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### Adopting U.S. GAAP Accounting for Pre-Need Plans

by Frank J. Buck

#### Introduction

**S** ignificant amounts of pre-need plans are sold in the Philippines. The benefits are designed to meet a number of known future events such as education fees, memorial benefits and payments upon retirement. In return for premiums paid, benefits are guaranteed. In some cases, inflationary increases are covered as well. Surrender values may be available for early terminations. The benefits payable on early death are, in general, modest.

This paper discusses approaches for reporting pre-need plans under the generally accepted accounting principles of the United States "U.S. GAAP."

#### Background

A pre-need contract, as defined in the pre-need regulations, is "a contract which provides for the payment and/or performance of future service(s) or monetary considerations at the time of actual need, payable in cash or installment by plan holders at stated prices, with or without interest or insurance coverage." While the majority of life insurers consider pre-need products to be life insurance, the industry is currently regulated by the Securities and Exchange Commission and not by the Insurance Commissioner. However, there is a proposal to place the regulation under the jurisdiction of the latter implying the reclassification of preneed plans from securities to insurance.

Initially, pre-need companies sold memorial plans that guaranteed the payment of interment services. Now pre-need contracts are classified into three major categories: life, pension and education. Some pre-need companies also sell plans that pay for medical expense, travel, weddings and even business expansion.

Pension plans normally provide fixed payments on specific dates, usually at retirement. They do not provide pension payments contingent upon death. Likewise, education plans provide for fixed payments on specific dates. In both cases the amount of mortality and morbidity cover is small. Premium waiver on death or disability is common, but additional payments on death are usually limited to a return of premiums. The industry has achieved phenomenal growth since the 1980s. It has consistently outpaced the life insurance industry by a wide margin. Throughout the 80s, the annual growth rate was in excess of 30 percent more than double the growth rate of the life insurance industry. By 1996, the number of pre-need organizations increased to 83. It is now down to 50 following the failure of several companies.

Table 1 on page 17 shows a summary of the pre-need sales from 1994 until 2001. It also shows the sales for the first six months of each year from 1999 until 2002.

The average annual growth rate of the sales amount from 1994 through 2001 was 11 percent.

In 2000, the life insurance industry reported total first year premium income valued at PhP 6.34 billion up from PhP 5.23 billion in 1999. The total premium income for 2000 was PhP 26.9 billion. The corresponding premium for 1999 was PhP 22.4 billion. The ratio of premium income to disposable was .92 percent. More recent figures are unavailable at this time.

Compared to the earlier years when sales were restricted to memorial (life) plans, the sales composition has changed significantly. In 2002, life plans only accounted for 5 percent of total sales. Pension plans accounted for 61 percent and education plans 34 percent. The top five companies for each major category make up over 70 percent of total sales. The market leaders, based on the sales results for the first six months of 2002, are shown in the tables on pages 17 and 18.

### **U.S. GAAP Accounting**

Products sold by life insurers in the United States are classified into various types and accounted for according to the relevant Statement of Financial Accounting Standard "SFAS" issued by the Financial Accounting Standards Board "FASB."

SFAS 60 was the first life insurance accounting standard. It covers traditional business and distinguishes between short term and long-term products. SFAS 97 modifies the approach to limited payment contracts and deals with investment contracts and Universal

	Table 1: S	ales by Year	
Year	Plans Sold	Sales Amount (Php)	Initial Collection (Php)
1994 1995	379,120 429,820	16,208,710,138 17,362,675,370	893545,664 1,024,011,780
1996 1997 1998	419,069 575,254 608,874	20,652,272,987 27,169,024,671 29,657,330,079	1,293,937,305 1,869,683,352 1,813,495,398
1999 2000 2001	626,088 582,003	31,093,149,840 36,073,035,938	2,154,645,843 2,319,545,742
First half 1999	305,843	8,454,777,580	583,283,917
First half 2000 First half 2001 First half 2002	310,714 359,172 311 977	17,044,060,081 19,714,509,925 19,988,085,925	1,150,303,432 1,580,242,101 1 580 242 101
1.00110112002	011,777	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1,000,242,101

Table 2: Top Comp	oanies by Sales V	olume of Education	Plans, Q1&2 2002
Company	Plans Sold	Sales (Php)	% of Total Sales
Philam Plans, Inc. College Assurance	11,512	1,569,641,543	27
Plans Inc.	39,992	1,207,131,792	17
Prudentialife Plans, Inc.	9,247	868,827,388	13
Berkley Int'l. Plans, Inc.	9,452	790,827,815	11
Pacific Plans, Inc.	7,266	787,499,100	11
Top Five Companies Total Education Sales	77,469 99,306	5,223,927,638 6,899,981,287	76

Life-type contracts. SFAS 120 addresses participating business sold by mutual life insurers where policyholder dividends are paid in accordance with the Contribution Principle.

There are accounting standards addressing reinsurance, taxation and investments and other guidance in the form of practice bulletins, statements of accounting concepts, emerging issues task force pronouncements, etc. General industry practice has also developed over time.

