IFRS – August 2010 Exposure Draft for Insurance Contracts Examined

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The August 2010 IFRS Exposure Draft for Insurance Contracts includes a number of provisions that have the potential to cause problematic results for life insurance companies. This paper is designed to summarize the methodology for long-duration contracts and examine the areas that are most likely to create reporting difficulties. This will be accomplished by comparing the income statement and balance sheet results under the proposed methodologies with the results currently produced under U.S. GAAP for three types of policies: 20-year level-term life, traditional whole life, and universal life.

PROPOSED METHODOLOGY

The exposure draft requires that reserves be calculated using the probability-weighed projected "fulfillment cash flows" (i.e., policy benefit payments plus defined policy-related expenses minus premiums) of possible future results. The results are to be discounted using the risk-free rate of return then in effect, enhanced for an illiquidity premium. The discounted result is the reserve at issue. It is typically negative at issue, reflecting the existence of the present value of future expected profits as well as the direct acquisition costs incurred in acquiring the business.

Additionally, a risk margin is established at each reporting period. Three methodologies are outlined in the exposure draft as acceptable in determining the risk margin. The method used in this examination is the "cost-of-capital" method, in which the cost of capital incurred while the policy that is in force is calculated. It is meant to represent, along with the reserve being established, an amount equal to "the maximum amount the insurer would rationally pay to be relieved of the risk that the ultimate fulfillment cash flows exceed those expected." The risk margin is meant to cover only the C-2 (insurance risk) and not C-1 (asset risk), C-3 (asset mismatch risk), and C-4 (operational risk). Consequently, it is expected to be relatively small.

If the sum of the reserve and the risk margin is less than zero at the time of issue, a residual margin is established so that the sum of the three is equal to zero. This eliminates any profit at issue that would otherwise emerge. If the sum of the reserve and the risk margin exceeds zero at issue, a loss at issue equal to that amount results. In that case, no residual margin is established. Likewise, a residual margin is not established for existing business at the time of conversion to the new standard. Rather, the reserve and risk margin are calculated, with any differences between the sum of the two and the net GAAP reserve (benefit reserve minus unamortized deferred acquisition costs) resulting in either a gain or loss on conversion. Any residual margin established at issue is to be amortized over "the coverage period in a systematic way that best reflects the exposure from providing insurance coverage."

During each reporting period, the reserve is recalculated using best-estimate assumptions appropriate at the time and using a discount rate equal to the risk-free rate (including a premium for illiquidity) at that time. The risk margin is also recalculated to reflect conditions at that time. The residual margin established at issue is amortized during each period, reflecting the amount of business remaining in force. Consequently, the profit that emerges during each period will reflect the change in reserve due to the changes in assumptions used to calculate the reserve, including the discount rate. If there have been no changes since issue, the earnings of a closed existing block of business will be comprised of the release of the risk margin, the amortization of the residual margin, interest earned on the sum of the risk margin and the residual reserve, interest earned on reserves in excess of the interest assumed in the calculation of reserves, plus any deviation in actual policy cash flows (i.e., mortality, surrenders) from those assumed in the calculation of the reserves.

As will be shown in the examples below, a change in the risk-free rate of return from period to period can result in a very "choppy" profit emergence unless asset cash flows and policy cash flows are well matched, resulting in similar changes in magnitude to the assets supporting these reserves.

One problem posed by the proposed standard is the exclusion of non-incremental acquisition expenses in the calculation of the cash flows emanating from the policy that will be used to establish the reserve. In the proposed standard, incremental acquisition expenses are determined at the contract level, a much more restrictive definition than under U.S. GAAP. Consequently, some acquisition expenses that are capitalized under U.S. GAAP will be expensed under the proposed standard. This could result in differences in accounting treatment depending upon how a product is distributed. For instance, a product distributed through agents that are employees of the insurer may have higher reserves due to the expensing of non-incremental acquisition costs than the same product issued through third-party brokers.

