

Accounting for insurance contracts: a comment on 'deprival value' measurement for contract liabilities in revenue recognition

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ABSTRACT

The ASB, FASB and IASB all have on their agendas a major project on revenue recognition in financial statements. Methods of revenue recognition and measurement can conflict with methods of liability recognition and measurement. We explore here (by reference to the examples of a magazine subscription and a short-term insurance policy) when the two measurement approaches coincide and when they conflict. The conflict most generally arises over deciding how to treat situations where enterprises expect to earn profits that cannot be identified as 'factor costs' in the way that 'interest' and 'reward for risk bearing' may. Moreover, in many circumstances even these two elements may not be separately estimable with any reliability from market benchmarks. In other cases, while companies may have invested in building up the necessary intangibles that enable them to achieve these apparent 'super-profits' thereafter, current GAAP accounting for those intangible fails properly to match investment and return. The conceptual conflict is exacerbated by the adoption of 'fair value' as the measurement basis for assets and liabilities rather than the theoretically sounder basis of 'deprival value'. However, while the 'balance sheet' liability and the revenue recognition problems (and the problems of income statement presentation) can be resolved by the application of 'deprival value' reasoning (subject to accounting for the effects of price changes), this is not sufficient to resolve issues of the appropriate timing of profit recognition. Performance measurement issues still need to be addressed directly. The standard setters' new project will therefore need to consider the whole issue of accounting for intangibles, and more generally the adequacy of a model that identifies 'comprehensive income' solely in terms of changes in recognized assets and liabilities, before it is likely to make any progress towards resolving the arguments over 'revenue recognition' issues and the appropriate presentation of the corresponding reported performance.

Acknowledgements: Financial support from the PD Leake Trust (a charitable trust associated with the Institute of Chartered Accountants in England & Wales ['ICAEW']), with support from B&W Deloitte and KPMG, is gratefully acknowledged for the research project of which this work forms a part. Grant applications are managed by the Centre for Business Performance ['CBP']. I am also grateful for the helpful comments of the members of the Academic Panel of the Accounting Standards Board ['ASB'] at their October 2002 meeting; of participants in the ACCA Seminar on *Liabilities: their recognition and measurement*, London, UK, 17th March 2003 and in the EAA Annual Congress, Seville, Spain, 4th April, 2003; and of colleagues, in particular David Gwilliam.

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BACKGROUND

It has become the conventional wisdom that the ‘asset/liability’ accounting model conflicts with the ‘deferral and matching’ model (e.g. Ernst & Young 1996; IASC Insurance Issues Paper, 1999; Grinyer, 2000; ASB discussion paper on *Revenue Recognition*, 2001 and new FASB and IASB projects in 2002; current IASB discussions on insurance ‘Phase II’; ASB FRED 34 *Life Assurance*, 2004). However, the real point at issue seems to be ‘value-based’ vs. ‘historical cost’ models.

The ASB’s July 2001 discussion paper on *Revenue Recognition* proposed that ‘Where contractual performance is incomplete, revenue should be recognised to the extent that the seller has performed and that performance has resulted in benefit accruing to the customer’ (para. 3.3). The ASB ‘acknowledged, however, that dealing with incomplete performance is likely to be the biggest single difficulty arising in practice, and that the application of this principle to specific industries will be an important part of the next stage of the project’ (fn.36, p.54).¹

With regard to insurance, at the stage when the IASB was still hoping to complete a comprehensive standard in time for 2005, a joint letter to the IASB from US, German, and Japanese insurance associations (June 11, 2002) objected to the trend in IASB’s insurance Draft Statement of Principles (‘DSOP’) and related discussions towards, *inter alia*:

- Favours the ‘asset/liability’ model as against the ‘deferral and matching’ model

- Adoption of ‘fair value’ (an exit, settlement value) for insurance policy liabilities
- Consequent recognition of profits at the time contracts are sold rather than wholly over ‘the service life of the policy’
- Elimination of the conventional insurance accounting asset of ‘deferred acquisition cost’ and its amortization.

Also the insurance examples discussed in IASB meetings (before the project was split into ‘Phase I’ and ‘Phase II’) had tended to abandon traditional presentations of ‘premiums’, ‘claims’ etc. in favour of ‘unwind of discount’ on, and ‘experience variations’ from, initial policy liability valuations.