The approach to accounting for life insurance products is to issue standards and guidance, but not to set out rigid rules. There are areas of interpretation, especially with products that are unusual in the United States.

### Accounting for Pre-Need Policies

Each plan should be considered on its merits and classified according to the appropriate accounting standard. Contracts are normally long duration and terms are normally fixed, both in terms of premium payments and benefits, so that it is unlikely that SFAS 97 Universal Life would be appropriate. If there is a significant mortality or morbidity element, SFAS 60 or SFAS 97 limited pay would probably apply. If the mortality or morbidity risk is not significant, the contract should be accounted for as an investment contract under SFAS 97.

Although SFAS 97 paragraph 7 states "a mortality or morbidity risk is present if, under the terms of the contract, the enterprise is required to make payments or forego required premiums contingent upon the death or disability of an individual or group of individuals", paragraph 40 states "a nominal mortality risk a risk of insignificant amount or of remote probability—is not sufficient to permit that a contract be accounted for as an insurance contract." There is no rule which determines

•	. ,		
Company	Plans Sold	Sales (Php)	% of Total Sales
Pacific Plans, Inc.	5,392	203,473,120	21
Philam Plans, Inc.	2,999	195,817,634	21
Prudential Plans, Inc.	4,882	127,033,600	13
Loyola Plans, Inc.	4,794	120,306,772	13
St. Peter Life Plans, Inc.	4,710	80,221,000	8
Top Five Companies	22,777	726,852,126	77
Total Life Sales	32,966	949,111,660	

#### Table 3: Top Companies by Sales Volume of Life Plans, Q1&2 2002

Table 4: Top Com	panies by Sales	Volume of Pension P	lans, Q1&2 2002
Company	Plans Sold	Sales (Php)	% of Total Sales
Philam Plans, Inc.	34,999	3,335,291,786	27
Prudentialife Plans, Inc.	21,348	1,842,625,385	15
Loyola Plans, Inc.	18,013	1,305,272,820	11
Comprehensive Annuity P	lans		
& Pension Corporation	24,970	1,256,741,301	10
TPG Corporation	11,887	785,853,477	6
Top Five Companies	111,217	8,525,784,769	70
Total Pension Sales	179,705	12,138,993,050	

whether a mortality risk is significant or not. It is a matter of judgement.

If the plan has significant mortality or morbidity, it should be accounted for under SFAS 60 or SFAS 97 limited pay. This treatment is standard and well defined. However, if the mortality risk is insignificant and SFAS 97 investment contract is appropriate, the methodology is less well defined. The balance of this paper describes approaches for reporting under SFAS 97—investment contract methodology.

### Interpreting SFAS 97— Investment Contracts

SFAS 97 paragraph 15 says that investment contracts should be "accounted for in a manner consistent with the accounting for interestbearing, or other financial instruments." Further guidance is available in Practice Bulletin 8 issued by the American Institute of Certified Public Accountants. Paragraph 7 states that the FASB 97 UL method for amortizing acquisition costs should be used if there are significant surrender charges or if the contracts yield significant revenues from sources other than the investment of contract holder funds. This approach is normally used where there is a clearly defined account value (for example, U.S. SPDA contracts).

Paragraph 7 also says that the alternative is to use an accounting method that recognizes acquisition and interest costs as expenses at a constant rate applied to net policy liabilities and that is consistent with the interest method under FASB Statement No. 91.

SFAS 91 was designed for non-refundable fees and costs associated with loans. The examples in Appendix B of the statement make it clear that the methodology is (1) to project future cash flows, (2) calculate the equivalent yield such that the present value of future cash flows equals the initial cash outflow, (3) use this interest rate to calculate the carrying amount at subsequent reporting dates and (4) set the unamortized net fees equal to the difference between the remaining principal and the carrying amount.

Applying this to long-duration contracts subject to SFAS 97–Investment Contracts leads to the following: (1) Project future cash flows, (2) calculate the equivalent yield such that the present value of future cash flows equals the initial cash outflow, (3) use this interest rate to calculate the net liability at subsequent reporting dates and (4) set the unamortized DAC equal to the difference between the benefit reserve and the net liability. The difficulty is in calculating the benefit reserve where there is no obvious account value.

### Example of a Pre-Need Contract

Table 5 in the appendix contains an example of a pre-need policy. Using an education plan, the appendix illustrates many of the concepts described above. The assumptions are set out in page 25.

The plan has a twenty-year duration and provides four years of education benefits and a maturity value. Premiums are payable for five years. Benefits are payable whether the policyholder is alive or dead. In addition, there is a benefit of the return of premiums upon death. There is a cash value which grades into 50 percent of premiums paid, but it is assumed that it is collected by only 30 percent of those who lapse through non-payment of premium.

The reserves are estimated and are based on Philippine statutory reserves. The mortality rates are from the 1973-78 Philippine Intercompany Table posted on the SOA Web site. (These are for illustration purposes only.)

