

STAFF PAPER

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FASB | IASB Meeting

Project	Insurance Contracts		
Paper topic	Examples to illustrate the use of other comprehensive income (OCI) for presenting specified changes in the insurance liability		
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What is this paper about?

1. The examples in this paper complement the analysis in Agenda Paper 2B/82B, which asks the boards to consider the use of OCI to record changes in the insurance contract liability arising from changes in the discount rate.

Staff analysis

Example 1: 3 year policy with claim payments made over 15 years

2. The staff built an example to include a hypothetical asset portfolio to consider presenting the effects on the insurance liability of a change in the discount rate in OCI together with changes in assets that may be presented in OCI as well.
3. The analysis shown in this paper considers a hypothetical investment of an insurance premium in a portfolio of fixed income and equity securities. The periodic claim payments that arise as a result of the insurance coverage are funded by bond maturities, cash returns of the investments (for example, dividends and

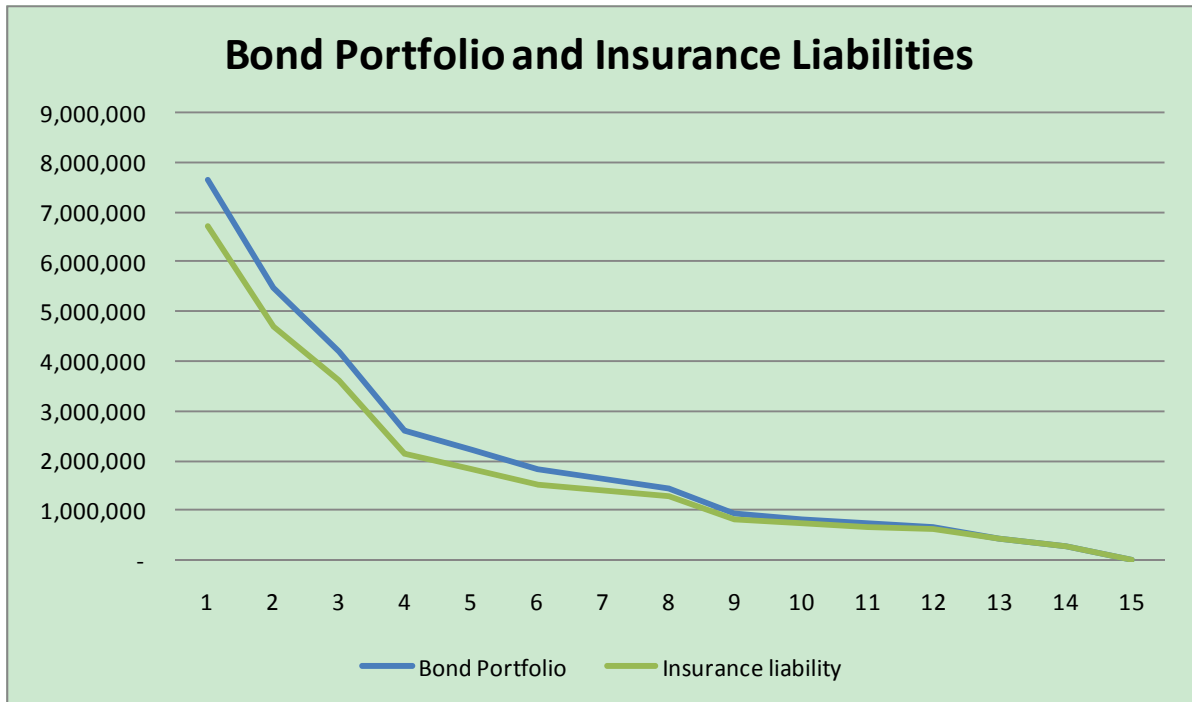
interest), and if necessary, proceeds from sales of the investments. The analysis has the following assumptions:

- (a) The premium received at the beginning of the contract is \$10M; the present value of the expected cash flows at that time is \$7.7M; and, the resulting single/residual margin is \$2.3M (assume there is no risk adjustment under IASB model in this example).
- (b) The insured period is 3 years, with claim liabilities paid over 15 years in varying amounts.
- (c) The single/residual margin is recognised straight-line over the payout period for simplicity.
- (d) There is no change in the expected cash flows other than those resulting from a change in the discount rate. The expected and actual cash outflows are as follows:

Year	Cash Outflow
1	1,500,000
2	2,500,000
3	1,500,000
4	1,500,000
5	500,000
6	500,000
7	300,000
8	200,000
9	500,000
10	100,000
11	100,000
12	100,000
13	200,000
14	200,000
15	300,000

- (e) 90 per cent of the \$10M premium is immediately invested in AA-rated corporate bonds with varying maturities between 1 and 15 years (purchased at par) to match the maturity of the bonds to the expected payout of the liability.
- (f) 10 per cent of the \$10M premium is immediately invested in the S&P 500 index.

- (g) No other assets exist to pay the claim liabilities.
 - (h) Claims that arise during a period are paid at the end of that period based on the availability of the following resources in order: 1) bond maturities (or sales if the fair value exceeds principal maturing in that period), 2) cash received from dividends or interest during the period, and 3) sales of equity securities (if available).
 - (i) Excess cash during a period that remains after fulfilling the entire liability for the period is not reinvested.
 - (j) Taxes are not considered in the analysis.
 - (k) The income statements for each of the scenarios included in the examples are simplified and therefore do not contemplate the full presentation of the income statement (that is, premiums and other expenses are not presented).
4. The evolution of prices for the equity securities is based on year-end prices of the S&P 500 index from 1996 through 2010. The evolution of prices for the hypothetical bond portfolio is based on the price returns of AA-rated corporate bond indices from 1996 through 2010. As held fixed income securities age in the analysis, price movements are developed based on the index that is relevant to the remaining maturity. Matching price returns of the hypothetical portfolio of fixed income securities to different AA-rated bond portfolios based on the remaining maturities of the bonds in the hypothetical portfolio allows the analysis to estimate the price of a the bonds within the portfolio through its entire life.
5. The following graph shows the fair value of the bond portfolio compared with the current value of the insurance liabilities that result from an initial investment in a hypothetical portfolio of fixed income securities with maturities that are matched to the expected payments on the insurance liabilities.



6. Fixed income securities that mature in a given period are assumed to be sold if the year-end fair value exceeds the principal amount to be collected upon maturity. Otherwise, par is assumed to be collected on the maturing securities. (Because the fair value at maturity approximates the par value, any resulting gains and losses from sales of the securities are insignificant to the analysis.)
7. The examples included in this Appendix are presented under four different scenarios, which are summarized as follows:

	Assets		Liabilities
	Bonds	Equities	Change in discount rate
Scenario 1	FV-OCI	FV-TPL	PL
Scenario 2	FV-OCI	FV-TPL	OCI
Scenario 3	FV-OCI	FV-OCI	OCI
Scenario 4	FV-TPL	FV-TPL	PL

8. Under all four scenarios, balance sheet totals (that is, total assets, total liabilities, and total stockholders' equity) are the same. The primary difference is within stockholders' equity. AOCI and retained earnings are different in each of the scenarios, but together, result in the same total stockholders' equity.

Unrealised gains and losses

9. The following chart shows the unrealized gains and losses on the hypothetical bond portfolio that would be presented in OCI compared to the unrealized gains and losses on the insurance liabilities that would be presented either in OCI or in net income, depending on the Scenario. For illustration purposes only, the staff assumed a yield curve for the discount rate for the period.

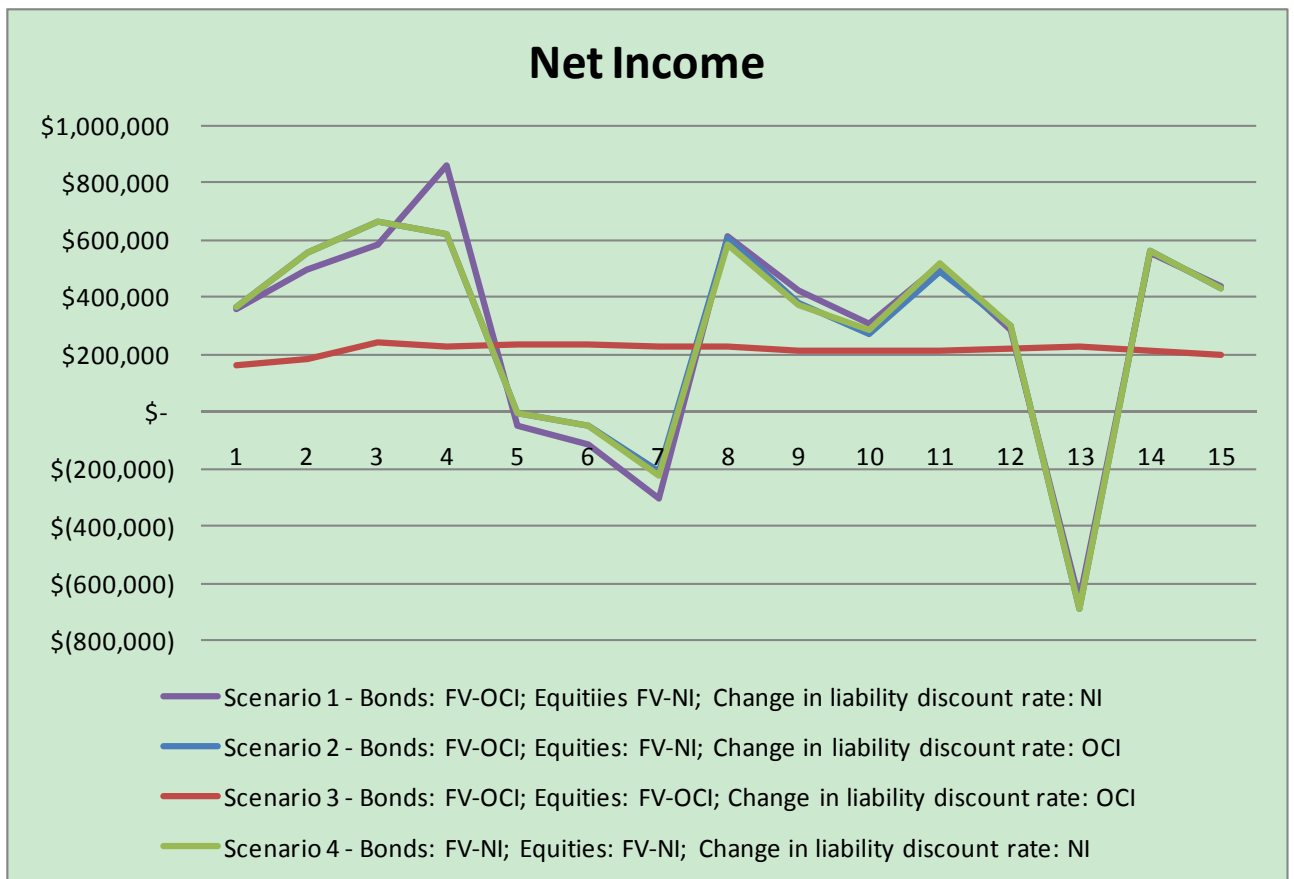
Year	Net Unrealized Gains (Losses)	
	Bonds	Effect of Discount Rate Change on Liability
1	\$ 9,990	\$ (9,990)
2	56,953	(56,951)
3	81,214	(81,213)
4	(237,677)	237,682
5	44,165	(44,158)
6	67,941	(67,941)
7	84,800	(99,451)
8	(28,692)	3,370
9	(52,520)	49,064
10	(24,740)	36,696
11	11,545	18,971
12	11,987	(11,028)
13	(27,355)	27,355
14	7,811	(7,826)
15	(5,422)	5,421

