ACTUARIAL STUDIES
AND
DEMOGRAPHY

Research Papers Series 3

Loss Recognition under the Margin on Services Reporting Technique

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Research Paper No. 008/96
ISBN No. 1 86408 253 4
August 1996

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1. Abstract

This paper examines the theoretical basis for the use of loss recognition procedures in the margin on services valuation method. The loss recognition procedures are compared to relevant sections of the Accounting Conceptual Framework and are found to be inconsistent with that framework. The loss recognition procedures are found to exhibit consistency with some existing accounting standards, but it is suggested that the justification for conservatism in those standards may not be relevant in the life insurance context.

2. Introduction

In June 1995 The Institute of Actuaries of Australia issued Professional Standard 201 (PS201) "Determination of Life Insurance Policy Liabilities". This standard sets out the principles for determining Policy Liabilities under the margin on services valuation method.

Section 6 of PS201 describes the procedures to be followed if the actuary deems it appropriate to change the valuation basis. Changes to the assumed earning rate due to a change in market yields require special treatment and are not discussed further in this paper. All other changes in the valuation basis are dealt with by resetting the profit margin. The new profit margin for the group of policies under consideration is determined in such a way that the policy liability at the valuation date using the new profit margin and new basis is equal to the policy liability at that date using the old profit margin and the old basis. This technique ensures that the change of basis does not influence the reported profit for the reporting year which has just been completed. Rather, the effect of the change of basis is spread over the remaining life of the group of policies, altering the planned profits in all those future years.

If the change of basis involved an improvement in assumptions (from the point of view of the insurer) then it causes the profit margin to increase. If the basis worsened the profit margin declines.

If the basis has worsened sufficiently, the new profit margin calculated by the above technique may be negative. That is, on the new basis we expect to make a loss rather than a profit in each of the remaining years of the policies' lives. If this occurs, then the Loss Recognition provisions in Section 7 of PS201 come into play. The new profit margin is set to zero, giving an immediate increase in the policy liability at the valuation date. That is, the change of basis will cause a reduction in the profit for the reporting year just completed.

3. The Justification for Loss Recognition - The Concept of Conservatism

The Loss Recognition procedures are an example of the accounting concept of conservatism. In general, conservatism occurs whenever any deliberate bias is incorporated in the accounts in such a way as to understate assets or to overstate liabilities.

One particular variety of conservatism can be stated as: "Never anticipate a profit; always anticipate a loss". This is the variety encountered in the loss recognition provisions of PS201.

Provided the profit margin remains positive, we expect the group of polices under consideration to continue producing profits. We do not anticipate these future profits, but rather let them gradually emerge over the remaining life of the policies. We believe that this approach gives a reasonable matching of the expenses to the revenues to which they relate.

However, if we recalculate a profit margin and obtain a negative result, we expect the policies will produce future losses. We anticipate these losses by setting the profit margin to zero, bringing all the future losses back to the reporting year just completed. That is, we abandon any attempt at matching expenses to their corresponding revenues and instead bring a collection of future expenses (the expense called "increase in policy liability") back to the current reporting year.

4. Conservatism and the Accounting Conceptual Framework

In recent years, the Australian Accounting Standards Board has been developing an Australian accounting conceptual framework.

"The primary objective of the conceptual framework is to ensure accounting standards are established on a consistent and logical basis because they stem from an orderly set of concepts." (Accounting and Actuaries Liaison Committee, 1994, p188.)

A number of "Statements of Accounting Concepts" have been released dealing with issues identified in the conceptual framework, though many more are yet to be completed. The Statement of Accounting Concept which deals with the concept of conservatism is "SAC 3 - Qualitative Characteristics of Financial Information".

Paragraph 48 of SAC 3 states:

"General purpose financial reports shall include all financial information which satisfies the concepts of relevance and reliability, and which passes the materiality test."

In paragraph 5, "reliability" is defined as:

"that quality of financial information which exists when that information can be depended upon to represent faithfully, and without bias or undue error, the transactions or events that either it purports to represent or could reasonably be expected to represent".