The policy pricing on a statutory basis is shown in Table 6 on page 26. Net present values of the various cash flow items are calculated. The net present value of the additional death benefit is 1.5 percent of the net present value of the premiums and the net present value of the waiver of premium on death is 0.5 percent of the present value of premiums. In many examples of materiality under U.S. GAAP, a level below 5 percent tends to be considered insignificant. This suggests that the mortality benefit is not significant and that this should be treated as an investment policy. It could also be argued that the substance of this contract is to provide education and maturity benefits and that the death benefit is a minor selling point.

The internal rate of return is calculated in table 7 on page 28. If the earned interest rate were replaced with the break-even rate, the present value of gross profits in Table 6 would be zero. This internal rate of return is used in Table 8 on page 29 to calculate the net liability. This will provide the basis for the U.S. GAAP projections.

## Calculation of the Benefit Reserve and DAC

For other products under US GAAP, the benefit reserve and DAC are calculated relatively independently and the net liability is the difference between the two. For investment contracts, the net liability is calculated first and the DAC becomes the balancing item between the benefit reserve and net liability.

One approach is to apply the SFAS 91 methodology to the cash flows excluding deferrable expenses. Table 9 on page 28 shows the calculation of the internal rate of return for the cash flow excluding deferrable expenses. The resulting benefit reserve calculation appears in Table 10 on page 29. Given the amount of deferrable expenses, the resulting DAC starts at a reasonable level.

The U.S. GAAP income statement that would result is shown as table 11 on pages 26-27. It should be noted that the investment income is based on the GAAP net liability as opposed to the statutory reserves in Table 6. It should also be noted that the present value of gross profit is unchanged. The difference is the emergence of profits.

### Using a proxy account balance

An alternative approach is to calculate a proxy account balance for the benefit reserve. One method could be to look at the policy from the point of view of a policyholder who keeps the policy in force. This approach is shown in Appendix on Table 12 on page 36 and Table 13 on pages 32-33). The GAAP earnings are unchanged, but both benefit reserve and DAC are lower.

#### Using SFAS 60 / SFAS 97 Limited Pay

If it could be argued that there was a sufficient mortality benefit, the treatment would be as for a traditional plan. Appendix 3 (tables 14 and 15) shows how this approach would work. DAC would be written off over the premium paying period and, as the premiums are payable over a period less than the benefit period, an Unearned Revenue Reserve would be established. In this example, profits would emerge approximately in proportion to the in force and, although the total profits would be the same, would be higher in the early years.

### **Product Classification**

The pre-need business consists of education plans, pension plans and life plans. Our initial

The pre-need business consists of education plans, pension plans and life plans. Our initial review of current business suggests that there is minimal mortality benefit in the pension plans...



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review of current business suggests that there is minimal mortality benefit in the pension plans, a small mortality benefit in the education plans and significant mortality in the life plans. This suggests SFAS 97 investment contract treatment for the pension plans, SFAS 60 / SFAS 97 limited pay for the life plan and probably SFAS 97 investment contracts for the education plans.

In order to classify products appropriately, a study should be made of the amount of mortality/morbidity covered by each contract. In the example given, the present value of mortality benefits, including waiver of premium on death, was 2.0 percent of the present value of premiums. If waiver of premium on disability was added, this would change to 2.2 percent, still an insignificant amount. However, other at other ages or in different plans the level could be higher.

#### Summary and Conclusions

Reporting pre-need plans under US GAAP will require a careful review of the amount of mortality/morbidity benefit provided. For most education and pension plans, we believe that the mortality/morbidity benefit is minimal and that these contracts should be classified as investment contracts.

The treatment of investment contracts where there is no defined account balance is rare in the United States, however, the authoritative literature points to the equivalent yield method of SFAS 91, which, in turn, shows how to approach the calculation of the net liability.

The GAAP benefit reserve should be set equal to the account balance, if one is readily determinable, otherwise, the approach described above, where a second equivalent yield is used to obtain the benefit reserve is the suggested approach for these contracts.  $\Box$ 

### International Section Council Photos



Gathering in Boston to plan the future activities of the International Section are council members (left to right) Rejean Besner, Marc Slutzky, Randy Makin (newsletter editor), Shumei Kuo (2002-2003 section chairperson), Lisa Kuklinski-Ramirez (2001-2002 section chairperson), Carl Khor, Hubert Mueller (retiring council member) and Michael Enright.



Shumei Kuo, incoming International Section chairperson, presents a gift of appreciation to Lisa Kulinksi-Ramirez, retiring section chairperson.



Members of the International Section enjoying the ambience of the Old South Meeting House during the section reception in Boston.