The IASB’s insurance project was split in May 2002 into two phases: Phase I considered those aspects that are primarily interrelated with the revisions to IAS32 and IAS39 on financial instruments, with a view to completion in time for 2005 (IASB, 2004). Phase II examines the more difficult core issues, primarily relating to life insurance contracts, over an unspecified timetable (e.g IASB <http://www.iasb.org/news/index.asp> 21.9.04)

In January 2003, the IASB agreed new bases for the development of Phase II which appear to go against the DSOP’s previous acceptance that measures of insurance liabilities based either on ‘fair value’ or an ‘entity specific’ approach would allow recognition of at least some profit on contract inception. The new proposal is that insurers adopt ‘fair value’ (while recognising that absence of sufficient market evidence will often require use of ‘entity specific’ assumptions to estimate fair value) but that, in the absence of market evidence to the contrary, contract liabilities should be stated at not less than the amount that would be charged for new contracts with the same terms and term (IASB, 2004).

In similar vein, while FASB's Appendix A to its *Preliminary Views* (1999) argued for exit 'fair value' for insurance liabilities, the FASB's recent exposure draft on *Fair Value Measurements* (FASB, 2004, para.C23) proposes to continue the current prohibition on recognizing a profit at inception where a derivative instrument is valued by a 'Level 3' estimate using significant entity inputs, noting that 'the Board is addressing related issues in its revenue recognition project'.²

It will be argued below that, while this approach is more consistent with the 'deprival value / relief value' approach to liability measurement it still leaves unresolved the underlying conceptual issues related to profit recognition.

THE ARGUMENT

The focus here is on the relationship between liability measurement and revenue recognition. The paper explores the accounting for the liability on an uncompleted contract's 'revenue in advance of costs' as a contrast to the rather more familiar discussions of accounting for assets (which are 'costs in advance of revenues'). This focus is particularly applicable to accounting by insurers for premium income.

The paper focuses on imaginary companies in two industries—magazine publishing and insurance—to explore how far the problem of accounting for incomplete performance may be generic or industry-specific, and how far there really is a conflict between 'release of liability' and 'revenue earned / performance based' approaches to revenue recognition and related profit recognition.

The paper builds on many of the ideas in Lennard (2002) and counters the views of Nobes (2003). While Nobes argues for 'exit' valuation of liabilities (and corresponding recognition of profit on inception of contracts), Lennard's essay seeks to justify a 'deprival value/relief value' measurement basis as against IASB's/FASB's

current focus on 'fair value' or proxies for it. It thereby identifies 'entry value' (consideration) as the normal relevant measure. The difference in emphasis is that my paper aims to provide a more strictly 'value measurement' argument, based in alternative market conditions, for why the 'deferred revenue' is the relevant relief value of a liability (i.e. the answer to the question: 'What difference would it make if the contract liability were "removed"?') whereas Lennard's paper (e.g. para.25(ii); para.34) still appears to rely more on arguments as to 'when is the performance?'.

The paper also questions whether Baxter (2003: 13-17) is right to dismiss the idea that liability 'relief' values are the mirror of asset 'deprival' values.

One conclusion of my paper (consistent with Lennard's) is that the asset/liability and deferral/matching approaches may be reconciled via 'deprival/relief value' and thereby avoid forcing unconventional revenue and profit recognition patterns. In this regard it also appears consistent with the IASB's revised approach to Phase II of the insurance project. Moreover it adds to the IASB's simple prohibition on inception-date profit recognition (except where there is convincing market based evidence) by suggesting how liabilities should be consistently measured throughout a contract's life thereby producing a defensible pattern of profit recognition.

However, a more significant conclusion is that the issues relating to revenue and profit recognition patterns are *not* necessarily thereby resolved: those issues still need addressing directly and are primarily related to the recognition and measurement of intangibles, both purchased and internally-generated, whatever the basis adopted for liability measurement. In this regard my paper is more consistent with the approach to insurance profit measurement previously proposed in the IASB's DSOP (and earlier Insurance Issues Paper), although potentially it completely breaks the link with solely *current* contracts and their performance (i.e. the value-added recognised may in

principle also include the value expected from future contracts, as is already conventionally recognised in purchased goodwill).

The numerical examples in this paper also illustrate that it appears unnecessary when adopting a ‘value-based’ approach to wholly abandon traditional styles of income statement presentation—provided one accepts ‘recycling’ from previously recognised elements of profit that were based on valuing the expected future revenues and earnings that have now been ‘realised’ through performance.