Paragraph 21 elaborates on the proscription of bias, stating:

"General purpose financial reporting should, if it is to be reliable, be free from bias (that is, neutral). … Bias can stem from deliberate misstatement of financial information for fraudulent purposes and it can also stem from misguided conservatism, resulting in preparers filtering the information provided and thereby usurping the rights of users to make their own decisions."

Further, to avoid any possibility of confusion on this point, paragraph 26 states:

"The concept of conservatism, where it is understood to lead to a deliberate bias towards understatement of revenues or assets and/or maximum recognition of expenses or liabilities, is at odds with many of the desirable qualitative characteristics, including reliability."

(Note that PS201 is retaining consistency with SAC 3 when it employs best estimate assumptions in the calculation of the Policy Liability.)

5. Accounting Standards and Conservatism

Once the full conceptual framework is in place, it should ensure that new accounting standards developed from the framework achieve a high degree of consistency. However, several accounting standards were developed prior to the issue of any of the Statements of Accounting Concepts. These older accounting standards may not be completely consistent with the more recent Statements of Accounting Concepts or with recent accounting standards based on those Statements.

The accounting standard entitled "AASB 1001: Accounting Policies" was revised in September 1995, incorporating the concept of reliability from SAC 3 and the need for financial reports to be free from bias.

However, several accounting standards are in conflict with SAC 3 in that they still incorporate conservatism of the "Always anticipate a loss; never anticipate a profit" variety. We will now take a closer look at two examples of this.

6. AASB 1009: Accounting for Construction Costs

When discussing reporting techniques for long-term life insurance contracts, actuaries sometimes make comparisons to the analogous situations in the accounting standards for construction contracts which span many reporting years.

Broadly, the techniques outlined in AASB 1009 aim to ensure that revenues are progressively recognised in line with the proportion of the construction work completed, thus ensuring a suitable matching of revenues and expenses. However, clause .20 of the standard states:

"A material loss on a construction contract, whether in relation to work completed or yet to be completed, shall be brought to account as soon as it is foreseeable."

That is, if we reach a situation where the future expected expenses under a construction contract exceed the future expected revenues, we abandon any attempt at matching revenues and expenses, invoke the concept of conservatism, and recognise the full expected future net losses in the current year. The loss recognition procedures in PS201 are broadly consistent with this approach.

7. AASB 1011: Accounting for Research and Development Costs

The relevant clauses of this standard are:

“.30 Research and development costs shall be charged to the profit and loss account as incurred, except to the extent that they meet the criterion for deferral specified in clause .31.

.31 Costs incurred during the financial year on a research and development project shall be deferred to future financial years to the extent that such costs, together with unamortised deferred costs in relation to that project, are expected beyond any reasonable doubt to be recoverable.”

Subsequent clauses then explain how any such deferred research and development costs are amortised, matching the expense against the revenues which occur once the product goes into production.

This seems to be a more severe example of conservatism than that in AASB 1009 and PS201. The loss recognition provisions in PS201 are triggered when on our best estimate basis we expect to incur future losses. By contrast, the loss recognition procedure of AASB 1011 can only be avoided if we are sure “beyond any reasonable doubt” that the costs incurred can be recovered from future commercialisation of the product.

8. A Choice of Consistencies

In deciding whether the loss recognition procedures under PS201 are reasonable, we may well consider the question of whether they are consistent with accounting standards. But consistent with which accounting standards?

Few would argue for consistency with AASB 1011, which would seem to require that we should trigger the loss recognition procedures as soon as future losses are expected on some set of conservative assumptions, rather than on the best estimate assumptions.

The current version of PS201 implements loss recognition as soon as future losses are expected on our best estimate assumptions. This is consistent with AASB 1009. However, by implementing a conservative approach consistent with AASB 1009, we are inconsistent with SAC 3 which proscribes conservatism.

It could be argued that SAC 3 indicates the direction the accounting conceptual framework is heading, and that hence we should try maintain consistency with that Statement by eliminating the conservative loss recognition procedures from PS201. This course of action may increase the chance that PS201 is consistent with new accounting standards derived in accordance with the conceptual framework. We may even find that standards such as AASB 1009 are subsequently modified to bring them into line with SAC 3.