METHODOLOGY

The methodology detailed in the exposure draft was applied to three types of policies: a traditional whole life policy, a universal life policy (with significant account value build up) and a 20-year level-term policy. The exposure draft was unclear as to when or whether all universal life policies were to be split into an insurance piece and a financial instrument piece. Consequently, the example shown herein treats the entire policy as an insurance contract.

Reserves were calculated deterministically, discounting at the current risk free interest rate (with an illiquidity premium). Clearly, this is not consistent with the proposed standard.

However, given the comparative nature of the results presented herein, it was deemed a reasonable estimate of the reserve that would emerge and appropriate for the purposes of this examination. Nonetheless, one of the significant challenges posed by this standard involves the timely completion of reserves during each accounting period. If this standard is adopted, it seems clear that companies will need to have a production system capable of generating reserves consistent with the standard on a timely basis.

In our examples, residual margins were released reflecting the time value of money and the amount of insurance in force. This is consistent with our interpretation of the methodologies defined in the proposed standard.

PROFIT EMERGENCE

Tables 1 through 3 compare the profit emergence of each product under U.S. GAAP and the proposed IFRS standard for the first 10 policy years. Investment income is earned on the net reserve in each. The present values of the streams of profits discounted at the investment earnings rate are equal (since the present value is independent of the reserve standard applied). As indicated, for each of the products, profits tend to emerge earlier under U.S. GAAP. This is particularly true for the traditional whole life product that was examined. It is less true for the level-term product. This disparity would be even more pronounced if any non-incremental acquisition costs existed that would be capitalized under U.S. GAAP but would be expensed under the proposed IFRS standard. In reality, many if not most policies will have non-incremental acquisition costs that will be expensed under the proposed standard. Consequently, a loss (or reduction in earnings) in the first year equal to these non-incremental acquisition costs will be incurred.

TABLE 1: COMPARISON OF IFRS RESULTS TO FAS 60 RESULTS 20-YEAR LEVEL TERM

	FAS 60	IFRS	IFRS MINUS FAS 60
POL YR	BOOK PROFIT	BOOK PROFIT	BOOK PROFIT
1	9.08	1.62	-7.47
2	7.26	0.84	-6.42
3	6.31	7.98	1.66
4	5.68	7.11	1.43
5	5.28	6.59	1.31
6	5.06	6.35	1.29
7	4.86	6.13	1.27
8	4.66	5.91	1.25
9	4.47	5.71	1.24
10	4.29	5.52	1.23

TABLE 2: COMPARISON OF IFRS RESULTS TO FAS 60 RESULTS TRADITIONAL WHOLE LIFE

	FAS 60	IFRS	IFRS MINUS FAS 60
POL YR	BOOK PROFIT	BOOK PROFIT	BOOK PROFIT
1	176.51	168.75	-7.76
2	149.93	142.86	-7.07
3	134.84	136.45	1.61
4	125.30	126.74	1.44
5	120.19	121.57	1.38
6	115.28	116.61	1.33
7	110.57	111.85	1.28
8	106.04	107.27	1.23
9	101.68	102.87	1.18
10	97.50	98.64	1.14

TABLE 3: COMPARISON OF IFRS RESULTS TO FAS 97 RESULTS UNIVERSAL LIFE

	FAS 97	IFRS	IFRS MINUS FAS 97
POL YR	BOOK PROFIT	BOOK PROFIT	BOOK PROFIT
1	71.43	81.25	9.82
2	94.46	74.38	-20.08
3	85.01	71.79	-13.22
4	71.46	70.48	-0.99
5	64.30	70.45	6.15
6	65.19	71.77	6.58
7	65.81	72.88	7.07
8	65.94	73.73	7.78
9	65.39	74.35	8.95
10	64.22	74.72	10.49

Tables 4 through 6 compare the profit emergence for each product under the proposed IFRS standard, assuming the risk-free rate of return drops 100 basis points at the end of the fourth policy year with the emergence that would have occurred had the risk-free rate remained the same. This is due to the increase in the policy reserve that results from a decrease in the risk-free rate of return. The policy reserve is directly affected by the reduction in the risk-free rate of return. The risk margin, when calculated using the cost-of-capital methodology, is determined by calculating the difference between the rate of return demanded by the market and the investment rate that is earned by the company. A drop in the risk-free rate of return may or may not result in a drop in the net investment rate earned by the company, depending upon what occurs to the corresponding spreads. Likewise, the risk margin could change even if the risk-free

rate of return did not. In the examples presented here, the risk margin was assumed not to change with the risk-free rate of return.