THE EXAMPLES

The illustrations in the Appendix to the paper and Table II *include* recognition of interest effects in valuation and the corresponding treatment of the ‘unwind of the discount’. It is simpler (as in Forfar and Masters 1999) to focus first on the special case where the interest rate is zero %, i.e. to *exclude* interest effects, in order to bring out the more basic issues, as in the corresponding selection of examples in Table I attached.

The examples are based on the following simple assumptions (more detail on these is given in the Appendix).

Revrec is a magazine publisher (and Insrec is a non-life insurer). Revrec receives annual magazine subscriptions in advance on 1 July. Its year end is 31 December. Costs are expected to be \$114 per year, incurred evenly with production and distribution which is also even throughout the year (i.e. \$9.50 per month). But Revrec also needs to cover risk, assumed to require an additional risk premium of \$6 per year (i.e. the certainty equivalent of expected costs is \$10 per month).

What is Revrec’s revenue and profit if all expectations are realised and if:

A) it charges \$120 for a year’s subscription (i.e. \$10 per monthly issue) and

B) \$132 (i.e. \$11 per monthly issue)?

Equivalently for Insrec if it charges annual premiums in advance of these same amounts?

The suggested solutions are given in Table I attached (numbered to correspond with those that are their equivalent in the fuller Table II in the Appendix).

Insert Table I about here

Solution for A):

Solution '3': as Revrec/Insrec are charging no more than what is needed to cover all costs including required 'normal profit' (i.e. interest and risk), profit is \$6 in total if expectations are realised (i.e. interest [\$0] and reward for risk bearing [\$6]). *Pro rata* 'revenue earned' and 'profit earned' to 31 December are \$60 and \$3 respectively.

In this case ('perfectly competitive markets') the balance sheet liability at 31 December is unambiguously \$60, representing both the consideration that would be charged for the six-months' remaining magazines/insurance and the amount it will cost to perform the remaining half of the contract (including the cost of risk-bearing). It is also the amount a customer would expect to be reimbursed if the contract is cancelled at that point ('cost of release').

Solutions for B):

Solution '4':

Revrec/Insrec are now charging \$1 per issue/month more than what is needed to cover all costs including 'normal profit' (i.e. interest and risk). So profit is \$18 in total if expectations are realised (i.e. interest [\$0] and reward for risk bearing [\$6] and 'abnormal profit' [\$12]); *pro rata* 'revenue earned' and 'profit earned' to 31

December would conventionally be \$66 and \$9 respectively. But is the liability valuation of the contract consistent with this?

In this case ('less than perfectly competitive markets') the balance sheet liability at 31 December is potentially one of the following:

- a) \$66, representing the consideration that could be charged for the remaining six-months magazines/insurance
- b) \$60, being the amount it will cost to perform the remaining half of the contract (including the cost of risk-bearing).
- c) \$66 would also appear to be the amount a customer would expect to be reimbursed if the contract is cancelled at that point ('cost of release'). Clearly Revrec/Insrec would plan to perform rather than cancel the contract as this is the more profitable alternative. Consistent with Lennard's 'relief value' approach, c) does not therefore seem to a relevant amount on a 'going concern' basis.

If a) is adopted (equivalent to the 'deferred revenue' on a conventional 'matching' approach), revenue and profit for the first 6 months are the conventional \$66 and \$9 respectively—with the same to come in the second six months.

However, if b) is adopted, which would appear to be the 'fair value' as defined by standard setters, and the relevant value according to Nobes (2003), profit for the first 6 months would rise to \$15 (i.e. interest [\$0] and reward for risk bearing [\$3] and all of the 'NPV' of the 'abnormal profit' [\$12])—with just \$3 normal profit to come in the second six months. Revenue could still be stated at \$66 for each six months: but only if the value of the anticipated excess revenue already included in the recognition of abnormal profit (i.e. \$6) is then 'recycled' out again.

Lennard's 'Relief value' is \$66 (i.e. the higher of consideration [\$66] and the lower of [performance cost [\$60] and cost of release [\$66]] = \$60). Under what

circumstances is it realistic to regard this rather than \$60 as the liability at 31 December?

The argument in this paper is that one has to ask: What are the market circumstances that can give rise to this situation?