9. Conservatism is Driven by the Balance Sheet.

The use of conservatism is based on the (questionable) premise that a conservative set of accounts is less damaging than an optimistic set of accounts. That is, conservatism seeks to avoid situations where the business entity's financial position is actually worse than is indicated by the published accounts and tolerates situations where the entity's financial position may in fact be better than the accounts indicate.

It can be argued that the use of conservatism is always driven by a desire to keep the balance sheet conservative, rather than by a desire for conservative revenue accounts. This viewpoint can be argued on that grounds that, while we can always ensure a balance sheet is conservative, it is difficult, if not impossible, to ensure that revenue accounts are conservative for any significant number of years.

To ensure a balance sheet is conservative, we merely need to do two things. Firstly, we need to ensure that each asset has at least the value reported in the accounts, understating the reported values where there is some uncertainty as to the exact true value. Secondly, we need to ensure that each liability is at most of the size reported in the accounts, overstating the extent of liabilities where any doubt of the true size exists.

Now consider how we might try to ensure a revenue account is conservative. We might try to ensure that each item of revenue is at least of the amount reported in the accounts, understating the reported revenue where some doubt exists as to it true size. We might also try to ensure that each expense is at most of the size reported, overstating the reported expense where doubt exists.

The first time we implement the above process, we probably can guarantee that the revenue account for that particular reporting year is conservative. However, conservatism cannot alter the total size of any revenue or expense item in the long run; it can only alter the timing of the recognition of the revenue or expense. If we are uncertain of some item of revenue and understate its amount in this year's accounts, we are merely deferring the recognition of some of the revenue to the next reporting year. This "conservative" deferment of revenue then causes us to overstate next year's revenue, leading to an optimistic profit being reported for that year.

We could of course bring in a slightly larger conservative adjustment next year, thus ensuring that next year's revenue account is also conservative. However, this merely carries the problem forward yet another year in a magnified form. Unless we are willing to produce revenue accounts that bear less and less resemblance to reality as time progresses, we must be resigned to the fact that eventually we will publish a revenue account which is optimistic rather than conservative. In the revenue account, any conservatism (or pessimism) in the current reporting year must eventually lead to an optimistic bias in a future year.

Since we cannot guarantee conservatism of revenue accounts for any length of time, we can argue that the principle of conservatism must be concerned with a desire to ensure the balance sheet is conservative. The effects that conservatism have on the revenue account are merely the necessary consequences of implementing a conservative balance sheet, and given that these effects include the abandoning of an appropriate matching of revenues and expenses, they can be viewed as unpleasant side effects.

10. The Construction Contract Revisited

We will now review the above argument as it applies to the construction contracts accounting standard, (with occasional parenthetical comparisons to the situation under PS201 for life insurance contracts.)

Assume that we have contracted to construct a building over a period of 5 years. We will incur expenses throughout the 5 years, but receive payment for the completed building only at the end of the 5 years.

If we only recognise revenue when payment is received at the end of the 5 years, we would report 4 years of losses followed by a large profit in the 5th year. This approach is unreasonable since it does not correctly match the revenue to the work undertaken.

AASB 1009 states that we should instead recognise revenue gradually over the 5 years in line with the proportion of construction work completed. This will match revenues to the corresponding expenses and will (hopefully) result in profits emerging in each of the 5 years of the contract. In the accounts, we create an asset named say “Contract in Progress”. The size of the asset at any time can be found by determining the proportion of the total construction work completed and taking this proportion of the total proceeds which will be received on completion of the building. That is, the purpose of this asset is to allow a gradual recognition of the revenue in an appropriate pattern. (By comparison, the purpose of the Policy Liability in PS201 is to allow planned profits to emerge in a suitable pattern.)

Now imagine that at the end of the first year of the contract we find that interest costs on the borrowings we made to finance the project have unexpectedly doubled. On our revised forecasts, we expect to make losses in each of the remaining 4 years of the contract.