10. The staff primarily focused on the scenarios in which bonds are recorded at FV-OCI and equities are recorded at FV-TPL but for completeness the staff also have also illustrated presentation of the unrealized gains and losses on the equity securities in OCI instead of net income. As such, the chart below shows the unrealized gains and losses on the equity securities are as follows:

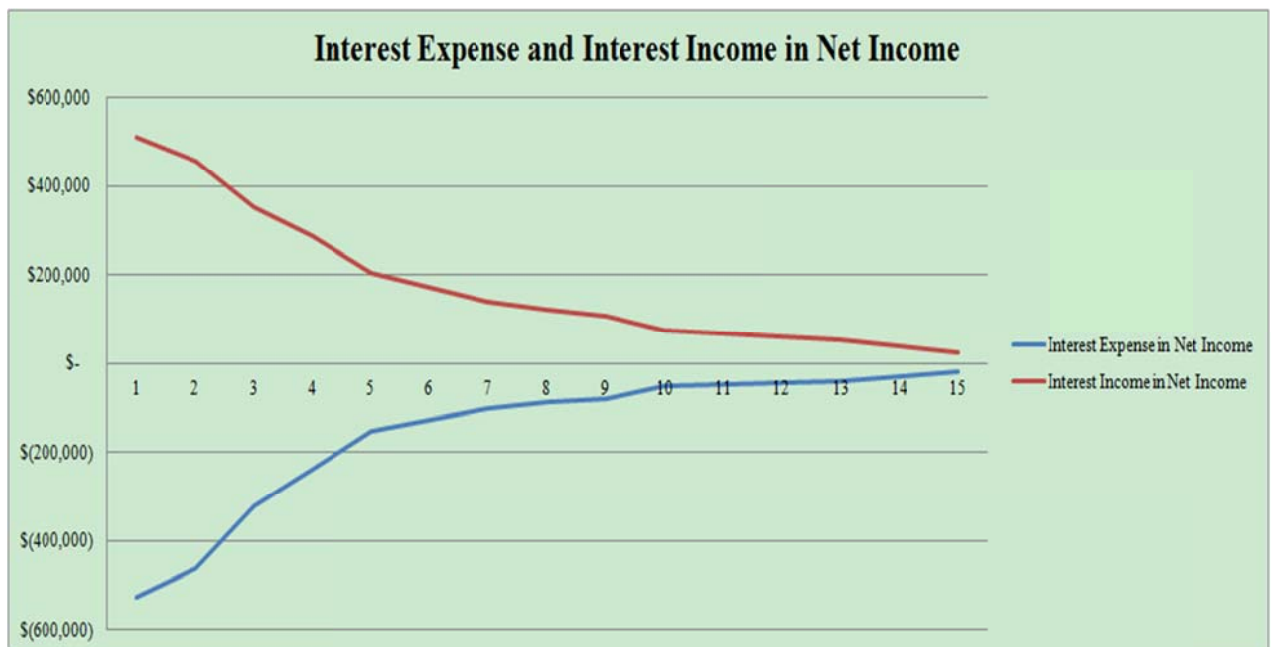
Net Unrealized Gains (Losses)	
Year	Equities
1	\$ 202,567
2	372,787
3	420,032
4	389,552
5	(241,778)
6	(279,464)
7	(435,402)
8	376,682
9	162,316
10	59,029
11	275,926
12	81,247
13	(917,174)
14	343,833
15	231,342

Net income under the four scenarios

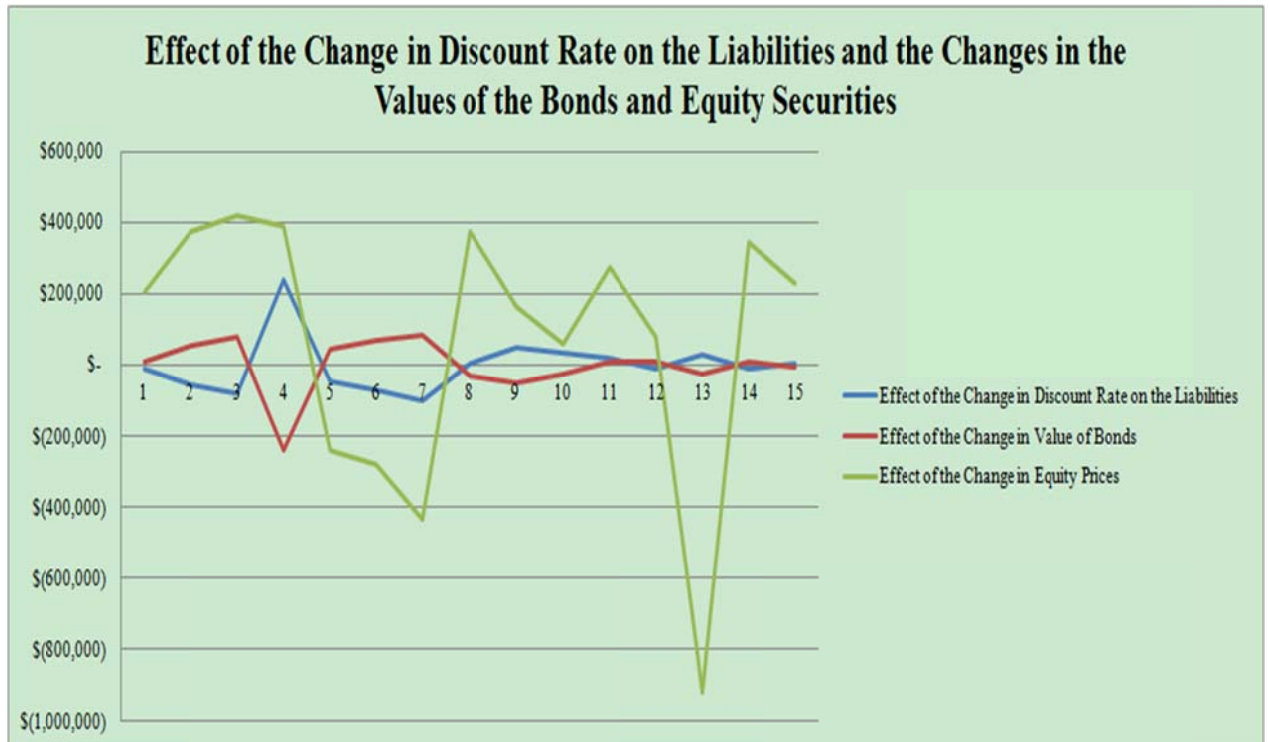
11. The following graph summarizes the effect on net income of each of the four scenarios:



12. In the graph above, it appears that Scenario 1 (including the movement in the liability as a result of a change in the discount rate in net income) and Scenario 2 (including the movement in the liability as a result of a change in the discount rate in other comprehensive income) would produce the same effect on net income.
13. However, the staff notes that Scenario 1 and Scenario 2 only appear to produce the same effect on net income because the unwind of the discount rate in interest expense almost perfectly offsets the interest income in net income. This is illustrated in the graph below:



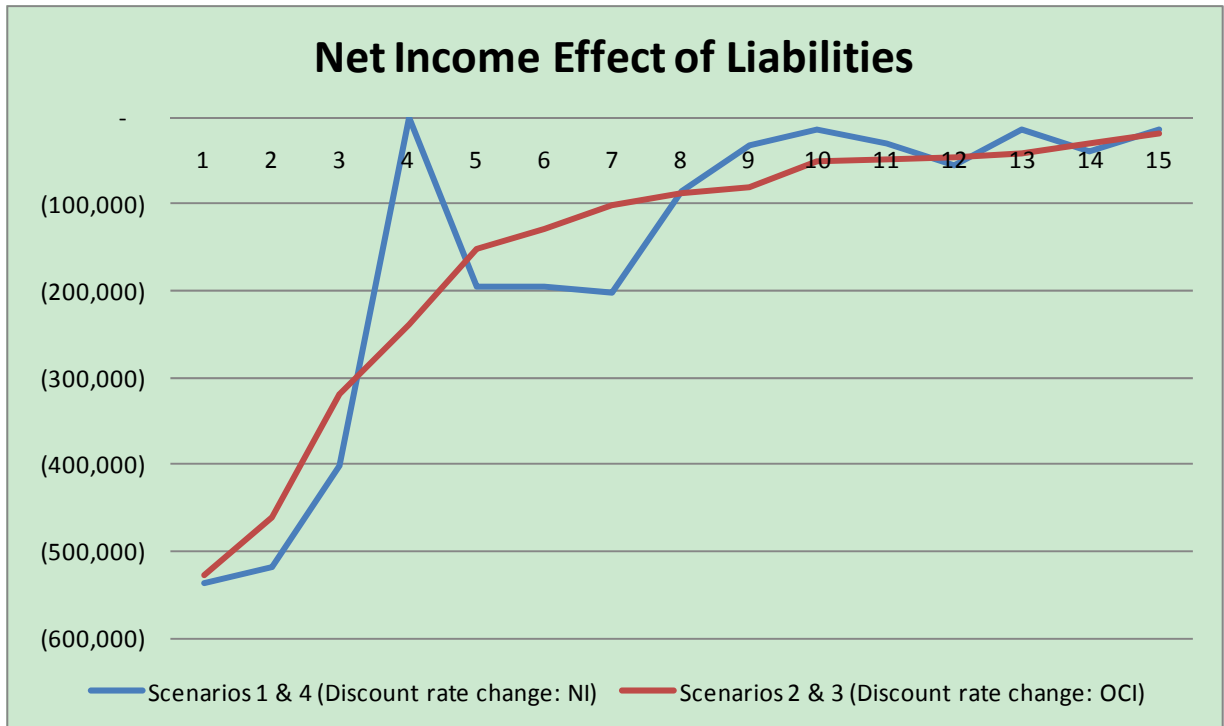
14. The graph below shows in more detail the effect that the change in the discount rate would have on the insurance liability, and the movement in the value of the bonds and equity securities. The graph below illustrates a reason for recording both the change in the insurance liability and the change in the value of the bonds in the same manner (i.e., recording both changes in other comprehensive income or both changes in net income), as the change in the insurance liability would offset the change in the value of the bonds.



