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Overview of IASB Accounting for Insurance Contracts

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Editor's Note: The section's International Accounting list serve would be an appropriate forum for discussing concepts in this article.

Companies in Europe, Australia and other parts of the world will be required to report using International Accounting Standards (IAS) for calendar year 2005. American subsidiaries that consolidate to a European parent will be required to do so as well. When companies report their first IAS statements, they will also be required to restate their 2004 income statement. This will require balance sheets for 2003, 2004 and 2005 year-ends. There are still many areas under debate with regard to insurance contract accounting under IAS, but some pieces are starting to fall into place.

The International Accounting Standards Board (IASB) has divided insurance contracts into two classifications: "financial instruments" and "insurance contracts." Financial instruments includes products without significant insurance risk, such as some deferred annuities, variable annuities and participating life. Their accounting is determined by IAS 32 and 39. The former addresses disclosure and presentation, the latter addresses recognition and measurement. Both of these standards have been adopted, and both have amendments pending in exposure draft form. Final versions of the standards will likely be seen in the revised standards to be released in 2003, provided the IASB holds to the original timetable.

Insurance contracts includes contracts that do contain significant insurance risk, such as term insurance, health insurance, and whole life. The IAS will not determine the accounting for insurance contracts until 2007, at the earliest. Until the insurance standard is issued, companies are allowed to use their local GAAP accounting for contracts that are classified as insurance under IAS 32.

For some contracts, it is not clear whether they will be classified as financial contracts or insurance contracts. Two examples are heavily-funded universal life contracts and deferred annuities with certain death benefit provisions.

THE VALUATION OF FINANCIAL CONTRACTS

The remainder of this article will examine the valuation of financial contracts, such as variable annuities, focusing on the implications of different approaches to a fair-value calculation. As IAS 39 is currently written (before considering changes in the exposure draft), this business should be valued at amortized cost, described as a constant interest method or level internal rate of return method. Under this method, there is an implicit deferral of acquisition costs, as the commissions are netted from the premium in determining the starting point for determining the IRR.

Proposed changes to IAS 39 will allow a financial instrument to be designated as "trading." A financial instrument designated as trading will be valued at fair value, and changes to fair value will then go through the income statement. IAS 39 suggests broad principles for valuing financial instruments for which there are no quoted market prices from an actively traded exchange. Among the methods allowed are the use of replicating portfolios, M&A valuation approach, discounted future cash flows and other valuation techniques.

BASIS FOR NUMERICAL EXAMPLES

To illustrate the various methods under discussion for valuing an insurance company's financial instruments that are liabilities (financial liabilities) under IAS 39, consider the numerical example of a simple variable annuity with cash flows detailed in Table 1, based on the following assumptions:

Term = 10 years

100,000 single premium

Commission = 5%

Fees = 1.3% of the account balance

Expenses = 0.4% of the account balance

Back-ended surrender charges (per year) = 10, 8, 6, 4, 2, 0% thereafter

Lapse rate = 2, 4, 6, 8, 10, 15, 10% thereafter

The IAS will not determine the accounting for insurance contracts until 2007.

**Table 1
Cash Flows From Sample Variable Annuity**

Year	Premium	Fund BOY	1.30% Fees	7% Interest Growth	Lapse Rate	AV Lapsed	Surrender Charge	Surrender Claims Paid	5% Comsn.	0.40% of Fund Expense
1	100,000	100,000	1,300	6,909	2%	2,112	10%	1,901	5,000	400
2		103,497	1,345	7,151	4%	4,367	8%	4,022	0	414
3		104,930	1,364	7,250	6%	6,649	6%	6,250	0	420
4		104,166	1,354	7,197	8%	8,801	4%	8,449	0	417
5		101,208	1,316	6,992	10%	10,689	2%	10,475	0	405
6		96,197	1,251	6,646	15%	15,239	0%	15,239	0	385
7		86,354	1,123	5,966	10%	9,120		9,120	0	345
8		82,077	1,067	5,671	10%	8,668		8,668	0	328
9		78,013	1,014	5,390	10%	8,239		8,239	0	312
10		74,150	964	5,123	100%	78,309		78,309	0	297