Appendix

Table 5: Assumptions For Sample Education Plan

Male 35 Interest Rate VAT		12.0% 10.0%	Annual Prem Inflation Rate SEC Registra	ium ation Fee	8.0% 0.1%	Percentage d	claiming surren	11,500 payab der value in pre Other Taxes	ole emium paying p	oeriod	5 years 30.0% 0.75%
Cas Year Valı	sh ue E	Additional Death Benefit	Reserve	Commission	Lapses	Education Benefit	Maturity Beneftit	Fixed Expenses	% Premium Expenses	Death Benefit Expenses	Mortality per 1000
								1,200			
1 2,3(	00	11,500	5,750	65%	40%	ı	1	300	2.5%	500	2.26
2 6,9(	00	23,000	12,650	25%	25%	1	1	324	2.5%	540	2.33
3 13,8	800	34,500	21,275	5%	20%			350	2.5%	583	2.42
4 23,(	7 000	46,000	30,475	5%	10%	ı	ı	378	2.5%	630	2.54
5 28,	750 E	57,500	39,675	5%	5%	I		408	2.5%	680	2.68
6 28,	750 5	57,500	44,275	I	2%	I	I	441	2.5%	735	2.86
7 28,	750 5	57,500	50,025	1	2%	1	1	476	2.5%	793	3.05
8 28,	750 E	57,500	56,925	I	2%	1	1	514	2.5%	857	3.26
9 28,	750 E	57,500	64,400	ı	2%	,		555	2.5%	925	3.49
10 28,	750 5	57,500	73,600	1	2%			600	2.5%	1,000	3.76
11 28,	750 5	57,500	82,800	1	2%	1	1	648	2.5%	1,079	4.04
12 28,	750 E	57,500	94,300	1	2%	I		669	2.5%	1,166	4.35
13 28,	750 5	57,500	106,950	ı	2%	I	ı	755	2.5%	1,259	4.68
14 28,	750 5	57,500	121,900	T	2%	1	1	816	2.5%	1,360	5.03
15 28,	750 5	57,500	138,000	1	2%			881	2.5%	1,469	5.43
16 28,	750 5	57,500	128,800	I	%0	28,750	1	952	2.5%	1,586	5.87
17 28,	750 5	57,500	112,700	I	%0	34,500	1	1,028	2.5%	1,713	6.37
18 28,	750 5	57,500	88,550	I	%0	40,250	1	1,110	2.5%	1,850	6.94
19 28,	750 5	57,500	53,475	1	%0	46,000		1,199	2.5%	1,998	7.58
20 28,	750 E	57,500	I	I	%0	1	57,500	1,295	2.5%	2,158	8.30

Assumes premiums and expenses are at start of year

Surrender benefits and maturity benefits are at the end of the year

Education and death benefits are in the middle of the year

Mortality is 1973-78 Philipine Intercompany Table - (Source: SOA Web site)

Statutory Reserves are approximate

Table 6	b: Pricing Fo	or Sample E	ducation P	lan					
Year	In Force	In Force For Benefits	Total Premium Income	Investment Income	Total Income	Surrender Benefit Outgo	Additional Death Beneftit	Education Benefit Outgo	Maturity Benefit Outgo
1	1.0000	1.0000	11,500	117	11,617	276	26	-	-
2	0.5977	0.6000	6,874	897	7,771	309	32	-	-
3	0.4469	0.4500	5,139	1,166	6,305	370	37	-	-
4	0.3564	0.3600	4,099	1,302	5,401	246	42	-	-
5	0.3199	0.3240	3,679	1,527	5,206	460	49	-	-
6	0.3030	0.3078	-	1,446	1,446	174	50	-	-
7	0.2961	0.3016	-	1,583	1,583	170	52	-	-
8	0.2893	0.2956	-	1,753	1,753	166	54	-	-
9	0.2826	0.2897	-	1,957	1,957	162	57	-	-
10	0.2759	0.2839	-	2,171	2,171	159	60	-	-
11	0.2694	0.2782	-	2,433	2,433	155	63	-	-
12	0.2629	0.2727	-	2,683	2,683	151	66	-	-
13	0.2565	0.2672	-	2,996	2,996	147	69	-	-
14	0.2502	0.2619	-	3,332	3,332	144	72	-	-
15	0.2439	0.2566	-	3,723	3,723	140	76	-	-
16	0.2377	0.2515	-	3,711	3,711	-	80	7,230	-
17	0.2363	0.2515	-	3,347	3,347	-	87	8,677	-
18	0.2348	0.2515	-	2,774	2,774	-	94	10,123	-
19	0.2332	0.2515	-	1,958	1,958	-	102	11,569	-
20	0.2314	0.2515	-	1,571	1,571	-	110	-	14,461
	NPV @	12.0%	26,990			1,688	403	5,400	1,499
							1.5%		