15. As a reminder, for illustrative purposes only, the staff assumed a yield curve for the discount rate that almost perfectly aligns with the change in the value of the bond portfolio. Scenario 2 and Scenario 4 (their lines are almost exactly the same) both eliminate the accounting mismatch in this hypothetical example because the unrealized gains and losses for the bonds and the effect of the change in the discount rate of the liability are both reflected either in net income or in OCI. To the extent that economic mismatches exist (duration, rate, or otherwise), those effects would be highlighted regardless of whether the changes are reported in OCI or net income. The purpose of the illustration is to show how recording the movement in the discount rate and the movement in the bonds in the same place helps reduce the accounting mismatch.
16. Scenario 1 in the graph uses the same assumptions for assets as Scenario 2 (that is, bonds: FV-OCI and equities: FV-NI), but the effects on insurance liabilities resulting from changes in the discount rate are reflected in net income instead of in OCI. If bonds are measured at fair value with changes through OCI and equities are measured at fair value with changes through NI, there may be significant changes in net income from one period to the next regardless of whether the

effects on insurance liabilities of changes in the discount rate is presented in OCI or net income.

17. The following graph shows the effect on net income of the insurance liabilities only:



18. For reference, the detailed information for the above charts and graphs is included in the remaining pages of this paper for each of the four scenarios.

Scenario 1 - Bonds: FV-OCI; Equities: FV-NI; Change in liability discount rate: NI

Income Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Single margin	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010
Interest expense	(527,774)	(458,194)	(304,272)	(204,483)	(168,327)	(136,720)	(98,295)	(63,562)	(51,921)	(38,190)	(41,027)	(41,242)	(30,782)	(32,440)	(13,917)
Change in discount rate	(9,990)	(59,543)	(97,223)	203,167	(27,944)	(59,363)	(103,677)	(21,983)	19,724	22,478	10,867	(15,411)	16,259	(6,370)	-
Interest income	508,365	454,365	353,115	285,615	204,615	173,115	140,490	120,645	107,145	72,945	65,970	58,815	51,615	37,035	22,275
Dividend income	24,166	25,189	26,293	27,120	26,406	25,546	26,098	29,019	31,498	36,323	40,656	45,006	45,525	36,209	37,524
Realized gain (loss) - bonds	1,709	4,792	25,796	-	-	5,420	7,370	12,525	-	-	-	2,323	18,852	15,876	4,552
Unrealized gain (loss) - equities	202,567	372,787	420,032	389,552	(241,778)	(279,464)	(435,402)	376,682	162,316	59,029	275,926	81,247	(917,174)	343,833	231,342
Realized gain (loss) - equities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net income	\$ 355,053	\$ 495,405	\$ 579,752	\$ 856,982	\$ (51,017)	\$ (115,457)	\$ (307,406)	\$ 609,337	\$ 424,772	\$ 308,594	\$ 508,403	\$ 286,749	\$ (659,694)	\$ 550,154	\$ 437,786
OCI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Assets															
Bonds	9,990	59,801	84,089	(214,221)	37,795	56,247	83,872	(15,150)	(38,891)	(24,610)	3,782	12,474	(5,887)	13,842	-
Recycle - bonds	-	(2,849)	(2,875)	(23,456)	6,370	11,694	928	(13,542)	(13,629)	(130)	7,763	(487)	(21,467)	(6,032)	(5,422)
Total OCI	\$ 9,990	\$ 56,953	\$ 81,214	\$ (237,677)	\$ 44,165	\$ 67,941	\$ 84,800	\$ (28,692)	\$ (52,520)	\$ (24,740)	\$ 11,545	\$ 11,987	\$ (27,355)	\$ 7,811	\$ (5,422)
Changes in Equity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Beginning equity	\$ -	\$ 365,044	\$ 917,402	\$ 1,578,368	\$ 2,197,673	\$ 2,190,821	\$ 2,143,305	\$ 1,920,700	\$ 2,501,344	\$ 2,873,596	\$ 3,157,450	\$ 3,677,398	\$ 3,976,134	\$ 3,289,085	\$ 3,847,050
Net income	355,053	495,405	579,752	856,982	(51,017)	(115,457)	(307,406)	609,337	424,772	308,594	508,403	286,749	(659,694)	550,154	437,786
OCI	9,990	56,953	81,214	(237,677)	44,165	67,941	84,800	(28,692)	(52,520)	(24,740)	11,545	11,987	(27,355)	7,811	(5,422)
Ending equity	\$ 365,044	\$ 917,402	\$ 1,578,368	\$ 2,197,673	\$ 2,190,821	\$ 2,143,305	\$ 1,920,700	\$ 2,501,344	\$ 2,873,596	\$ 3,157,450	\$ 3,677,398	\$ 3,976,134	\$ 3,289,085	\$ 3,847,050	\$ 4,279,414
Balance Sheet	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Assets															
Cash	\$ 384,586	\$ 618,932	\$ 874,136	\$ 1,036,871	\$ 1,217,892	\$ 1,371,973	\$ 1,515,931	\$ 1,658,121	\$ 1,746,763	\$ 1,846,031	\$ 1,942,657	\$ 2,038,801	\$ 2,134,793	\$ 2,203,913	\$ 2,238,264
Investment in bonds	7,659,990	5,466,943	4,198,157	2,610,480	2,204,645	1,822,586	1,637,386	1,428,694	926,174	811,434	732,979	654,966	447,611	275,422	-
Investment in equities	1,202,221	1,575,008	1,995,040	2,384,593	2,142,814	1,863,350	1,427,948	1,804,630	1,966,946	2,025,975	2,301,901	2,383,148	1,465,975	1,809,807	2,041,150
Total assets	\$ 9,246,798	\$ 7,660,883	\$ 7,067,333	\$ 6,031,944	\$ 5,565,352	\$ 5,057,909	\$ 4,581,265	\$ 4,891,444	\$ 4,639,883	\$ 4,683,439	\$ 4,977,537	\$ 5,076,915	\$ 4,048,379	\$ 4,289,143	\$ 4,279,414
Liabilities															
Insurance ECFs	\$ 6,697,610	\$ 4,715,348	\$ 3,616,842	\$ 2,118,158	\$ 1,814,428	\$ 1,510,511	\$ 1,412,484	\$ 1,298,029	\$ 830,226	\$ 745,938	\$ 676,098	\$ 632,750	\$ 447,273	\$ 286,083	\$ -
CM remaining	2,184,143	2,028,133	1,872,123	1,716,113	1,560,102	1,404,092	1,248,082	1,092,072	936,061	780,051	624,041	468,031	312,020	156,010	-
Total liabilities	\$ 8,881,754	\$ 6,743,481	\$ 5,488,965	\$ 3,834,271	\$ 3,374,531	\$ 2,914,604	\$ 2,660,566	\$ 2,390,100	\$ 1,766,287	\$ 1,525,990	\$ 1,300,139	\$ 1,100,781	\$ 759,294	\$ 442,093	\$ -
Stockholders' equity															
AOCI	\$ 9,990	\$ 66,943	\$ 148,157	\$ (89,520)	\$ (45,355)	\$ 22,586	\$ 107,386	\$ 78,694	\$ 26,174	\$ 1,434	\$ 12,979	\$ 24,966	\$ (2,389)	\$ 5,422	\$ 0
Retained earnings	355,053	850,459	1,430,211	2,287,193	2,236,176	2,120,719	1,813,313	2,422,650	2,847,422	3,156,016	3,664,419	3,951,168	3,291,474	3,841,628	4,279,414
Total SE	\$ 365,044	\$ 917,402	\$ 1,578,368	\$ 2,197,673	\$ 2,190,821	\$ 2,143,305	\$ 1,920,700	\$ 2,501,344	\$ 2,873,596	\$ 3,157,450	\$ 3,677,398	\$ 3,976,134	\$ 3,289,085	\$ 3,847,050	\$ 4,279,414
Total Liabilities and SE	\$ 9,246,798	\$ 7,660,883	\$ 7,067,333	\$ 6,031,944	\$ 5,565,352	\$ 5,057,909	\$ 4,581,265	\$ 4,891,444	\$ 4,639,883	\$ 4,683,439	\$ 4,977,537	\$ 5,076,915	\$ 4,048,379	\$ 4,289,143	\$ 4,279,414

Scenario 2 - Bonds: FV-OCI; Equities: FV-NI; Change in liability discount rate: OCI