**Table 2
Valuation of Variable Annuity Using Amortized Cost**

Time	Cash Flow	Reserve	Profit	Profit/Reserve
0	95,000	95,000		
1	4,608	99,095	513	0.54%
2	2,714	101,275	535	0.54%
3	580	101,308	547	0.54%
4	-1,669	99,093	547	0.54%
5	-3,887	94,671	535	0.54%
6	-8,977	85,183	511	0.54%
7	-3,499	81,224	460	0.54%
8	-3,326	77,460	438	0.54%
9	-3,161	73,881	418	0.54%
10	-73,483	0	399	0.54%
IRR	-0.54%			

Cash Flow = Premium - Surrenders Claims Paid - Commissions

Reserve = Prior Reserve * (1+IRR) + Cash Flow

Profit = Cash Flow - Increase in Reserve

Account value growth rate = 7%

Annual model with premiums, fees and expenses at the beginning of the year, surrenders at the end of the year

There are no guaranteed minimum death or earnings provisions

The cash flows resulting from these assumptions are shown above in Table 1.

FAIR VALUE: AMORTIZED COST

As explained above, under the current version of IAS 39, financial instruments such as the sample variable annuity would be valued using amortized cost. Table 2 shows the sample cash flows, the IRR and the resulting profit from this type of calculation. The profit emerges smoothly as a constant percentage of the reserve.

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Table 3
Valuation Of Variable Annuity: Reserve = Account Balance, IAS and US GAAP

Time	IAS (No DAC)			US GAAP with DAC		
	Cash Flows	Reserve	Profit	EOY EGP	DAC	Profit
0		0			5,000	
1	99,608	103,497	-3,889	1,174	4,585	696
2	2,714	104,930	1,281	1,346	4,028	725
3	580	104,166	1,343	1,409	3,392	707
4	-1,669	101,208	1,290	1,355	2,746	644
5	-3887	96,197	1,125	1,188	2,163	542
6	-8,977	86,354	866	926	1,711	413
7	-3,499	82,077	777	832	1,289	355
8	-3,326	78,013	739	790	864	314
9	-3,161	74,150	702	751	435	273
10	-73,483	0	667	714	0	232

7,672 PV at 7%
 65% k-factor

FAIR VALUE: REPLICATING PORTFOLIO

A replicating portfolio is a group of financial instruments with a readily available fair value that has the same cash flows as the financial instrument one is trying to value. If it is possible to find a combination of exchange traded financial instruments that replicate the cash flows of our variable annuity, then we can use the fair value of those exchanged traded instruments as a proxy for the fair value of our annuity.

Some have interpreted this to mean that the account balance, not reduced by surrender charges, is a fair-value reserve, since the assets that back the account value for a variable product constitute a replicating portfolio.

Although the reserve mechanism would then be the same as a U.S. GAAP FAS 97 reserve, acquisition costs cannot be deferred under IAS fair value methods, which creates a large disconnect between the two systems. Table 3 shows reserve and profit under the replicating portfolio approach, with a comparison to U.S. GAAP. The IAS method produces a large loss at issue, which most insurers would not find appropriate.

FAIR VALUE: M&A VALUATION APPROACH

Another method for determining fair value is to approach the valuation similar to the way that you would price the contract in an acquisition. One such method would be to define the reserve as the account balance (fair value of the assets backing the variable annuity) less the present value of the expected margins. This is also consistent with methods used in determining embedded values, which are often used in determining purchase prices for transactions in Europe.

The figures in Table 4 apply this methodology to the variable annuity example, defining the reserve as the account balance less 85% of the present value of future margins. The remaining 15% is an assumed margin for risk and prudence.