Assumes premiums and expenses are at start of year

Surrender benefits and maturity benefits are at the end of the year

Education and death benefits are in the middle of the year

Gross Initial Expenses	Gross Renewal Expenses	Commission	Total Pre- Need VAT & Duties Payable	Other Taxes	Increase in Revenue	Total Expenses	Gross Profit	Premiums Waived on Death
1,200	589	7,475	1,162	86	3,450	14,263	(2,646)	-
-	366	1,719	694	52	2,243	5,414	2,357	26
-	286	257	519	39	1,967	3,474	2,831	36
-	238	205	414	31	2,215	3,390	2,011	41
-	223	184	372	28	2,338	3,653	1,552	47
-	134	-	-	-	1,143	1,502	(55)	-
-	142	-	-	-	1,433	1,797	(214)	-
-	150	-	-	-	1,703	2,073	(320)	-
-	158	-	-	-	1,792	2,169	(213)	-
-	167	-	-	-	2,194	2,579	(408)	-
-	176	-	-	-	2,099	2,492	(59)	-
-	185	-	-	-	2,621	3,024	(340)	-
-	195	-	-	-	2,809	3,220	(224)	-
-	206	-	-	-	3,276	3,698	(367)	-
-	217	-	-	-	3,423	3,857	(133)	-
-	228	-	-	-	(2,314)	5,225	(1,514)	-
-	245	-	-	-	(4,049)	4,960	(1,613)	-
-	264	-	-	-	(6,074)	4,406	(1,632)	-
-	283	-	-	-	(8,821)	3,132	(1,174)	-
-	304	-	-	-	(13,449)	1,426	145	-
1,200	2,237	9,477	2,726	202	-	-	2,157	124
							8.0%	0.5%

Table 7:	Calculate I	nternal Rat	e Of Return	٦				
Year	Total Premium Value	Surrender Benefit Outgo	Additional Death Benefit	Education Benefit Outgo	Maturity Benefit Outgo	Ongoing Expenses	Deferrable Expenses	Cash Flow
1	11,500	276	26	-	-	915	9,597	687
2	6,874	309	32	-	-	418	2,413	3,702
3	5,139	370	37	-	-	324	776	3,632
4	4,099	246	42	-	-	268	619	2,924
5	3,679	460	49	-	-	251	556	2,363
6	-	174	50	-	-	134	-	(358)
7	-	170	52	-	-	142	-	(364)
8	-	166	54	-	-	150	-	(370)
9	-	162	57	-	-	158	-	(377)
10	-	159	60	-	-	167	-	(385)
11	-	155	63	-	-	176	-	(393)
12	-	151	66	-	-	185	-	(402)
13	-	147	69	-	-	195	-	(412)
14	-	144	72	-	-	206	-	(422)
15	-	140	76	-	-	217	-	(433)
16	-	-	80	7,230	-	228	-	(7,539)
17	-	-	87	8,677	-	245	-	(9,009)
18	-	-	94	10,123	-	264	-	(10,480)
19	-	-	102	11,569	-	283	-	(11,953)
20	-	-	110	-	14,461	302	-	(14,875)

Internal Rate of Return

10.26%

Table 9:	Calculate In	ternal Rate C	of Return Exc	luding Defer	rable Exper	ises	
Year	Total Premium Value	Surrender Benefit Outgo	Additional Death Benefit	Education Benefit Outgo	Maturity Benefit Outgo	Ongoing Expenses	Cash Flow Excluding Deferrable Expenses
1	11 500	275	26			015	10.282
2	6 974	275	20	-	-	71J /10	6 115
2	5 139	370	37	-	-	324	4 408
4	4.099	246	42	-	-	268	3.543
5	3,679	460	49	-	-	251	2,919
6	-	174	50	-	-	134	(358)
7	-	170	52	-	-	142	(364)
8	-	166	54	-	-	150	(370)
9	-	162	57	-	-	158	(377)
10	-	159	60	-	-	167	(385)
11	-	155	63	-	-	176	(393)
12	-	151	66	-	-	185	(402)
13	-	147	69	-	-	195	(412)
14	-	144	72	-	-	206	(422)
15	-	140	76	-	-	217	(433)
16	-	-	80	7,230	-	228	(7,539)
17	-	-	87	8,677	-	245	(9,009)
18	-	-	94	10,123	-	264	(10,480)
19	-	-	102	11,569	-	283	(11,953)
20	-	-	110	-	14,461	304	(14,875)

Table 8:	Calculate	Net Liability	1						
Year	Total Premium Value	Surrender Benefit Outgo	Additional Death Benefit	Education Benefit Outgo	Maturity Benefit Outgo	Ongoing Expenses	Deferrable Expenses	Cash Flow	Net Liability
1	11,500	276	26	-	-	915	9,597	687	787
2	6,874	309	32	-	-	418	2,413	3,702	4,983
3	5,139	370	37	-	-	324	776	3,632	9,539
4	4,099	246	42	-	-	268	619	2,924	13,770
5	3,679	460	49	-	-	251	556	2,363	17,839
6	-	174	50	-	-	134	-	(358)	19,295
7	-	170	52	-	-	142	-	(364)	20,895
8	-	166	54	-	-	150	-	(370)	22,651
9	-	162	57	-	-	158	-	(377)	24,580
10	-	159	60	-	-	167	-	(385)	26,697
11	-	155	63	-	-	176	-	(393)	29,023
12	-	151	66	-	-	185	-	(402)	31,578
13	-	147	69	-	-	195	-	(412)	34,383
14	-	144	72	-	-	206	-	(422)	37,465
15	-	140	76	-	-	217	-	(433)	40,851
16	-	-	80	7,230	-	228	-	(7,539)	37,116
17	-	-	87	8,677	-	245	-	(9,009)	31,452
18	-	-	94	10,123	-	264	-	(10,480)	23,662
19	-	-	102	11,569	-	283	-	(11,953)	13,524
20	-	-	110	-	14,461	304	-	(14,875)	(0)