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Income Statement															
Single margin	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010
Interest expense	(527,774)	(458,194)	(304,272)	(204,483)	(168,327)	(136,720)	(98,295)	(63,562)	(51,921)	(38,190)	(41,027)	(41,242)	(30,782)	(32,440)	(13,917)
Recycle - liabilities	-	(2,592)	(16,010)	(34,514)	16,214	8,578	(4,226)	(25,353)	(29,339)	(14,219)	(8,103)	(4,383)	(11,096)	1,456	(5,421)
Interest income	508,365	454,365	353,115	285,615	204,615	173,115	140,490	120,645	107,145	72,945	65,970	58,815	51,615	37,035	22,275
Dividend income	24,166	25,189	26,293	27,120	26,406	25,546	26,098	29,019	31,498	36,323	40,656	45,006	45,525	36,209	37,524
Realized gain (loss) - bonds	1,709	4,792	25,796	-	-	5,420	7,370	12,525	-	-	-	2,323	18,852	15,876	4,552
Unrealized gain (loss) - equities	202,567	372,787	420,032	389,552	(241,778)	(279,464)	(435,402)	376,682	162,316	59,029	275,926	81,247	(917,174)	343,833	231,342
Realized gain (loss) - equities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net income	\$ 365,044	\$ 552,356	\$ 660,965	\$ 619,301	\$ (6,859)	\$ (47,516)	\$ (207,955)	\$ 605,967	\$ 375,708	\$ 271,898	\$ 489,433	\$ 297,777	\$ (687,049)	\$ 557,980	\$ 432,365
OCI															
Liabilities															
Change in discount rate	\$ (9,990)	\$ (59,543)	\$ (97,223)	\$ 203,167	\$ (27,944)	\$ (59,363)	\$ (103,677)	\$ (21,983)	\$ 19,724	\$ 22,478	\$ 10,867	\$ (15,411)	\$ 16,259	\$ (6,370)	\$ -
Recycle	-	2,592	16,010	34,514	(16,214)	(8,578)	4,226	25,353	29,339	14,219	8,103	4,383	11,096	(1,456)	5,421
Assets															
Bonds	9,990	59,801	84,089	(214,221)	37,795	56,247	83,872	(15,150)	(38,891)	(24,610)	3,782	12,474	(5,887)	13,842	-
Recycle - bonds	-	(2,849)	(2,875)	(23,456)	6,370	11,694	928	(13,542)	(13,629)	(130)	7,763	(487)	(21,467)	(6,032)	(5,422)
Total OCI	\$ 0	\$ 2	\$ 1	\$ 4	\$ 7	\$ 1	\$ (14,651)	\$ (25,323)	\$ (3,456)	\$ 11,956	\$ 30,516	\$ 959	\$ 1	\$ (15)	\$ (1)
Changes in Equity															
Beginning equity	\$ -	\$ 365,044	\$ 917,402	\$ 1,578,368	\$ 2,197,673	\$ 2,190,821	\$ 2,143,305	\$ 1,920,700	\$ 2,501,344	\$ 2,873,596	\$ 3,157,450	\$ 3,677,398	\$ 3,976,134	\$ 3,289,085	\$ 3,847,050
Net income	365,044	552,356	660,965	619,301	(6,859)	(47,516)	(207,955)	605,967	375,708	271,898	489,433	297,777	(687,049)	557,980	432,365
OCI	0	2	1	4	7	1	(14,651)	(25,323)	(3,456)	11,956	30,516	959	1	(15)	(1)
Ending equity	\$ 365,044	\$ 917,402	\$ 1,578,368	\$ 2,197,673	\$ 2,190,821	\$ 2,143,305	\$ 1,920,700	\$ 2,501,344	\$ 2,873,596	\$ 3,157,450	\$ 3,677,398	\$ 3,976,134	\$ 3,289,085	\$ 3,847,050	\$ 4,279,414
Balance Sheet															
Assets															
Cash	\$ 384,586	\$ 618,932	\$ 874,136	\$ 1,036,871	\$ 1,217,892	\$ 1,371,973	\$ 1,515,931	\$ 1,658,121	\$ 1,746,763	\$ 1,846,031	\$ 1,942,657	\$ 2,038,801	\$ 2,134,793	\$ 2,203,913	\$ 2,238,264
Investment in bonds	7,659,990	5,466,943	4,198,157	2,610,480	2,204,645	1,822,586	1,637,386	1,428,694	926,174	811,434	732,979	654,966	447,611	275,422	-
Investment in equities	1,202,221	1,575,008	1,995,040	2,384,593	2,142,814	1,863,350	1,427,948	1,804,630	1,966,946	2,025,975	2,301,901	2,383,148	1,465,975	1,809,807	2,041,150
Total assets	\$ 9,246,798	\$ 7,660,883	\$ 7,067,333	\$ 6,031,944	\$ 5,565,352	\$ 5,057,909	\$ 4,581,265	\$ 4,891,444	\$ 4,639,883	\$ 4,683,439	\$ 4,977,537	\$ 5,076,915	\$ 4,048,379	\$ 4,289,143	\$ 4,279,414
Liabilities															
Insurance ECFs	\$ 6,697,610	\$ 4,715,348	\$ 3,616,842	\$ 2,118,158	\$ 1,814,428	\$ 1,510,511	\$ 1,412,484	\$ 1,298,029	\$ 830,226	\$ 745,938	\$ 676,098	\$ 632,750	\$ 447,273	\$ 286,083	\$ -
CM remaining	2,184,143	2,028,133	1,872,123	1,716,113	1,560,102	1,404,092	1,248,082	1,092,072	936,061	780,051	624,041	468,031	312,020	156,010	-
Total liabilities	\$ 8,881,754	\$ 6,743,481	\$ 5,488,965	\$ 3,834,271	\$ 3,374,531	\$ 2,914,604	\$ 2,660,566	\$ 2,390,100	\$ 1,766,287	\$ 1,525,990	\$ 1,300,139	\$ 1,100,781	\$ 759,294	\$ 442,093	\$ -
Stockholders' equity															
AOCI	\$ 0	\$ 2	\$ 3	\$ 7	\$ 15	\$ 15	\$ (14,636)	\$ (39,959)	\$ (43,415)	\$ (31,459)	\$ (943)	\$ 16	\$ 16	\$ 1	\$ (0)
Retained earnings	365,044	917,400	1,578,365	2,197,666	2,190,807	2,143,290	1,935,335	2,541,303	2,917,011	3,188,909	3,678,342	3,976,118	3,289,069	3,847,049	4,279,414
Total SE	\$ 365,044	\$ 917,402	\$ 1,578,368	\$ 2,197,673	\$ 2,190,821	\$ 2,143,305	\$ 1,920,700	\$ 2,501,344	\$ 2,873,596	\$ 3,157,450	\$ 3,677,398	\$ 3,976,134	\$ 3,289,085	\$ 3,847,050	\$ 4,279,414
Total Liabilities and SE	\$ 9,246,798	\$ 7,660,883	\$ 7,067,333	\$ 6,031,944	\$ 5,565,352	\$ 5,057,909	\$ 4,581,265	\$ 4,891,444	\$ 4,639,883	\$ 4,683,439	\$ 4,977,537	\$ 5,076,915	\$ 4,048,379	\$ 4,289,143	\$ 4,279,414

Scenario 3 - Bonds: FV-OCI; Equities: FV-OCI; Change in liability discount rate: OCI

Income Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Single margin	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010
Interest expense	(527,774)	(458,194)	(304,272)	(204,483)	(168,327)	(136,720)	(98,295)	(63,562)	(51,921)	(38,190)	(41,027)	(41,242)	(30,782)	(32,440)	(13,917)
Recycle - liabilities	-	(2,592)	(16,010)	(34,514)	16,214	8,578	(4,226)	(25,353)	(29,339)	(14,219)	(8,103)	(4,383)	(11,096)	1,456	(5,421)
Interest income	508,365	454,365	353,115	285,615	204,615	173,115	140,490	120,645	107,145	72,945	65,970	58,815	51,615	37,035	22,275
Dividend income	24,166	25,189	26,293	27,120	26,406	25,546	26,098	29,019	31,498	36,323	40,656	45,006	45,525	36,209	37,524
Realized gain (loss) - bonds	1,709	4,792	25,796	-	-	5,420	7,370	12,525	-	-	-	2,323	18,852	15,876	4,552
Realized gain (loss) - equities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net income	\$ 162,477	\$ 179,570	\$ 240,933	\$ 229,748	\$ 234,919	\$ 231,948	\$ 227,447	\$ 229,285	\$ 213,392	\$ 212,869	\$ 213,507	\$ 216,529	\$ 230,124	\$ 214,147	\$ 201,023
OCI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Liabilities															
Change in discount rate	\$ (9,990)	\$ (59,543)	\$ (97,223)	\$ 203,167	\$ (27,944)	\$ (59,363)	\$ (103,677)	\$ (21,983)	\$ 19,724	\$ 22,478	\$ 10,867	\$ (15,411)	\$ 16,259	\$ (6,370)	\$ -
Recycle	-	2,592	16,010	34,514	(16,214)	(8,578)	4,226	25,353	29,339	14,219	8,103	4,383	11,096	(1,456)	5,421
Assets															
Bonds	9,990	59,801	84,089	(214,221)	37,795	56,247	83,872	(15,150)	(38,891)	(24,610)	3,782	12,474	(5,887)	13,842	-
Recycle - bonds	-	(2,849)	(2,875)	(23,456)	6,370	11,694	928	(13,542)	(13,629)	(130)	7,763	(487)	(21,467)	(6,032)	(5,422)
Equities	202,567	372,787	420,032	389,552	(241,778)	(279,464)	(435,402)	376,682	162,316	59,029	275,926	81,247	(917,174)	343,833	231,342
Recycle - equities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OCI	\$ 202,567	\$ 372,788	\$ 420,033	\$ 389,557	\$ (241,771)	\$ (279,464)	\$ (450,053)	\$ 351,359	\$ 158,660	\$ 70,985	\$ 306,442	\$ 82,206	\$ (917,173)	\$ 343,817	\$ 231,341
Changes in Equity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Beginning equity	\$ -	\$ 365,044	\$ 917,402	\$ 1,578,368	\$ 2,197,673	\$ 2,190,821	\$ 2,143,305	\$ 1,920,700	\$ 2,501,344	\$ 2,873,596	\$ 3,157,450	\$ 3,677,398	\$ 3,976,134	\$ 3,289,085	\$ 3,847,050
Net income	162,477	179,570	240,933	229,748	234,919	231,948	227,447	229,285	213,392	212,869	213,507	216,529	230,124	214,147	201,023
OCI	202,567	372,788	420,033	389,557	(241,771)	(279,464)	(450,053)	351,359	158,660	70,985	306,442	82,206	(917,173)	343,817	231,341
Ending equity	\$ 365,044	\$ 917,402	\$ 1,578,368	\$ 2,197,673	\$ 2,190,821	\$ 2,143,305	\$ 1,920,700	\$ 2,501,344	\$ 2,873,596	\$ 3,157,450	\$ 3,677,398	\$ 3,976,134	\$ 3,289,085	\$ 3,847,050	\$ 4,279,414
Balance Sheet	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Assets															
Cash	\$ 384,586	\$ 618,932	\$ 874,136	\$ 1,036,871	\$ 1,217,892	\$ 1,371,973	\$ 1,515,931	\$ 1,658,121	\$ 1,746,763	\$ 1,846,031	\$ 1,942,657	\$ 2,038,801	\$ 2,134,793	\$ 2,203,913	\$ 2,238,264
Investment in bonds	7,659,990	5,466,943	4,198,157	2,610,480	2,204,645	1,822,586	1,637,386	1,428,694	926,174	811,434	732,979	654,966	447,611	275,422	-
Investment in equities	1,202,221	1,575,008	1,995,040	2,384,593	2,142,814	1,863,350	1,427,948	1,804,630	1,966,946	2,025,975	2,301,901	2,383,148	1,465,975	1,809,807	2,041,150
Total assets	\$ 9,246,798	\$ 7,660,883	\$ 7,067,333	\$ 6,031,944	\$ 5,565,352	\$ 5,057,909	\$ 4,581,265	\$ 4,891,444	\$ 4,639,683	\$ 4,683,439	\$ 4,977,537	\$ 5,076,915	\$ 4,048,379	\$ 4,289,143	\$ 4,279,414
Liabilities															
Insurance ECFs	\$ 6,697,610	\$ 4,715,348	\$ 3,616,842	\$ 2,118,158	\$ 1,814,428	\$ 1,510,511	\$ 1,412,484	\$ 1,298,029	\$ 830,226	\$ 745,938	\$ 676,098	\$ 632,750	\$ 447,273	\$ 286,083	\$ -
CM remaining	2,184,143	2,028,133	1,872,123	1,716,113	1,560,102	1,404,092	1,248,082	1,092,072	936,061	780,051	624,041	468,031	312,020	156,010	-
Total liabilities	\$ 8,881,754	\$ 6,743,481	\$ 5,488,965	\$ 3,834,271	\$ 3,374,531	\$ 2,914,604	\$ 2,660,566	\$ 2,390,100	\$ 1,766,287	\$ 1,525,990	\$ 1,300,139	\$ 1,100,781	\$ 759,294	\$ 442,093	\$ -
Stockholders' equity															
AOCI	\$ 202,567	\$ 575,355	\$ 995,389	\$ 1,384,946	\$ 1,143,175	\$ 863,711	\$ 413,658	\$ 765,017	\$ 923,677	\$ 994,861	\$ 1,301,303	\$ 1,383,509	\$ 466,337	\$ 810,154	\$ 1,041,495
Retained earnings	162,477	342,047	582,979	812,728	1,047,647	1,279,595	1,507,042	1,736,327	1,949,719	2,162,588	2,376,095	2,592,625	2,822,749	3,036,896	3,237,919
Total SE	\$ 365,044	\$ 917,402	\$ 1,578,368	\$ 2,197,673	\$ 2,190,821	\$ 2,143,305	\$ 1,920,700	\$ 2,501,344	\$ 2,873,596	\$ 3,157,450	\$ 3,677,398	\$ 3,976,134	\$ 3,289,085	\$ 3,847,050	\$ 4,279,414
Total Liabilities and SE	\$ 9,246,798	\$ 7,660,883	\$ 7,067,333	\$ 6,031,944	\$ 5,565,352	\$ 5,057,909	\$ 4,581,265	\$ 4,891,444	\$ 4,639,683	\$ 4,683,439	\$ 4,977,537	\$ 5,076,915	\$ 4,048,379	\$ 4,289,143	\$ 4,279,414