As you can see, the change in the profits reported (ignoring any change in the value of the asset side of the balance sheet) in the fourth policy year is dramatic, particularly for those products (the universal life and traditional life products) with significant asset build-up. This emphasizes the need for a very disciplined and rigorous asset-liability matching program. This will be discussed further below.

TABLE 4: 20-YEAR LEVEL TERM BOOK PROFIT

POL YR	NO CHANGE IN RISK FREE RATE @ EOY 4	100 BP DROP IN RISK FREE RATE @ EOY 4
1	1.62	1.62
2	0.84	0.84
3	7.98	7.98
4	7.11	0.47
5	6.59	5.81
6	6.35	5.95
7	6.13	6.07
8	5.91	6.18
9	5.71	6.26
10	5.52	6.33

TABLE 5: TRADITIONAL WHOLE LIFE BOOK PROFIT

POL YR	NO CHANGE IN RISK FREE RATE @ EOY 4	100 BP DROP IN RISK FREE RATE @ EOY 4
1	168.75	168.75
2	142.86	142.86
3	136.45	136.45
4	126.74	-553.93
5	121.57	125.96
6	116.61	126.11
7	111.85	126.24
8	107.27	126.34
9	102.87	126.41
10	98.64	126.43

TABLE 6: UNIVERSAL LIFE BOOK PROFIT

POL YR	NO CHANGE IN RISK FREE RATE @ EOY 4	100 BP DROP IN RISK FREE RATE @ EOY 4
1	81.25	81.25
2	74.38	74.38
3	71.79	71.79
4	70.48	-387.04
5	70.45	88.04
6	71.77	93.76
7	72.88	98.83
8	73.73	103.21
9	74.35	106.95
10	74.72	110.04

NET RESERVE

Tables 7 through 9 compare the net liabilities established for each policy under U.S. GAAP and the proposed IFRS standard. Tables 10 through 12 compare the differences in the net liabilities established for each policy with and without the residual margin included. These differences contribute to the corresponding difference in profit emergence under the two methods. However, they are also important because the differences in the net liabilities held represent the change in the balance sheet (reflecting existing business on the books) that will occur if/when the proposed IFRS standard is adopted. No residual liability will be established for existing business at the time of conversion to the new standard. Consequently, the difference in the net liabilities shown excludes the residual margin (the residual margin is shown here strictly for informational purposes).

As demonstrated, for each of these products the net liability under the proposed IFRS standard is less than the net GAAP reserve established under U.S. GAAP. This is a positive result, in that GAAP equity will increase at the time of conversion. However, it is undesirable, in that future profits will decrease (since the release of a liability increases income) and the return on equity will similarly decrease because profits (the numerator of the calculation of ROE) will decrease and equity (the denominator of the calculation of ROE) will increase. This may be somewhat offset should the risk-free rate of return remain at recent historical lows, as a lower discount rate produces a higher reserve in most circumstances.

It is possible that a fast-growing company could actually show negative profits for several years due to the low profits emerging from existing business (release of risk margin and interest spread) being overwhelmed by the losses at issue from new business. This would result from non-incremental acquisition expenses being expensed while the recognition of revenue to cover them is deferred through the residual margin.

This change in accounting standards, if adopted, will require substantial communication/explanation to the users of insurer financial statements (i.e., stock analysts).