Internal Rate of Return

10.26%

Table 1	10: Calcula	ate Benefi	t Reserve	s and DAC	2					
							Cash Flow			
	Total	Surrender	Additional	Education	Maturity		excluding			
	Premium	Benefit	Death	Benefit	Benefit	Ongoing	Deferrable	Benfit	Net	
Year	Value	Outgo	Benefit	Outgo	Outgo	Expenses	Expenses	Reserve	Liability	DAC
1	11,500	276	26	-	-	915	10,283	10,791	787	10,005
2	6,874	309	32	-	-	418	6,115	17,735	4,983	12,752
3	5,139	370	37	-	-	324	4,408	23,226	9,539	13,687
4	4,099	246	42	-	-	268	3,543	28,069	13,770	14,299
5	3,679	460	49	-	-	251	2,919	32,501	17,839	14,662
6	-	174	50	-	-	134	(358)	33,698	19,295	14,403
7	-	170	52	-	-	142	(364)	34,946	20,895	14,052
8	-	166	54	-	-	150	(370)	36,248	22,651	13,597
9	-	162	57	-	-	158	(377)	37,605	24,580	13,025
10	-	159	60	-	-	167	(385)	39,018	26,697	12,321
11	-	155	63	-	-	176	(393)	40,491	29,023	11,468
12	-	151	66	-	-	185	(402)	42,025	31,578	10,448
13	-	147	69	-	-	195	(412)	43,623	34,383	9,240
14	-	144	72	-	-	206	(422)	45,287	37,465	7,821
15	-	140	76	-	-	217	(433)	47,019	40,851	6,167
16	-	-	80	7,230	-	228	(7,539)	41,556	37,116	4,440
17	-	-	87	8,677	-	245	(9,009)	34,325	31,452	2,873
18	-	-	94	10,123	-	264	(10,480)	25,240	23,662	1,578
19	-	-	102	11,569	-	283	(11,953)	14,209	13,524	685
20	-	-	110	-	14,461	304	(14,875)	(0)	(0)	(0)

Internal Rate of Return

4.81%

Table 1	I: US GAAP	Income Stater	nent				
Үеаг	Total Premium Income	Investment Income	Total Income	Surrender Benefit Outgo	Additional Death Benefit	Education Benefit Outgo	Maturity Benefit Outgo
1	11,500	117	11,617	276	26	-	-
2	6,874	578	7,452	309	32	-	-
3	5,139	1,081	6,220	370	37	-	-
4	4,099	1,528	5,627	246	42	-	-
5	3,679	1,994	5,673	460	49	-	-
6	-	2,122	2,122	174	50	-	-
7	-	2,295	2,295	170	52	-	-
8	-	2,486	2,86	166	54	-	-
9	-	2,696	2,696	162	57	-	-
10	-	2,926	2,926	159	60	-	-
11	-	3,179	3,179	155	63	-	-
12	-	3,457	3,457	151	66	-	-
13	-	3,762	3,762	147	69	-	-
14	-	4,097	4,097	144	72	-	-
15	-	4,465	4,465	140	76	-	-
16	-	4,449	4,449	-	80	7,230	-
17	-	3,914	3,914	-	87	8,677	-
18	-	3,147	3,147	-	94	10,123	-
19	-	2,125	2,125	-	102	11,569	-
20	-	1,580	1,580	-	110	-	14,461
NPV @	12.0%						

Initial	Renewal		VAT, duties and other	Increase	Increase	Total	Gross
Expenses	Expenses	Commission	Taxes	in Reserve	in DAC	Expenses	Profit
1,200	589	7,475	1,248	10,791	10,005	11,600	17
-	366	1,719	746	6,943	2,747	7,368	84
-	286	257	558	5,491	935	6,064	156
-	238	205	445	4,843	612	5,406	221
-	223	184	399	4,432	363	5,384	289
-	134	-	-	1,197	(260)	1,815	307
-	142	-	-	1,248	(351)	1,963	332
-	150	-	-	1,302	(455)	2,126	360
-	158	-	-	1,357	(572)	2,306	390
-	167	-	-	1,414	(704)	2,503	423
-	176	-	-	1,473	(853)	2,719	460
-	185	-	-	1,534	(1,020)	2,956	500
-	195	-	-	1,598	(1,208)	3,217	544
-	206	-	-	1,664	(1,418)	3,504	593
-	217	-	-	1,732	(1,654)	3,819	646
-	228	-	-	(5,463)	(1,727)	3,803	645
-	245	-	-	(7,231)	(1,567)	3,345	568
-	264	-	-	(9,085)	(1,295)	2,690	457
-	283	-	-	(11,031)	(893)	1,815	310
-	304	-	-	(14,209)	(685	1,351	229
							2,157