Scenario 4 - Bonds: FV-NI; Equities: FV-NI; Change in liability discount rate: NI

Income Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Single margin	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010	\$ 156,010
Interest expense	(527,774)	(458,194)	(304,272)	(204,483)	(168,327)	(136,720)	(98,295)	(63,562)	(51,921)	(38,190)	(41,027)	(41,242)	(30,782)	(32,440)	(13,917)
Change in discount rate	(9,990)	(59,543)	(97,223)	203,167	(27,944)	(59,363)	(103,677)	(21,983)	19,724	22,478	10,867	(15,411)	16,259	(6,370)	-
Interest income	508,365	454,365	353,115	285,615	204,615	173,115	140,490	120,645	107,145	72,945	65,970	58,815	51,615	37,035	22,275
Dividend income	24,166	25,189	26,293	27,120	26,406	25,546	26,098	29,019	31,498	36,323	40,656	45,006	45,525	36,209	37,524
Realized gain (loss) - bonds	1,709	1,943	22,921	(23,456)	6,370	17,113	8,298	(1,017)	(13,629)	(130)	7,763	1,836	(2,615)	9,845	(870)
Realized gain (loss) - equities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unrealized gain (loss) - bonds	9,990	59,801	84,089	(214,221)	37,795	56,247	83,872	(15,150)	(38,891)	(24,610)	3,782	12,474	(5,887)	13,842	-
Unrealized gain (loss) - equities	202,567	372,787	420,032	389,552	(241,778)	(279,464)	(435,402)	376,682	162,316	59,029	275,926	81,247	(917,174)	343,833	231,342
Net income	\$ 365,044	\$ 552,358	\$ 660,966	\$ 619,305	\$ (6,852)	\$ (47,516)	\$ (222,606)	\$ 580,645	\$ 372,252	\$ 283,854	\$ 519,948	\$ 298,736	\$ (687,049)	\$ 557,964	\$ 432,364
Changes in Equity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Beginning equity	\$ -	\$ 365,044	\$ 917,402	\$ 1,578,368	\$ 2,197,673	\$ 2,190,821	\$ 2,143,305	\$ 1,920,700	\$ 2,501,344	\$ 2,873,596	\$ 3,157,450	\$ 3,677,398	\$ 3,976,134	\$ 3,289,085	\$ 3,847,050
Net income	365,044	552,358	660,966	619,305	(6,852)	(47,516)	(222,606)	580,645	372,252	283,854	519,948	298,736	(687,049)	557,964	432,364
Ending equity	\$ 365,044	\$ 917,402	\$ 1,578,368	\$ 2,197,673	\$ 2,190,821	\$ 2,143,305	\$ 1,920,700	\$ 2,501,344	\$ 2,873,596	\$ 3,157,450	\$ 3,677,398	\$ 3,976,134	\$ 3,289,085	\$ 3,847,050	\$ 4,279,414
Balance Sheet	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Assets															
Cash	\$ 384,586	\$ 618,932	\$ 874,136	\$ 1,036,871	\$ 1,217,892	\$ 1,371,973	\$ 1,515,931	\$ 1,658,121	\$ 1,746,763	\$ 1,846,031	\$ 1,942,657	\$ 2,038,801	\$ 2,134,793	\$ 2,203,913	\$ 2,238,264
Investment in bonds	7,659,990	5,466,943	4,198,157	2,610,480	2,204,645	1,622,586	1,637,386	1,428,694	926,174	811,434	732,979	654,966	447,611	275,422	-
Investment in equities	1,202,221	1,575,008	1,995,040	2,384,593	2,142,814	1,663,350	1,427,948	1,804,630	1,966,946	2,025,975	2,301,901	2,383,148	1,465,975	1,809,807	2,041,150
Total assets	\$ 9,246,798	\$ 7,660,883	\$ 7,067,333	\$ 6,031,944	\$ 5,565,352	\$ 5,057,909	\$ 4,581,265	\$ 4,891,444	\$ 4,639,883	\$ 4,683,439	\$ 4,977,537	\$ 5,076,915	\$ 4,048,379	\$ 4,289,143	\$ 4,279,414
Liabilities															
Insurance ECFs	\$ 6,697,610	\$ 4,715,348	\$ 3,616,842	\$ 2,118,158	\$ 1,814,428	\$ 1,510,511	\$ 1,412,484	\$ 1,298,029	\$ 830,226	\$ 745,938	\$ 676,098	\$ 632,750	\$ 447,273	\$ 286,083	\$ -
CM remaining	2,184,143	2,028,133	1,872,123	1,716,113	1,560,102	1,404,092	1,248,082	1,092,072	936,061	780,051	624,041	468,031	312,020	156,010	-
Total liabilities	\$ 8,881,754	\$ 6,743,481	\$ 5,488,965	\$ 3,834,271	\$ 3,374,531	\$ 2,914,604	\$ 2,660,566	\$ 2,390,100	\$ 1,766,287	\$ 1,525,990	\$ 1,300,139	\$ 1,100,781	\$ 759,294	\$ 442,093	\$ -
Stockholders' equity															
AOCI	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retained earnings	365,044	917,402	1,578,368	2,197,673	2,190,821	2,143,305	1,920,700	2,501,344	2,873,596	3,157,450	3,677,398	3,976,134	3,289,085	3,847,050	4,279,414
Total SE	\$ 365,044	\$ 917,402	\$ 1,578,368	\$ 2,197,673	\$ 2,190,821	\$ 2,143,305	\$ 1,920,700	\$ 2,501,344	\$ 2,873,596	\$ 3,157,450	\$ 3,677,398	\$ 3,976,134	\$ 3,289,085	\$ 3,847,050	\$ 4,279,414
Total Liabilities and SE	\$ 9,246,798	\$ 7,660,883	\$ 7,067,333	\$ 6,031,944	\$ 5,565,352	\$ 5,057,909	\$ 4,581,265	\$ 4,891,444	\$ 4,639,883	\$ 4,683,439	\$ 4,977,537	\$ 5,076,915	\$ 4,048,379	\$ 4,289,143	\$ 4,279,414

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Example 2: 15 year policy with lump sum payment at the end of the coverage period