TABLE 7: COMPARISON OF IFRS RESULTS TO FAS 60 RESULTS 20-YEAR LEVEL TERM

	FAS 60			IFRS			
POL YR	DAC	BENEFIT RESERVE	NET GAAP RESERVE	BENEFIT RESERVE	RESIDUAL MARGIN	RISK MARGIN	NET GAAP RESERVE
@ ISSUE				-57.87	19.98	37.90	0.00
1	220.42	46.79	-173.62	-225.89	18.05	41.69	-166.16
2	206.47	84.38	-122.09	-170.23	16.62	45.85	-107.76
3	195.24	115.10	-80.14	-124.85	15.44	42.81	-66.60
4	185.71	142.51	-43.19	-84.91	14.41	40.22	-30.28
5	177.10	167.73	-9.38	-48.32	13.46	37.86	3.00
6	168.78	191.02	22.24	-13.98	12.52	35.53	34.07
7	160.74	211.65	50.91	17.37	11.60	33.21	62.18
8	152.95	229.76	76.81	45.92	10.69	30.90	87.50
9	145.41	245.09	99.68	71.41	9.79	28.59	109.78
10	138.10	257.00	118.90	93.22	8.90	26.26	128.38

TABLE 8: COMPARISON OF IFRS RESULTS TO FAS 60 RESULTS TRADITIONAL WHOLE LIFE

	FAS 60			IFRS			
POL YR	DAC	BENEFIT RESERVE	NET GAAP RESERVE	BENEFIT RESERVE	RESIDUAL MARGIN	RISK MARGIN	NET GAAP RESERVE
@ ISSUE				-1,429.54	1,382.05	47.49	0.00
1	1,036.95	532.20	-504.75	-1,843.56	1,294.33	52.24	-496.99
2	1,007.56	1,012.69	5.13	-1,264.08	1,227.04	57.46	20.43
3	985.63	1,459.77	474.14	-736.37	1,170.30	54.82	488.75
4	968.21	1,883.87	915.66	-242.19	1,119.38	52.51	929.70
5	952.87	2,292.95	1,340.09	232.96	1,070.35	50.28	1,353.59
6	939.60	2,687.12	1,747.52	689.24	1,023.12	48.14	1,760.50
7	928.42	3,065.89	2,137.47	1,126.26	977.61	46.08	2,149.95
8	919.34	3,430.16	2,510.82	1,544.98	933.75	44.09	2,522.82
9	912.37	3,780.17	2,867.80	1,945.69	891.48	42.17	2,879.34
10	907.54	4,115.69	3,208.14	2,328.20	850.71	40.32	3,219.23

TABLE 9: COMPARISON OF IFRS RESULTS TO FAS 97 RESULTS UNIVERSAL LIFE

	FAS 97			IFRS			
POL YR	DAC	BENEFIT RESERVE	NET GAAP RESERVE	BENEFIT RESERVE	RESIDUAL MARGIN	RISK MARGIN	NET GAAP RESERVE
@ ISSUE				-608.95	567.73	41.23	0.00
1	874.40	697.43	-176.97	-751.03	518.89	45.35	-186.79
2	875.61	1,217.15	341.55	-170.28	479.58	41.80	351.09
3	885.83	1,654.53	768.71	306.90	446.39	38.87	792.16
4	903.97	2,061.03	1,157.06	729.40	417.45	36.36	1,183.20
5	926.02	2,463.25	1,537.23	1,133.75	391.26	34.11	1,559.12
6	945.89	2,830.42	1,884.53	1,502.82	366.61	32.00	1,901.43
7	963.86	3,161.55	2,197.70	1,835.33	343.41	30.01	2,208.74
8	979.53	3,458.51	2,478.99	2,133.35	321.56	28.13	2,483.05
9	993.63	3,722.62	2,728.99	2,397.03	301.00	26.37	2,724.40
10	1,006.09	3,956.81	2,950.72	2,628.95	281.64	24.71	2,935.30

TABLE 10: COMPARISON OF IFRS RESULTS TO FAS 60 RESULTS 20-YEAR LEVEL TERM

	IFRS MINUS FAS 60	
POL YR	NET GAAP RESERVE	EXCLUDING RES MARGIN
1	7.47	-10.58
2	14.34	-2.29
3	13.54	-1.91
4	12.92	-1.50
5	12.38	-1.08
6	11.83	-0.69
7	11.27	-0.33
8	10.69	0.01
9	10.10	0.31
10	9.47	0.58