FAIR VALUE: SURRENDER VALUE APPROACH

Some of the IAS committee members are leaning towards defining the fair-value reserve as the surrender value. The idea behind this is that this is the amount that the insurance company must pay if the policyholder decides to terminate the

Table 4
Valuation Of Variable Annuity: Reserve = Account Balance – 85% Of Future Margins

Time	End of Year Margins	7% PV Margins	85% Margins	Reserve	Cash Flows	Profit
0		2,672		0		
1	-4,176	7,035	5,980	97,517	99,608	2,091
2	1,346	6,181	5,254	99,676	2,714	555
3	1,409	5,204	4,423	99,743	580	513
4	1,355	4,213	3,581	97,627	-1,669	447
5	1,188	3,320	2,822	93,375	-3,887	365
6	926	2,626	2,232	84,122	-8,977	276
7	832	1,978	1,681	80,396	-3,499	227
8	790	1,326	1,127	76,886	-3,326	185
9	751	667	567	73,583	-3,161	142
10	714	0	0	0	-73,483	100

Margin = (Fees – Commission – % of Fund Expense) * (1 + AV growth rate) + (AV lapsed – Surr Paid)

7% PV Margin = PV of future margins at 7%

Reserve = AV – 85% Margins

Profit = Cash Flow – Increase in Reserve

Table 5
Valuation of Variable Annuity: Reserve = Surrender Value

Time	Cash Flows	Account Balance	Reserve = Surrender Value	Profit
0			0	
1	99,608	103,930	93,147	6,461
2	2,714	104,930	96,535	-674
3	580	104,166	97,916	-801
4	-1,669	101,208	97,160	-912
5	-3,887	96,197	94,273	-1,000
6	-8,977	86,354	86,354	-1,058
7	-3,499	82,077	82,077	777
8	-3,326	78,013	78,013	739
9	-3,161	74,150	74,150	702
10	-73,483	0	0	667

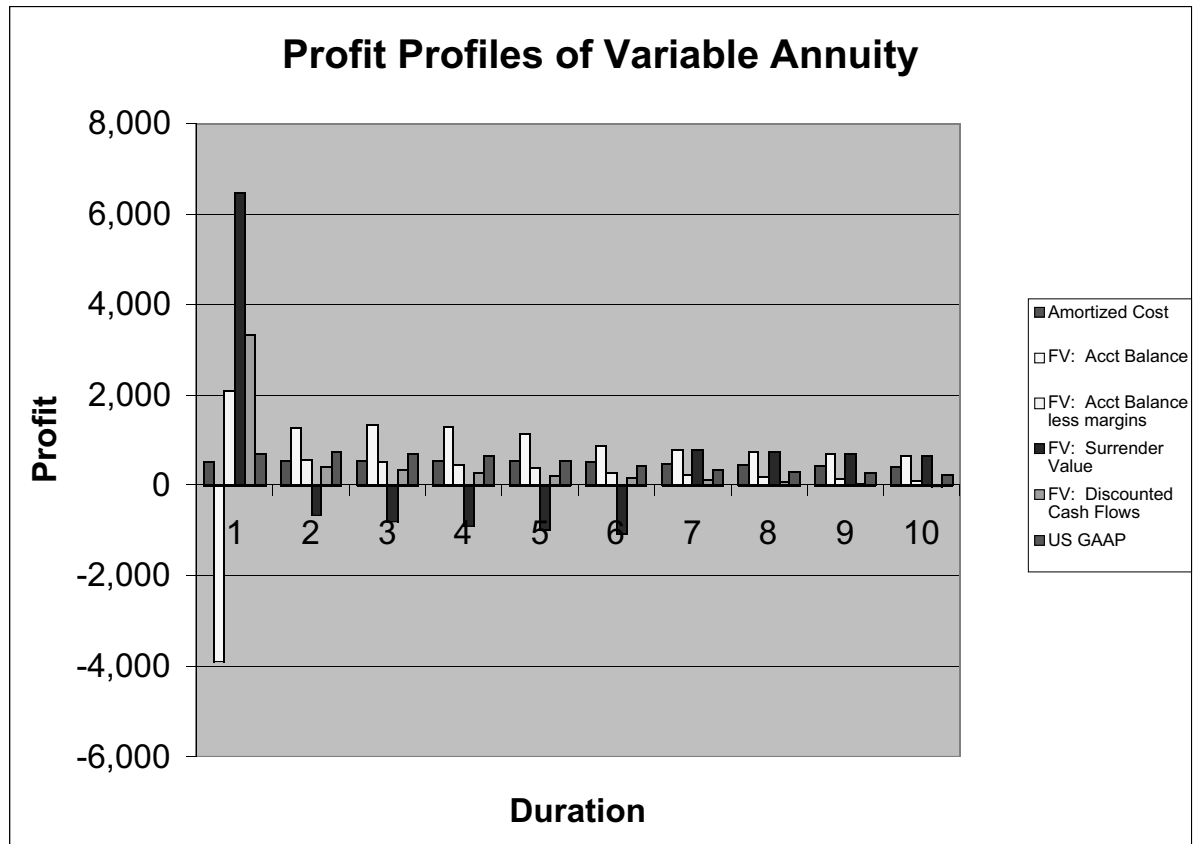
Profit = Cash Flow – Increase in Reserve