If one presumes that Revrec (and Insrec) are behaving rationally and optimally, they will have already taken on as many such contracts as can be handled while adding to profits—but no more. As analysed in conventional microeconomics, they will have equated marginal cost and marginal revenue (Bromwich, 1977). Reasons not to take on another contract might include adverse consequences of having to lower the price and/or rising costs (whether operating, financing or organisational) of further expansion perhaps due to ‘indivisibilities’ such as the need to incur major additional investment which will require finding outlets for substantial rather than simply marginal production volume increases. In the case of insurance companies there may be regulatory constraints inhibiting volume expansion through further price cutting. While the precise conditions need fuller analysis, it is sufficient here to recognise that this will be a common situation.

So, the crucial insight here is that if Revrec (or Insrec) is now at its optimal capacity but it still has ‘super-profitable’ contracts, then if ‘relieved’ of one of those current contracts immediately after inception Revrec would seek to use the production capacity now freed up to obtain and fulfil another ‘replacement’ subscription, for which it could again charge \$132. In other words it would end up in the same position as before, facing production outlays and risk with an expected cost of \$120, but would have received a further \$132 from the ‘replacement’ subscriber. Again the equivalent amounts at 31st December would be \$60 and \$66.

The 'entry' value ('consideration') may therefore always be taken as the relevant liability measure, however profitable the contract.

In Table I, solution #4a 'dv' shows the income statement and balance sheet amounts if Revrec uses a 'relief value' measure of its liability, equivalent to deferred revenue throughout as 'relief' would enable the signing of a further profitable contract. This valuation would then naturally lead to balance sheet and income statement figures generally identical to those under the conventional 'revenue recognition' approach.

But even with this higher liability value, although no longer *forced* by the bookkeeping to report a profit on inception of the contract, Revrec can still *choose* to do so by valuing the relevant 'inherent goodwill', as in solution #4b 'dv'. As in other cases, this approach would then require 'recycling' of the initial profit measure as revenues are earned and costs incurred but would not require a wholesale recasting of the income statement from a 'traditional' basis onto a 'valuation' basis. Situations where this 'inherent goodwill' might be more readily accepted would be where there is strong market evidence that the profit estimate on the contract is realistic: e.g. where other companies would be prepared to pay an acquisition cost of up to £12 to take over Revrec's/Insrec's contract (or pay for 'goodwill' of £12 to take over the company instead) and thereby still earn a 'normal' profit on the business after charging that acquisition cost/goodwill amortization. Revrec/Insrec could thereby realise the £12 immediately on inception of the contract. If it does not wish to actually transfer its business in this way, it could nevertheless then 'mark to market' and report the value gain accordingly, which would then have to be recycled as a charge against the subsequent conventional reporting of revenues and profits earned.

The conclusion is therefore that the amount for ‘deferred revenue’ can represent the ‘relief value’ of Revrec’s liability and that ‘deprival value’ reasoning offers a resolution of the conflict between the ‘revenue recognition’ and ‘asset/liability’ approaches to stating balance sheet measures. However, unfortunately this resolution of the balance sheet measurement problem does not in itself resolve the issues over profit recognition. Just as valuing assets at replacement cost (equivalent to (depreciated) historical cost until prices change) would not *ipso facto* preclude recognition of the value of ‘inherent goodwill’ (whether or not identified with particular intangibles such as brands), and therefore potentially of the profitability of investment in the assets ahead of their actual use/consumption, similarly measurement of contract liabilities at the corresponding ‘relief value’ (here argued to be the equivalent of the ‘deferred revenue’ at least until prices change) would similarly not *ipso facto* preclude recognition of the value of ‘inherent goodwill’, and therefore potentially of the profitability of contracts ahead of their actual full or partial fulfilment. Except in the special cases of ‘zero super-profit’ contracts the conceptual arguments over asset and liability valuation cannot resolve how profit recognition conventions should be standardised—and there they are not needed at least until prices change. Nevertheless standard setters clearly need to devote attention to clarifying and refining their valuation concepts and to move beyond regarding ‘fair value’ alone (or even ‘fair value’ and ‘entity specific value’) as an adequate tool for resolving accounting conflicts (e.g. FASB, 2004: cf. Barth and Landsman, 1995; Horton and Macve, 2000).