TABLE 11: COMPARISON OF IFRS RESULTS TO FAS 60 RESULTS TRADITIONAL WHOLE LIFE

	IFRS MINUS FAS 60	
POL YR	NET GAAP RESERVE	EXCLUDING RES MARGIN
1	7.76	-1,286.57
2	15.30	-1,211.74
3	14.61	-1,155.69
4	14.05	-1,105.34
5	13.50	-1,056.84
6	12.98	-1,010.13
7	12.48	-965.13
8	12.00	-921.75
9	11.54	-879.94
10	11.09	-839.61

TABLE 12: COMPARISON OF IFRS RESULTS TO FAS 97 RESULTS UNIVERSAL LIFE

	IFRS MINUS FAS 97	
POL YR	NET GAAP RESERVE	EXCLUDING RES MARGIN
1	-9.82	-528.71
2	9.55	-470.03
3	23.46	-422.94
4	26.14	-391.31
5	21.89	-369.37
6	16.89	-349.72
7	11.05	-332.36
8	4.06	-317.50
9	-4.59	-305.59
10	-15.42	-297.06

COMPONENTS OF PROFIT

Table 13 details the components of profit for the universal life product as they would be presented in the insurer's income statement. Obviously, differences between actual experience and expected experience used in the development of the policy reserves, changes in reserves and risk margins due to market conditions (changes in the risk free rate of return), and non-incremental acquisition expenses will be a few of the additional components of income shown on the insurer's actual income statement.

TABLE 13: UNIVERSAL LIFE IFRS INCOME STATEMENT PRESENTATION

	INVEST	RELEASE OF		
POL YR	INCOME ON RESV/MARG	RISK MARGIN	RESIDUAL MARGIN	BOOK PROFIT
1	36.54	-4.12	48.84	81.25
2	31.52	3.55	39.31	74.38
3	35.67	2.93	33.18	71.79
4	39.02	2.51	28.95	70.48
5	42.02	2.25	26.19	70.45
6	45.01	2.11	24.65	71.77
7	47.68	1.99	23.20	72.88
8	50.01	1.87	21.84	73.73
9	52.02	1.76	20.56	74.35
10	53.70	1.66	19.36	74.72

ASSET-LIABILITY MATCHING

Given the volatility introduced by capital market changes on the liability side of the balance sheet by the proposed IFRS standard, it will be critically important that the investments supporting these liabilities have market values that will change in the same direction and with the same magnitude as the liabilities. If they do not, the insurer's reported income will become extremely volatile. This is particularly true for insurance contracts that result in substantial asset accumulation (i.e., long-term care).

Even if a rigorous matching program is followed, there will be income volatility from asset credit spread volatility. Assets will likely be valued at market/fair value with their values moving up and down due to changes in the risk-free rates and market credit spreads. Liabilities will react to changes in risk-free rates and changes in the price for illiquidity, but will not react to changes in asset credit spreads. This was readily apparent in late 2008 when risk-free rates declined but credit spreads increased, leaving the asset discount rates little changed. Had the proposed standard been in force in 2008, liabilities would have been significantly increased in such a scenario, without a corresponding change in asset values.

An insurer holds assets supporting statutorily required reserves, capital, and surplus. The level of these assets typically differs significantly from the level of net GAAP reserves held. Consequently, even if the insurer matches changes due to market conditions in the value of the assets and the reported GAAP liabilities, a degree of volatility will be introduced into the reported earnings of insurers if the proposed IFRS standard is adopted.

CONCLUSION

Adoption of the proposed standard has significant implications for insurers' financial statements, for users of these financial statements, and for actuaries involved in the development of the underlying policy liabilities. Significant effort will be required by all parties involved to effectively communicate and interpret what has occurred during each accounting period. Failure to do so could result in a lack of transparency in insurers' financial statements and criticism of those responsible for their preparation.

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