	Table 13: US GAAP Income Statement										
Year	Total Premium Income	Investment Income	Total Income	Surrender Benefit Outgo	Additional Death Benefit	Education Benefit Outgo	Maturity Benefit Outgo				
1	11,500	117	11,617	276	26	-	-				
2	6,874	578	7,452	309	32	-	-				
3	5,139	1,081	6,220	370	37	-	-				
4	4,099	1,528	5,627	246	42	-	-				
5	3,679	1,994	5,673	460	49	-	-				
6	-	2,122	2,122	174	50	-	-				
7	-	2,295	2,295	170	52	-	-				
8	-	2,486	2,486	166	54	-	-				
9	-	2,696	2,696	162	57	-	-				
10	-	2,926	2,926	159	60	-	-				
11	-	3,179	3,179	155	63	-	-				
12	-	3,457	3,457	151	66	-	-				
13	-	3,762	3,762	147	69	-	-				
14	-	4,097	4,097	144	72	-	-				
15	-	4,465	4,465	140	76	-	-				
16	-	4,449	4,449	-	80	7,230	-				
17	-	3,914	3,914	-	87	8,677	-				
18	-	3,147	3,147	-	94	10,123	-				
19	-	2,125	2,125	-	102	11,569	-				
20	-	1,580	1,580	-	110	-	14,461				
NPV @	12%										

#### Table 13: US GAAP Income Statement

			VAT, duties				
Initial	Renewal		and other	Increase	Increase	Total	Gross
Expenses	Expenses	Commission	Taxes	in Reserve	in DAC	Expenses	Profit
1,200	589	7,475	1,248	7,486	6,699	11,600	17
-	366	1,719	746	4,220	24	7,368	84
-	286	257	558	2,946	(1,610)	6,064	156
-	238	205	445	3,697	(533)	5,406	221
-	223	184	399	4,404	334	5,384	289
-	134	-	-	1,439	(17)	1,815	307
-	142	-	-	1,530	(69)	1,963	332
-	150	-	-	1,627	(130)	2,126	360
-	158	-	-	1,730	(199)	2,306	390
-	167	-	-	1,839	(279)	2,503	423
-	176	-	-	1,955	(371)	2,719	460
-	185	-	-	2,079	(476)	2,956	500
-	195	-	-	2,210	(595)	3,217	544
-	206	-	-	2,350	(732)	3,504	593
-	217	-	-	2,499	(887)	3,819	646
-	228	-	-	(3,963)	(227)	3,803	645
-	245	-	-	(5,806)	(143)	3,345	568
-	264	-	-	(7,805)	(15)	2,690	457
-	283	-	-	(9,975)	164	1,815	310
-	304	-	-	(14,461)	(937)	1,351	229
							2,157

Table 1	5: US GAAP	Income State	ment				
Year	Total Premium Income	Investment Income	Total Income	Surrender Benefit Outgo	Additional Death Benefit	Education Benefit Outgo	Maturity Benefit Outgo
1	11,500	117	11,617	276	26	-	-
2	6,874	544	7,418	309	32	-	-
3	5,139	1,032	6,172	370	37	-	-
4	4,099	1,476	5,575	246	42	-	-
5	3,679	1,951	5,629	460	49	-	-
6	-	2,096	2,096	174	50	-	-
7	-	2,250	2,250	170	52	-	-
8	-	2,423	2,423	166	54	-	-
9	-	2,618	2,618	162	57	-	-
10	-	2,836	2,836	159	60	-	-
11	-	3,080	3,080	155	63	-	-
12	-	3,354	3,354	151	66	-	-
13	-	3,660	3,660	147	69	-	-
14	-	4,003	4,003	144	72	-	-
15	-	4,388	4,338	140	76	-	-
16	-	4,396	4,396	-	80	7,230	-
17	-	3,890	3,890	-	87	8,677	-
18	-	3,147	3,147	-	94	10,123	-
19	-	2,139	2,139	-	102	11,569	-
20	-	1,592	1,592	-	110	-	14,461
NPV @	12.0%						