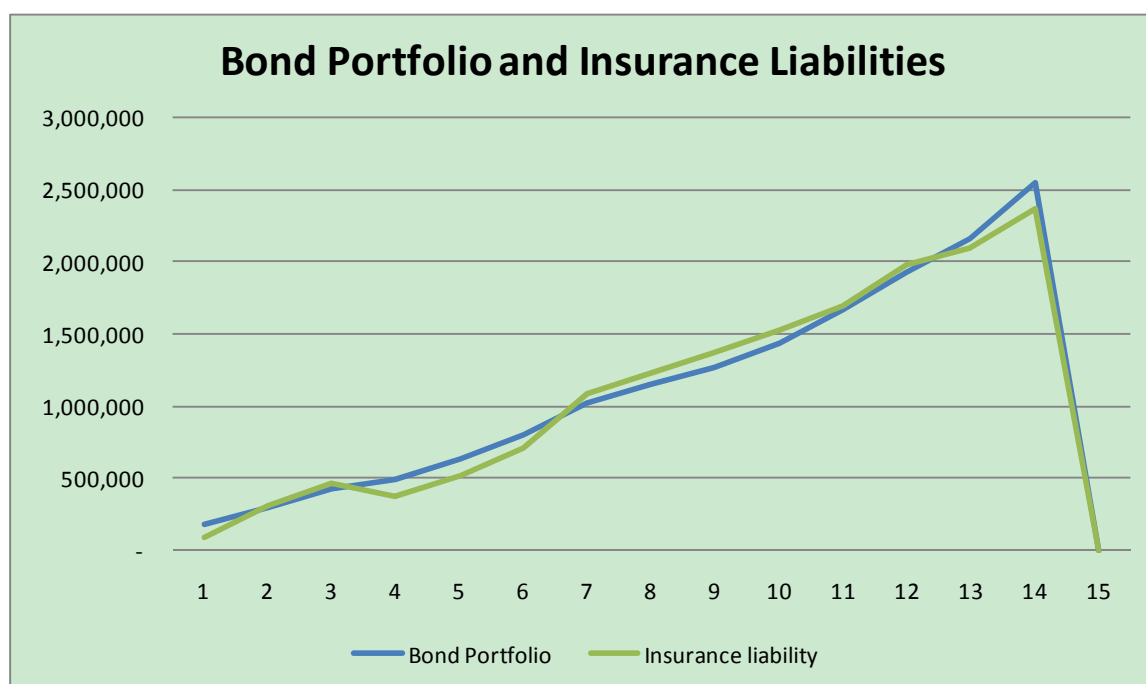
19. The remainder of this paper includes another example with a hypothetical asset portfolio, but has different cash flow assumptions than the example above. The same graphs and charts are provided for this example to illustrate the four scenarios for an insurance portfolio with a different payout pattern.
20. The analysis shown in this example considers a hypothetical investment of yearly insurance premium in a portfolio of fixed income and equity securities. . The analysis has the following assumptions:
- (a) Premiums of \$100,000 are received at the beginning of each year for 15 years. The insured period is 15 years, with claim liabilities of \$2.5M paid at the end of the 15th year.
 - (b) The single/residual margin is recognized straight-line over the payout period for simplicity (there is no risk adjustment under the IASB model).
 - (c) There is no change in the expected cash flows other than those resulting from a change in the discount rate. The expected and actual cash outflows are as follows:

Year	Cash Outflow
1	-
2	-
3	-
4	-
5	-
6	-
7	-
8	-
9	-
10	-
11	-
12	-
13	-
14	-
15	2,500,000

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- (d) 90 per cent of the premiums received are invested in AA-rated corporate bonds maturing at the end of 15 years to match the expected payout of the liability.
- (e) 10 per cent of the premiums are invested in the S&P 500 index.
- (f) No other assets exist to pay the claim liabilities.
- (g) Cash received from interest and dividends is reinvested 90% in bonds (with terms equal to the remaining payout period) and 10% in equities.
- (h) Taxes are not considered in the analysis.
- (i) The income statements for each of the scenarios included in the examples are simplified and therefore do not contemplate the full presentation of the income statement (that is, premiums and other expenses are not presented).

21. The following graph shows the fair value of the bond portfolio compared with the current value of the insurance liabilities that result from an investment in a hypothetical portfolio of fixed income securities with maturities that are matched to the expected payments on the insurance liabilities.



22. Fixed income securities that mature at the end of the 15-year period are assumed to be sold if the year-end fair value exceeds the principal amount to be collected upon maturity. Otherwise, par is assumed to be collected on the maturing securities. (Because the fair value at maturity approximates the par value, any resulting gains and losses from sales of the securities are insignificant to the analysis.)

Unrealised gains and losses

23. The following chart shows the unrealized gains and losses on the hypothetical bond portfolio that would be presented in OCI compared to the unrealized gains and losses on the insurance liabilities that would be presented either in OCI or in net income, depending on the Scenario. For illustration purposes only, the staff assumed a yield curve for the discount rate for the period.

Year	Net Unrealized Gains (Losses)	
	Bonds	Effect of Discount Rate Change on Liability
1	\$ 208	\$ (208)
2	8,464	(103,818)
3	11,877	(46,293)
4	(54,305)	212,293
5	10,747	(4,913)
6	20,727	(57,405)
7	58,894	(218,513)
8	(35,489)	21,489
9	(60,303)	33,797
10	(35,771)	37,889
11	11,336	39,102
12	30,147	(63,510)
13	(25,000)	125,117
14	114,072	(16,690)
15	(55,603)	41,662

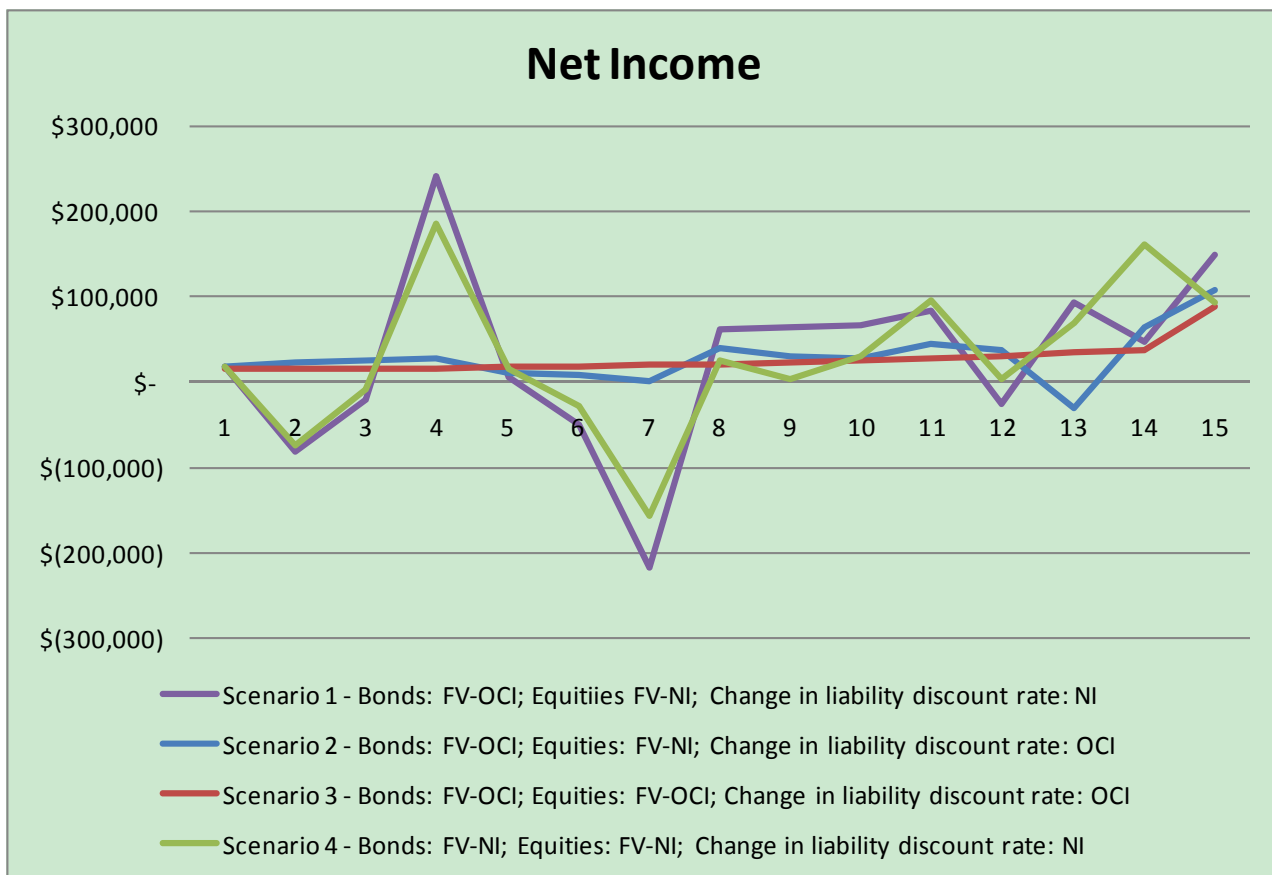
24. The staff primarily focused on the scenarios in which bonds are recorded at FV-OCI and equities are recorded at FV-TPL but for completeness the staff have also illustrated the presentation of unrealized gains and losses on equity securities in OCI instead of net income. As such, the chart below shows the unrealized gains and losses on the equity securities are as follows:

Net Unrealized Gains (Losses)	
Year	Equities
1	\$ 1,997
2	6,661
3	10,093
4	11,281
5	(7,895)
6	(10,331)
7	(18,242)
8	18,335
9	8,701
10	3,455
11	17,511
12	5,507
13	(65,553)
14	26,905
15	19,243

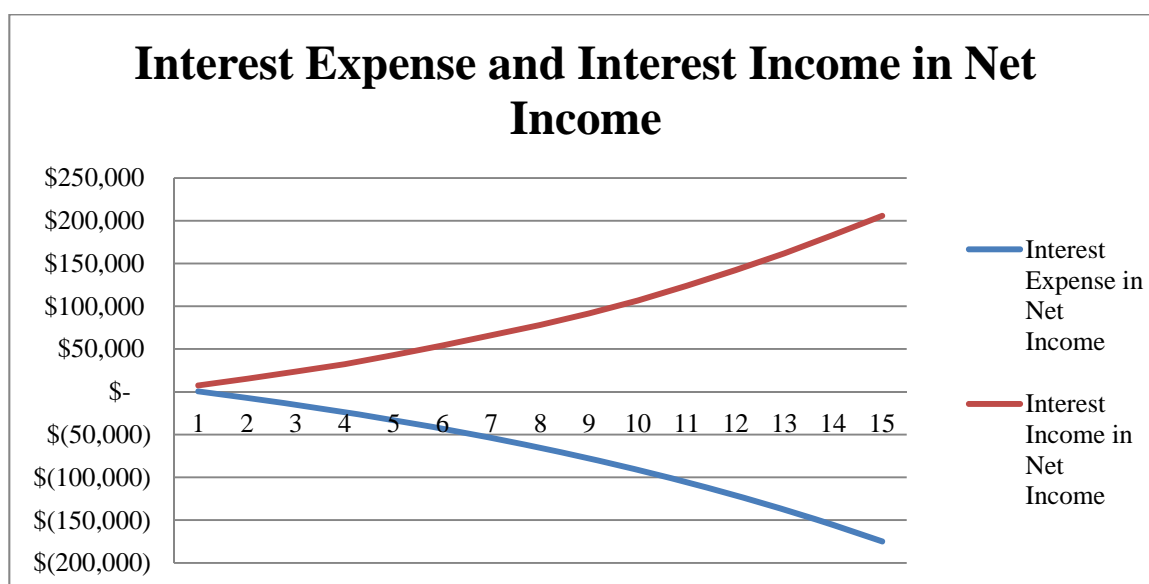
Net income under the four scenarios

25. The following graph summarizes the effect on net income of each of the four scenarios:

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26. The graph below shows that the unwind of the discount rate in interest expense almost perfectly offsets the interest income in net income.

