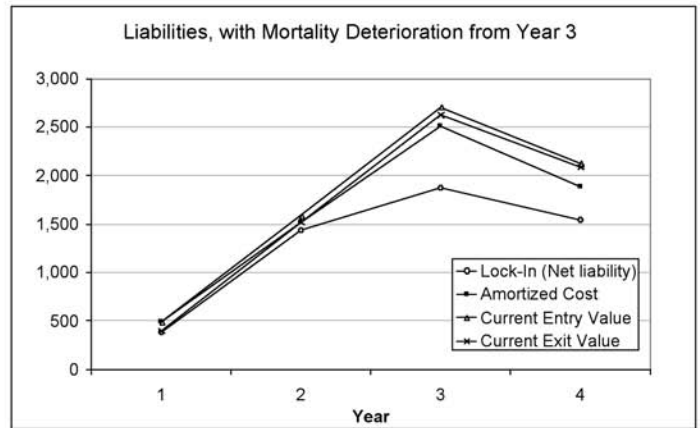
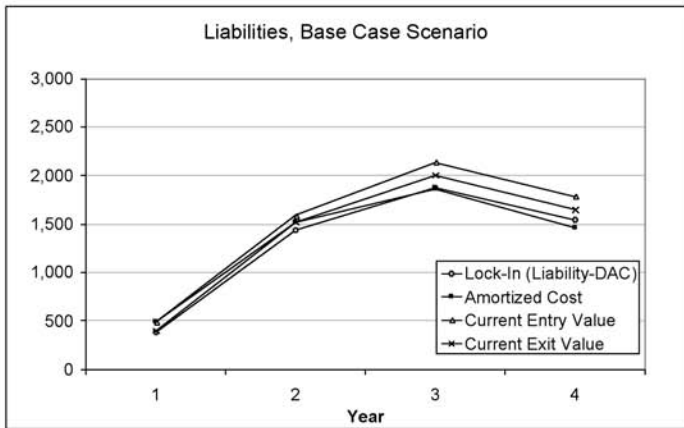
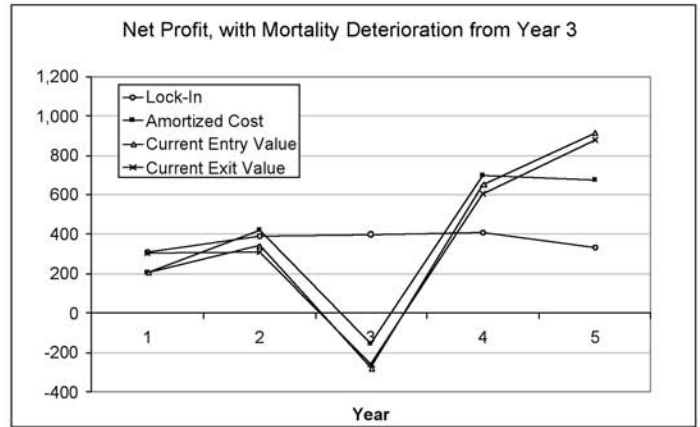
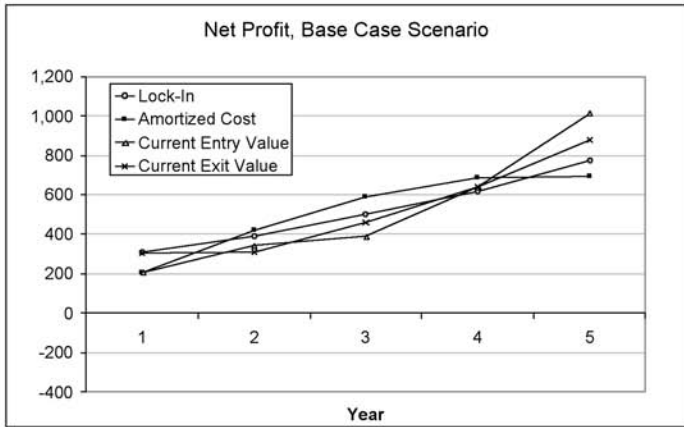
The current exit value is the insurer's hypothetical cost to exit the business. That is, the cost is an estimate of the amount the insurer would have to pay another entity to accept all of its remaining contractual rights and obligations. This amount is then the reserve: the insurer would have to have it or effectively be

ready to pay it to meet its commitments. In this model, the acquisition costs are implicitly deferred as long as the assuming entity would itself pay to acquire the business. There could be initial income impact depending on the insurer's estimate of secondary insurance market conditions.

The liability includes a margin demanded by market participants for risk, so margins should flow into income as the insurer is released from risk. Again here, with current assumptions, no liability adequacy test is needed. The liability reflects the policies' inherent credit risk, which the Insurance Working Group intends to discuss in the future. The approach is consistent with IAS 37 liability measurement, which is the amount required to settle the obligation. The Insurance Working Group considers a "business-to-customer" approach, such as the Current Entry Value method, to be more appropriate than this "business-to-business" approach, and gains at inception are considered imprudent. As with current entry value, poorer risk management and measurement systems are likely to lead to lower liabilities—a potential failure of the early warning system.

### Examples

The Insurance Working Group has produced numerical examples of financials under all four methods and under three scenarios, together with descriptions of the models and assumptions. All are provided on the IASB Web site in the Insurance Working Group observer notes section at [http://www.iasb.org/meetings/wg\\_obs\\_ins.asp](http://www.iasb.org/meetings/wg_obs_ins.asp). For purposes of illustration, charts are presented here of the liability and earnings under the first two of those scenarios—a base case with experience emerging as expected, and a second case with mortality 110 percent of expected from the third year. The product is a five-year term plan projected without lapses.



## Conclusions

Best-estimate assumptions have the common advantages of keeping the view current, and the common disadvantages of expense and difficulty. Whether there are accounting mismatches depends of course on the asset valuation. To compare any methods we must keep in mind whether their valuations of assets and liabilities accurately reflect the underlying business economics and risks.

In particular please see the paper “Life Insurance: Overview of Possible Accounting Approaches” that is referenced there as well as the related numerical examples. The charts above are from those examples. □



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