CHANGING PRICES

The ASB's discussion paper on *Revenue Recognition* suggests that often an appropriate technique when 'dealing with incomplete contractual performance is to assess the value of benefit that has not yet accrued to a customer' (ASB, 2001, para. 3.22). However, inconsistently with deprival value reasoning, it argues that: 'Once again, when making this assessment, it is important that it is based on prices and circumstances that would have prevailed at the time the contract was originally formed; otherwise, *changed prices may distort the allocation of overall revenue from the contract*' (para. 3.23--emphasis added).

If at the year-end conditions have changed such that Revrec (or Insrec) can now charge more for new subscriptions (or policy premiums), while costs have not changed, then both conventional revenue recognition and an asset/liability approach based on the exit value of 'expected cost to perform' will still show the originally expected amounts. But 'relief value' will rise as avoidance of the current obligation would allow entry into a new, replacement contract at the new price. Restatement to the new level would also appear consistent with the IASB's new approach to the valuation of insurance liabilities for Phase II.

There is clearly an 'opportunity loss' from being saddled with the current contract (and equivalently an 'opportunity gain' if prices have fallen). But whether the accounts should record any loss or gain as part of 'current earnings' opens up the same arguments as those debated frequently in the past over whether gains and losses in replacement costs of assets should be recognized in current earnings or presented separately (e.g. as currently in the UK in the STRGL); and if the latter whether they should then be 'recycled' into current earnings in subsequent periods to offset the higher or lower cost (here revenue) amounts then flowing through. Lennard (2002,

Appendix B) argues, on balance, against recognizing repricing effects. However, it may be noted that not recognizing such revaluation gains and losses, as recommended by ASB 2001, has the same overall net effect on earnings as initial recognition outside earnings coupled with subsequent recycling into earnings.

Where the higher price now being charged reflects the opportunity for Revrec/Insrec to earn an higher margin of profit in the future, it does seem paradoxical to show a loss due to restating the liability at the new higher 'relief value' amount. Clearly a satisfactory overall solution also requires restatement of the related intangible for the NPV, which should also be restated upwards too to reflect the additional profit the company could earn at the new prices. Once again, not repricing the liability is tantamount to the implicit recognition of this gain.

The repricing issue therefore emphasises the previous argument that revenue and profit recognition need to be considered independently of simply resolving asset and liability measurement issues.

CONCLUSIONS

Will the 'asset/liability' approach produce reported earnings patterns of better 'quality' than the 'revenue recognition' approach? A conflict most generally will appear wherever enterprises expect to earn profits that cannot be identified as 'factor costs' in the way that items such as 'interest' and 'reward for risk bearing' may. Moreover, in many circumstances, even these elements may not be separately estimable with any reliability from market benchmarks. In other cases, while companies may have invested in building up the necessary intangibles that enable them to achieve apparent 'super-profits', current GAAP accounting for these intangibles fails to properly match investment and return.

Deprival value reasoning (in the form of ‘relief value’) does offer a reconciliation of the ‘asset/liability’ approach and the ‘revenue recognition’ approach to the measurement of liabilities themselves, just as it does of the ‘asset/liability’ approach and the ‘cost matching’ approach to the measurement of assets—at least until prices change (Baxter, 1975). Unlike the wholly ‘exit value’ liability measurement approaches currently favoured by standard setters (whether ‘fair value’ or ‘entity specific value’) it does not therefore force the recognition of ‘profit on inception’ of a contract, which has proved to be the stumbling block in the IASB’s discussion of insurance contracts. But this balance sheet reconciliation is still insufficient in itself to determine the issue of when profits should be recognised: that requires specific consideration of how performance should be measured, and not just of how it should be presented. It is therefore unfortunate that it is only the latter issue which is the focus of the standard setters’ current projects on ‘performance reporting’.

Given that the conflict with current GAAP pervades all kinds of business (as acknowledged by the generic ‘revenue recognition’ projects of ASB, IASB and now FASB) it would appear that standard setters will need to consider the whole issue of accounting for intangibles, and the overall adequacy of a model that identifies ‘comprehensive income’ solely in terms of changes in recognized assets and liabilities (e.g. Macve, 1997), before it is likely to make any progress towards resolving the arguments over ‘revenue recognition’ issues and the appropriate presentation of the corresponding reported performance.

Annexed: Table I of examples: file lsesemoct04/revrectabledvnointlse

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¹ The ASB has subsequently (February 2002) issued an ED of Application Notes under FRS5 dealing with particular contentious revenue recognition practices.

² For comments see <http://accfin.lse.ac.uk/staff/macve/>