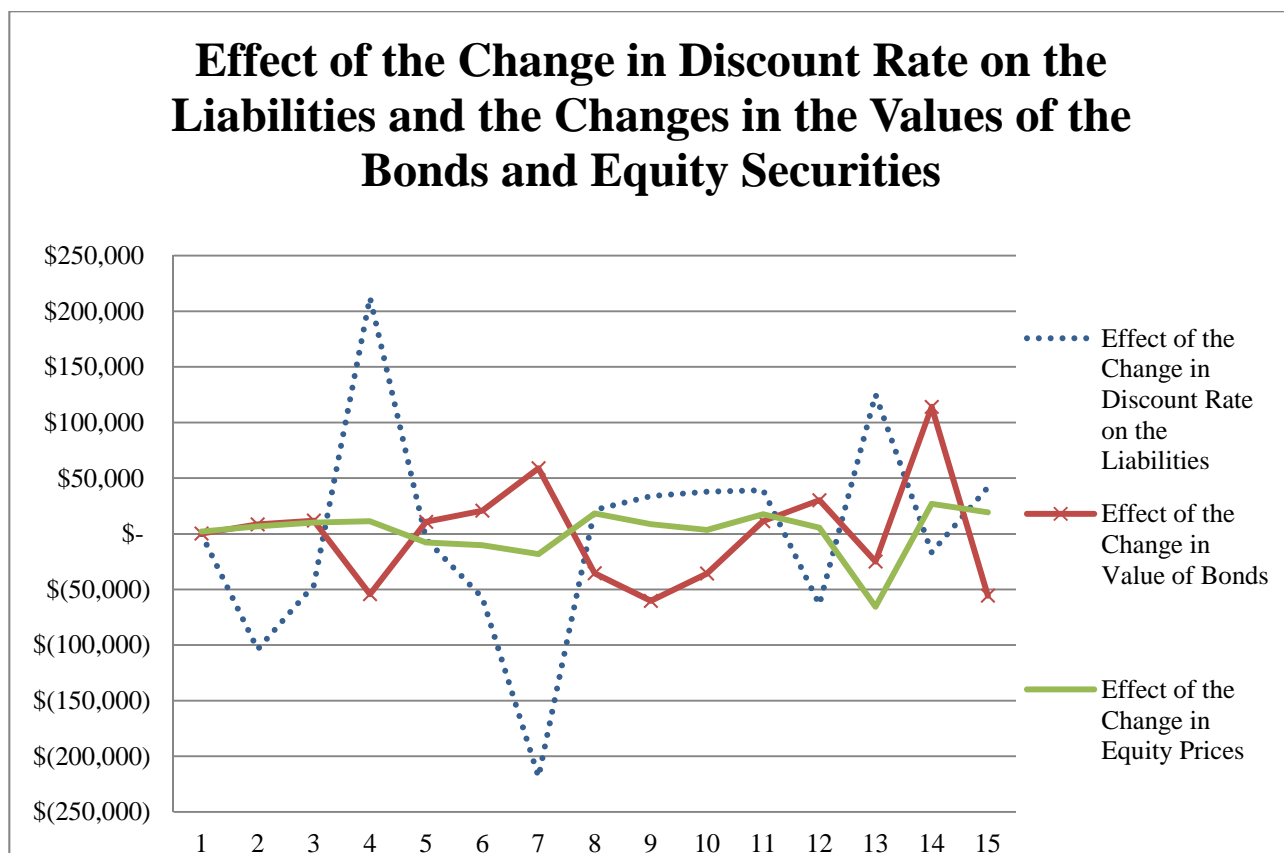


27. However, the graph below shows in more detail the effect that the change in the discount rate would have on the insurance liability and the movement in the value

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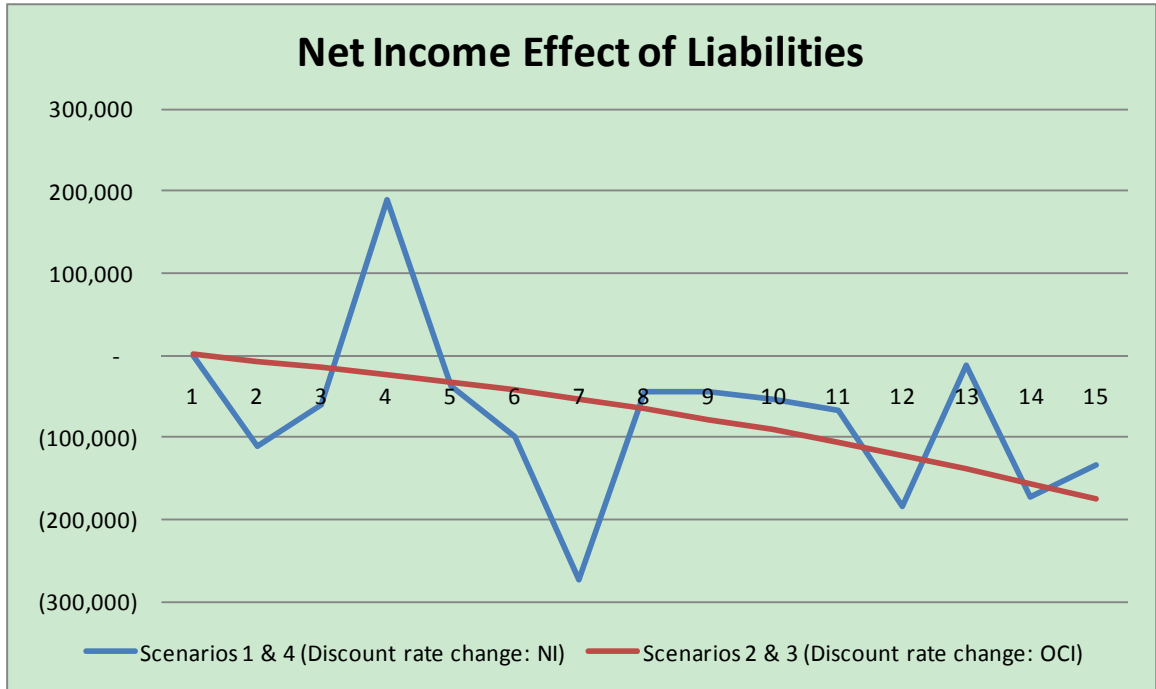
of the bonds and the equity securities. The graph below illustrates a reason for recording both the change in the insurance liability and the change in the value of the bonds in the same manner (i.e., recording both changes in other comprehensive income or both changes in net income), as the change in the insurance liability would offset the change in the value of the bonds to an extent.

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28. Scenario 1 in the graph uses the same assumptions for assets as Scenario 2 (that is, bonds: FV-OCI and equities: FV-NI), but the effects on insurance liabilities resulting from changes in the discount rate are reflected in net income instead of in OCI. If bonds are measured at fair value with changes through OCI and equities are measured at fair value with changes through NI, there may be significant changes in net income from one period to the next regardless of whether the effects on insurance liabilities of changes in the discount rate is presented in OCI or net income.
29. The following graph shows the effect on net income of the insurance liabilities only:

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30. For reference, the detail information for the above charts and graphs is included in the remaining pages of this paper for each of the four scenarios.

Scenario 1 - Bonds: FV-OCI; Equities: FV-NI; Change in liability discount rate: NI