If we ignore the balance sheet and ask ourselves “What is the most meaningful way to report these losses in our revenue account?” the answer is probably that we leave them exactly where we expect them to occur. We continue to recognise the expenses where they are incurred and we continue to recognise revenue gradually in line with the work completed. That is, we continue to match revenues to their corresponding expenses and report that, due to our mismanagement of our exposure to interest rate movements, we expect to make losses on this project for the next 4 years.

However, if we follow the procedures outlined in AASB 1009, we instead concentrate on the balance sheet and argue as follows.

While the construction contract appeared profitable, the sole purpose of the “Contract in Progress” asset was to act as a device to allow the gradual recognition of revenue in the appropriate pattern.

However, now that the contract appears unprofitable, we will suddenly change our approach, introduce a conservative bias, and insist that the “Contract in Progress” asset not exceed the total future net cash inflows expected for the construction project. The asset has ceased to be a device to spread revenue and produce an appropriate matching of revenue and expenses. (The comparable situation for the life insurance policy under PS201 is that, when a recalculated profit margin becomes negative, the policy liability ceases to be a device for spreading profits and is replaced by the best estimate liability.)

The result of this conservatism in the balance sheet is that the revenue account no longer makes sense from the point of view of matching revenues and expenses. By bringing future losses forward our revenue account for the first year of the project has become conservative, while those for the remaining years of the contract are likely to be optimistic. If everything proceeds as planned for the remainder of the contract, we will report optimistic profits of zero in each of those years, whereas if we had not introduced conservatism into the balance sheet the unbiased revenue accounts would have resulted in losses in each of those 4 years.

11. Solvency as a Justification for Conservatism in the Balance Sheet

We have argued that conservatism in the balance sheet is undesirable, firstly because it introduces a bias which contravenes SAC 3 and secondly because it abandons matching of revenues and expenses, usually causing future revenue accounts to be optimistic rather than pessimistic.

However, if we are trying to determine whether a company is solvent by testing whether its assets exceed its liabilities, then it is possible to justify the type of conservatism employed in AASB 1009.

For example, if we were testing whether the construction company described above were solvent, we would want to ensure that the sum of:

(a) the future net cash inflows expected on the construction project described above and;

(b) other net assets of the company

is positive. (By “other” net assets, we mean those not already incorporated in our calculations of the future losses expected for the building project.) Part (a) above is the figure which results when the loss recognition procedures of AASB 1009 are applied to the “Contract in Progress” asset. This suggests that the purpose of the loss recognition procedures in AASB 1009 is to ensure that an insolvency of a construction company can be detected by testing whether its reported assets exceed its reported liabilities.

12. Is Conservatism Appropriate in a Life Company’s Balance Sheet?

If the purpose of the loss recognition procedures in AASB 1009 is to allow testing of solvency by comparing the assets to the liabilities, then we can argue that it is inappropriate to employ similar loss recognition procedures for life insurance policies in PS201.

This is because the solvency of a life insurance company is not measured by comparing assets to liabilities, but rather by comparing assets to the solvency requirement. (For simplicity, in this section we will refer solely to solvency requirements, though similar statements can be made with regard to capital adequacy requirements.)

That is, since we have a separate structure in place to measure solvency, we need not be concerned with solvency when determining policy liabilities. Hence we can justify not implementing any loss recognition procedures in situations where profit margins are found to be negative. Eliminating the loss recognition procedures would ensure that our revenue accounts will maintain a reasonable matching of revenue and expenses. If this implies that we expect future losses then it can be argued that that is exactly what we should report.

(At first glance there may appear to be a loophole in the above argument. We stated that the solvency requirement is quite separate from the policy liability. In fact the solvency requirement is subject to a minimum of the total liabilities of the company, where those total liabilities include the policy liabilities.