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Table 6
Valuation of Variable Annuity: Reserve = PV Benefits & Expense

Time	Cash Flows	Benefits	Expenses	Reserve	Profit
0			0		
1	99,608	1,901	5,400	96,290	3,318
2	2,714	4,022	414	98,594	410
3	580	6,250	420	98,826	348
4	-1,669	8,449	417	96,879	279
5	-3,887	10,475	405	92,781	211
6	-8,977	15,239	385	83,652	152
7	-3,499	9,120	345	80,042	111
8	-3,326	8,668	328	76,649	68
9	-3,161	8,239	312	73,463	25
10	-73,483	78,309	297	0	-19

Expenses = Commission + % of Fund Expense
 Reserve = PV of future benefits + PV of future expenses
 Profit = Cash Flow - Increase in Reserve



contract. Clearly, this creates a profit timing problem with contracts that have unusually high surrender charges in the early years. Table 5 shows this irregular profit pattern.

FAIR VALUE: DISCOUNTED FUTURE CASH FLOWS

The last method that we examine comes from guidance in IAS 39 that allows for the estimation of fair value based on the discounted future cash flows expected to arise from the financial instrument. The discount rate used should be appropriate for the cash flows. In our annuity example, the assets backing the account value are assumed to earn seven percent, so this seems to be an appropriate rate. The cash flows used in determining the reserve in this example are only those that are paid out in either benefits or expenses. The exact cash flows that will be allowed under this method are currently under debate.

REGULAR PREMIUM CONSIDERATIONS

The IASB is currently debating the role of future premiums in such a reserving system. It is likely

that future premiums will only be recognized if they increase the reserve. The argument in support of this position is that the policyholder is not contractually obligated to pay future premiums; therefore, only if it is advantageous for the policyholder to do so, should future premiums be allowed in the reserving. There is still much debate that will occur on this topic before a final position is decided.

SUMMARY

The chart on page 10 summarizes the profiles of each of the methods above. It is evident from the chart that, if the IASB allows free rein with regard to the application of IAS 39 to insurance products classified as financial instruments, the resulting financial statements from similar companies will be far from comparable. There are a variety of logical interpretations that one can make, each with very different results. ☒



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What's Outside

This is a listing of some articles published elsewhere that may interest financial reporting actuaries. If you would like to recommend an article for inclusion in this list in a future issue, please e-mail the editor.

"Regulators Respond to Industry 'Innovation' through Guideline AXXX" provides a summary of each of the eight sections of AXXX, with each section providing guidance about how to apply Guideline AXXX. By Mary J. Bahna-Nolan, *Product Matters!* January 2002.

"The New 2001 CSO Implications for Universal Life Plans" discusses implications of the new table, including statutory reserve effect. By Nancy Winings, *Product Matters!* January 2002.

"International Accounting Standards: Some Pain, Much Gain for Insurers." A four-page overview that examines the challenges, implications, and opportunities presented by international accounting standards, by Peter Duran, Mark Freedman, and Emma McWilliam, *Contingencies*. November/December 2002.

"Market Value Accounting for Insurance Liabilities." A 2.5 page article that addresses why another accounting convention is needed and criticisms of market value accounting. The fair value and entity-specific value of determining the market value of insurance liabilities are described. By Lee Fischbeck, *Contingencies*, January/February 2003.

"The 2001 CSO Mortality Table." After reading page after page about the 2001 CSO, you might enjoy reading this two-page summary by Michael S. Taht, *The Actuary*, December 2002. ☒