			VAT, duties				
Initial	Renewal		and other	Increase	Increase	Total	Gross
Expenses	Expenses	Commission	Taxes	in Reserve	in DAC	Expenses	Profit
4 9 9 9	500		4.0.40	4 975		11.000	0.05
1,200	589	7,475	1,248	4,975	4,467	11,322	295
-	366	1,719	746	3,554	(516)	7,242	176
-	286	257	558	3,068	(1,464)	6,040	132
-	238	205	445	3,048	(1,247)	5,470	105
-	223	184	399	2,981	(1,239)	5,535	94
-	134	-	-	1,293	0	1,652	445
-	142	-	-	1,452	0	1,816	434
-	150	-	-	1,629	0	1,999	424
-	158	-	-	1,826	0	2,203	415
-	167	-	-	2,046	0	2,431	405
-	176	-	-	2,292	0	2,685	395
-	185	-	-	2,566	0	2,968	386
-	195	-	-	2,872	0	3,284	376
-	206	-	-	3,214	0	3,636	367
-	217	-	-	3,596	0	4,030	358
-	228	-	-	(3,492)	0	4,047	349
-	245	-	-	(5,465)	0	3,544	347
-	264	-	-	(7,677)	0	2,803	344
-	283	-	-	(10,156)	0	1,797	342
-	304	-	-	(13,623)	0	1,252	339
							2,157

## Table 12: Calculate Policyholder's Internal Rate Of ReturnPolicy remains in force

Year	Total Premium Value	Education Benefit Outgo	Maturity Benefit Outgo	Cash Flow	Benefit Reserve	In Force At End	Benefit Reserve	DAC
1	11,500	-	-	11,500	12,477	0.6000	7,486	6,693
2	11,500	-	-	11,500	26,013	0.4500	11,706	6,708
3	11,500	-	-	11,500	40,700	0.3600	14,652	5,087
4	11,500	-	-	11,500	56,634	0.3240	18,349	4,544
5	11,500	-	-	11,500	73,921	0.3078	22,753	4,869
6	-	-	-	-	80,200	0.3016	24,192	4,849
7	-	-	-	-	87,012	0.2956	25,722	4,777
8	-	-	-	-	94,402	0.2897	27,348	4,645
9	-	-	-	-	102,421	0.2839	29,078	4,445
10	-	-	-	-	111,120	0.2782	30,917	4,165
11	-	-	-	-	120,559	0.2727	32,872	3,794
12	-	-	-	-	130,799	0.2672	34,951	3,319
13	-	-	-	-	141,909	0.2619	37,161	2,725
14	-	-	-	-	153,963	0.2566	39,511	1,997
15	-	-	-	-	167,040	0.2515	42,010	1,115
16	-	28,750	-	(28,750)	151,282	0.2515	38,047	894
17	-	34,500	-	(34,500)	128,197	0.2515	32,241	760
18	-	40,250	-	(40,250)	97,161	0.2515	24,436	754
19	-	46,000	-	(46,000)	57,500	0.2515	14,461	928
20	-	-	57,500	(57,500)	-	-	-	0

Internal Rate of Return

8.49%

#### Table 14: SFAS 60 Calculations

	Total	Surrender	Additional	Education	Maturity						Unearned	
	Premium	Benefit	Death	Benefit	Benefit	Deferrable	Ongoing	In	Benefit		Revenue	Maint.
Year	Income	Outgo	Benefit	Outgo	Outgo	Expenses	Expenses	Force	Reserve	DAC	Reserve	Reserve
1	11,500	276	26	-	-	9,597	915	1.00000	3,987	4,467	735	254
2	6,874	309	32	-	-	2,413	418	0.5977	6,686	3,950	1,262	581
3	5,139	370	37	-	-	776	324	0.4469	8,996	2,486	1,742	859
4	4,099	246	42	-	-	619	268	0.3564	11,315	1,239	2,212	1,118
5	3,679	460	49	-	-	556	251	0.3199	13,533	0	2,713	1,380
6	-	174	50	-	-	-	134	0.3030	14,930	0	2,594	1,395
7	-	170	52	-	-	-	142	0.2961	16,497	0	2,471	1,404
8	-	166	54	-	-	-	150	0.2893	18,252	0	2,343	1,405
9	-	162	57	-	-	-	158	0.2826	20,220	0	2,209	1,397
10	-	159	60	-	-	-	167	0.2759	22,425	0	2,070	1,378
11	-	155	63	-	-	-	176	0.2694	24,895	0	1,923	1,347
12	-	151	66	-	-	-	185	0.2629	27,661	0	1,768	1,301
13	-	147	69	-	-	-	195	0.2565	30,760	0	1,604	1,238
14	-	144	72	-	-	-	206	0.2502	34,231	0	1,429	1,156
15	-	140	76	-	-	-	217	0.2439	38,118	0	1,243	1,052
16	-	-	80	7,230	-	-	228	0.2377	34,955	0	1,043	932
17	-	-	87	8,677	-	-	245	0.2363	29,876	0	822	759
18	-	-	94	10,123	-	-	264	0.2348	22,649	0	576	554
19	-	-	102	11,569	-	-	283	0.2332	13,016	0	303	304
20	-	-	110	-	14,461	-	304	0.2314	0	0	(O)	0
NPV	26,990	1,688	403	5,400	1,499	13,163	2,680	3.522				
Bonofit	Not Promium		33.3%			NDV 5		2 3 4 7				
Deneliit	NGCI IGHIUH	1	00.070					2.347				
DAC Ne	t Premium		48.8%									
Mainter	ance Expens	se N P	9.9%									
Excess	Premium		17.1%									