However, it seems likely that this minimum will have no effect in respect of policies in a loss recognition situation. For such a group of policies, the current PS201 loss recognition procedures effectively set the Policy Liability equal to the Best Estimate Liability. If the loss recognition procedures are eliminated, then we would be allowing a Policy Liability less than the Best Estimate Liability. Provided the Solvency Requirement for the group of policies can not be less than the Best Estimate Liability for those policies, then the Solvency Requirement would be unaffected by the elimination of the loss recognition procedures.

The November 1995 LIASB Solvency Standard Discussion Draft does appear to ensure that the Solvency Requirement will not be less than the Best Estimate Liability. The calculation of the Solvency Requirement begins with a calculation of the Solvency Liability for each policy, as described in section 3.1(a) of that document. This amount is found by using the method used to determine the Best Estimate Liability, but a different basis. Section 4.1.3 of the Discussion Draft specifies that each element of the basis should not be less than the corresponding Best Estimate Assumption. Hence the Solvency Liability can not be less than the Best Estimate Liability.)

13. Does the "Life Insurance Approach" have Export Potential?

As an aside, it is interesting to speculate whether the "life insurance approach" could be successfully exported to the reporting structure for construction contracts. The life insurance approach uses a policy liability to measure profit and a separate solvency requirement to test solvency.

If a construction contract finds itself in a loss recognition situation, then under the life insurance approach we would argue that matching of revenues and expenses should still remain the prime consideration when reporting profit, and that hence future losses should not be brought forward. However, to allow analysts and supervisory authorities to accurately gauge solvency, the company would be required to set up a clearly identified reserve equal to the expected future losses on the construction contract. By making this extra amount a reserve (that is, part of the owners' equity) rather than a liability, we ensure that it does not distort the matching of revenues and expenses. By contrast, the current approach of AASB 1009 reduces the "Contracts in Progress" asset by the expected future losses. This is equivalent to identifying the expected future losses as a liability rather than a reserve, thus abandoning the matching concept and distorting the reported profit.

14. Effect on Management

When considering whether the loss recognition procedures of PS201 are appropriate, one final pragmatic point which could be considered is the effect their removal may have on management. It should be noted that the suggestions in this section are highly speculative.

Consider the situation where expenses have run out of control for a particular class of policies. Say this has caused a change in basis which results in a negative profit margin. The messages the accounts send to management, with and without loss recognition provisions in place, might be paraphrased as follows. (The numbers are illustrative only and don't represent any real-life situation!)

With Loss Recognition Implemented:

> "Due to poor expense control, we made a loss of $100M on this class of business last year and unless you fix the problem we will only roughly break even for about the next 10 years."

Without Loss Recognition Implemented - Allowing negative profit margins:

> "Due to poor expense control we now expect this class of business to be unprofitable. Unless you fix this problem we expect to make of loss of about $12M p.a. for the next 10 years."

It is possible (though admittedly far from certain) that the second approach may produce a more concerted corrective action from management, since the problem is presented as an ongoing problem requiring a solution if losses are to be avoided. By contrast, the first approach may give the impression that the damage has already occurred and hence that it is too late to correct the problem.

References

ACCOUNTING & ACTUARIES LIAISON COMMITTEE, **Accounting for Actuaries.** Transactions of The Institute of Actuaries of Australia. 1994. p185-291.

AUSTRALIAN ACCOUNTING STANDARDS BOARD. **Statement of Accounting Concepts SAC 3: Qualitative Characteristics of Financial Information.** August 1990.

AUSTRALIAN ACCOUNTING STANDARDS BOARD. **AASB 1001 : Accounting Policies.** Sept. 1995.

AUSTRALIAN ACCOUNTING STANDARDS BOARD. **AASB 1009 : Accounting for Construction Contracts.** Nov. 1986.

AUSTRALIAN ACCOUNTING STANDARDS BOARD. **AASB 1011: Accounting for Research and Development Costs.** May 1987.

THE INSTITUTE OF ACTUARIES OF AUSTRALIA. **Professional Standard 201 - Determination of Life Insurance Policy Liabilities.** June 1995.

LIFE INSURANCE ACTUARIAL STANDARDS BOARD. **Discussion Draft : Solvency Standard.** Nov. 1995.