Income Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Single margin	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041
Interest expense	423	(7,082)	(19,218)	(27,401)	(31,371)	(42,392)	(53,880)	(56,949)	(66,081)	(77,111)	(90,158)	(105,721)	(96,407)	(144,406)	(133,275)
Change in discount rate	(208)	(103,805)	(42,200)	215,907	(6,643)	(58,128)	(218,515)	12,977	21,968	23,703	23,571	(78,954)	83,718	(27,982)	-
Interest income	7,425	15,345	23,678	32,258	42,900	54,203	66,165	78,128	91,575	106,838	123,915	142,313	161,865	183,563	205,673
Dividend income	238	450	632	785	862	944	1,093	1,413	1,688	2,126	2,580	3,050	3,254	2,833	3,121
Realized gain (loss) - bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47,571
Unrealized gain (loss) - equities	1,997	6,661	10,093	11,281	(7,895)	(10,331)	(18,242)	18,335	8,701	3,455	17,511	5,507	(65,553)	26,905	19,243
Realized gain (loss) - equities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net income	\$ 16,917	\$ (81,389)	\$ (19,974)	\$ 239,871	\$ 4,895	\$ (48,663)	\$ (216,338)	\$ 60,944	\$ 64,892	\$ 66,053	\$ 84,460	\$ (26,765)	\$ 93,919	\$ 47,954	\$ 149,374
OCI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Assets															
Bonds	208	8,464	11,877	(54,305)	10,747	20,727	58,894	(35,489)	(60,303)	(35,771)	11,336	30,147	(25,000)	114,072	(55,603)
Recycle - bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OCI	\$ 208	\$ 8,464	\$ 11,877	\$ (54,305)	\$ 10,747	\$ 20,727	\$ 58,894	\$ (35,489)	\$ (60,303)	\$ (35,771)	\$ 11,336	\$ 30,147	\$ (25,000)	\$ 114,072	\$ (55,603)
Changes in Equity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Beginning equity	\$ -	\$ 17,125	\$ (55,801)	\$ (63,898)	\$ 121,668	\$ 137,309	\$ 109,373	\$ (48,071)	\$ (22,616)	\$ (18,026)	\$ 12,255	\$ 108,051	\$ 111,434	\$ 180,352	\$ 342,378
Net income	16,917	(81,389)	(19,974)	239,871	4,895	(48,663)	(216,338)	60,944	64,892	66,053	84,460	(26,765)	93,919	47,954	149,374
OCI	208	8,464	11,877	(54,305)	10,747	20,727	58,894	(35,489)	(60,303)	(35,771)	11,336	30,147	(25,000)	114,072	(55,603)
Ending equity	\$ 17,125	\$ (55,801)	\$ (63,898)	\$ 121,668	\$ 137,309	\$ 109,373	\$ (48,071)	\$ (22,616)	\$ (18,026)	\$ 12,255	\$ 108,051	\$ 111,434	\$ 180,352	\$ 342,378	\$ 436,149
Balance Sheet	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Assets															
Cash	\$ 1,957	\$ 2,219	\$ 3,418	\$ 5,056	\$ 6,553	\$ 7,149	\$ 8,716	\$ 10,088	\$ 11,588	\$ 12,563	\$ 14,141	\$ 18,065	\$ 18,450	\$ 22,544	\$ 266,368
Investment in bonds	186,429	300,722	425,876	494,160	637,930	804,022	1,018,930	1,152,714	1,274,479	1,436,710	1,663,035	1,925,811	2,155,609	2,543,062	-
Investment in equities	21,481	37,847	57,774	77,870	79,217	78,070	69,506	96,736	115,132	128,574	156,013	170,330	114,713	150,539	169,781
Total assets	\$ 209,868	\$ 340,788	\$ 487,068	\$ 577,086	\$ 723,700	\$ 889,242	\$ 1,097,152	\$ 1,259,538	\$ 1,401,200	\$ 1,577,847	\$ 1,833,189	\$ 2,114,206	\$ 2,288,771	\$ 2,716,144	\$ 436,149
Liabilities															
Insurance ECFs	\$ 94,163	\$ 305,050	\$ 466,468	\$ 377,962	\$ 515,976	\$ 716,496	\$ 1,088,892	\$ 1,232,864	\$ 1,376,977	\$ 1,530,384	\$ 1,696,972	\$ 1,981,648	\$ 2,094,337	\$ 2,366,725	\$ -
CM remaining	98,580	91,539	84,497	77,456	70,415	63,373	56,332	49,290	42,249	35,207	28,166	21,124	14,083	7,041	-
Total liabilities	\$ 192,743	\$ 396,589	\$ 550,965	\$ 455,418	\$ 586,391	\$ 779,869	\$ 1,145,223	\$ 1,282,154	\$ 1,419,226	\$ 1,565,592	\$ 1,725,138	\$ 2,002,772	\$ 2,108,420	\$ 2,373,766	\$ -
Stockholders' equity															
AOCI	\$ 208	\$ 8,671	\$ 20,549	\$ (33,757)	\$ (23,010)	\$ (2,283)	\$ 56,611	\$ 21,122	\$ (39,181)	\$ (74,952)	\$ (63,616)	\$ (33,469)	\$ (58,469)	\$ 55,603	\$ -
Retained earnings	16,917	(64,472)	(84,447)	155,424	160,319	111,656	(104,682)	(43,738)	21,155	87,208	171,667	144,902	238,821	286,775	436,149
Total SE	\$ 17,125	\$ (55,801)	\$ (63,898)	\$ 121,668	\$ 137,309	\$ 109,373	\$ (48,071)	\$ (22,616)	\$ (18,026)	\$ 12,255	\$ 108,051	\$ 111,434	\$ 180,352	\$ 342,378	\$ 436,149
Total Liabilities and SE	\$ 209,868	\$ 340,788	\$ 487,068	\$ 577,086	\$ 723,700	\$ 889,242	\$ 1,097,152	\$ 1,259,538	\$ 1,401,200	\$ 1,577,847	\$ 1,833,189	\$ 2,114,206	\$ 2,288,771	\$ 2,716,144	\$ 436,149

Scenario 2 - Bonds: FV-OCI; Equities: FV-NI; Change in liability discount rate: OCI

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Income Statement															
Single margin	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041
Interest expense	423	(7,082)	(19,218)	(27,401)	(31,371)	(42,392)	(53,880)	(56,949)	(66,061)	(77,111)	(90,158)	(105,721)	(96,407)	(144,406)	(133,275)
Recycle - liabilities	-	13	4,093	3,614	(1,730)	(724)	(3)	(8,512)	(11,829)	(14,186)	(15,531)	(15,444)	(41,399)	(11,293)	(41,662)
Interest income	7,425	15,345	23,678	32,258	42,900	54,203	66,165	78,128	91,575	106,838	123,915	142,313	161,865	183,563	205,673
Dividend income	238	450	632	785	862	944	1,093	1,413	1,688	2,126	2,580	3,050	3,254	2,833	3,121
Realized gain (loss) - bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47,571
Unrealized gain (loss) - equities	1,997	6,661	10,093	11,281	(7,895)	(10,331)	(18,242)	18,335	8,701	3,455	17,511	5,507	(65,553)	26,905	19,243
Realized gain (loss) - equities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net income	\$ 17,125	\$ 22,428	\$ 26,319	\$ 27,578	\$ 9,808	\$ 8,742	\$ 2,174	\$ 39,455	\$ 31,095	\$ 28,164	\$ 45,358	\$ 36,745	\$ (31,198)	\$ 64,644	\$ 107,712
OCI															
Liabilities															
Change in discount rate	\$ (208)	\$ (103,805)	\$ (42,200)	\$ 215,907	\$ (6,643)	\$ (58,128)	\$ (218,515)	\$ 12,977	\$ 21,968	\$ 23,703	\$ 23,571	\$ (78,954)	\$ 83,718	\$ (27,982)	\$ -
Recycle	-	(13)	(4,093)	(3,614)	1,730	724	3	8,512	11,829	14,186	15,531	15,444	41,399	11,293	41,662
Assets															
Bonds	208	8,464	11,877	(54,305)	10,747	20,727	58,894	(35,489)	(60,303)	(35,771)	11,336	30,147	(25,000)	114,072	(55,603)
Recycle - bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OCI	\$ (0)	\$ (95,354)	\$ (34,416)	\$ 157,987	\$ 5,834	\$ (36,678)	\$ (159,618)	\$ (14,000)	\$ (26,506)	\$ 2,118	\$ 50,438	\$ (33,363)	\$ 100,116	\$ 97,382	\$ (13,941)
Changes in Equity															
Beginning equity	\$ -	\$ 17,125	\$ (55,801)	\$ (63,898)	\$ 121,668	\$ 137,309	\$ 109,373	\$ (48,071)	\$ (22,616)	\$ (18,026)	\$ 12,255	\$ 108,051	\$ 111,434	\$ 180,352	\$ 342,378
Net income	17,125	22,428	26,319	27,578	9,808	8,742	2,174	39,455	31,095	28,164	45,358	36,745	(31,198)	64,644	107,712
OCI	(0)	(95,354)	(34,416)	157,987	5,834	(36,678)	(159,618)	(14,000)	(26,506)	2,118	50,438	(33,363)	100,116	97,382	(13,941)
Ending equity	\$ 17,125	\$ (55,801)	\$ (63,898)	\$ 121,668	\$ 137,309	\$ 109,373	\$ (48,071)	\$ (22,616)	\$ (18,026)	\$ 12,255	\$ 108,051	\$ 111,434	\$ 180,352	\$ 342,378	\$ 436,149
Balance Sheet															
Assets															
Cash	\$ 1,957	\$ 2,219	\$ 3,418	\$ 5,056	\$ 6,553	\$ 7,149	\$ 8,716	\$ 10,088	\$ 11,588	\$ 12,563	\$ 14,141	\$ 18,065	\$ 18,450	\$ 22,544	\$ 266,368
Investment in bonds	186,429	300,722	425,876	494,160	637,930	804,022	1,018,930	1,152,714	1,274,479	1,436,710	1,663,035	1,925,811	2,155,609	2,543,062	-
Investment in equities	21,481	37,847	57,774	77,870	79,217	78,070	69,506	96,736	115,132	128,574	156,013	170,330	114,713	150,539	169,781
Total assets	\$ 209,868	\$ 340,788	\$ 487,068	\$ 577,086	\$ 723,700	\$ 889,242	\$ 1,097,152	\$ 1,259,538	\$ 1,401,200	\$ 1,577,847	\$ 1,833,189	\$ 2,114,206	\$ 2,288,771	\$ 2,716,144	\$ 436,149
Liabilities															
Insurance ECFs	\$ 94,163	\$ 305,050	\$ 466,468	\$ 377,962	\$ 515,976	\$ 716,496	\$ 1,088,892	\$ 1,232,864	\$ 1,376,977	\$ 1,530,384	\$ 1,696,972	\$ 1,981,648	\$ 2,094,337	\$ 2,366,725	\$ -
CM remaining	98,580	91,539	84,497	77,456	70,415	63,373	56,332	49,290	42,249	35,207	28,166	21,124	14,083	7,041	-
Total liabilities	\$ 192,743	\$ 396,589	\$ 550,965	\$ 455,418	\$ 586,391	\$ 779,869	\$ 1,145,223	\$ 1,282,154	\$ 1,419,226	\$ 1,565,592	\$ 1,725,138	\$ 2,002,772	\$ 2,108,420	\$ 2,373,766	\$ -
Stockholders' equity															
AOCI	\$ (0)	\$ (95,354)	\$ (129,770)	\$ 28,217	\$ 34,051	\$ (2,627)	\$ (162,245)	\$ (176,245)	\$ (202,751)	\$ (200,633)	\$ (150,196)	\$ (183,558)	\$ (83,442)	\$ 13,941	\$ -
Retained earnings	17,125	39,553	65,872	93,450	103,258	112,000	114,174	153,629	184,725	212,888	258,247	294,992	263,793	328,437	436,149
Total SE	\$ 17,125	\$ (55,801)	\$ (63,898)	\$ 121,668	\$ 137,309	\$ 109,373	\$ (48,071)	\$ (22,616)	\$ (18,026)	\$ 12,255	\$ 108,051	\$ 111,434	\$ 180,352	\$ 342,378	\$ 436,149
Total Liabilities and SE	\$ 209,868	\$ 340,788	\$ 487,068	\$ 577,086	\$ 723,700	\$ 889,242	\$ 1,097,152	\$ 1,259,538	\$ 1,401,200	\$ 1,577,847	\$ 1,833,189	\$ 2,114,206	\$ 2,288,771	\$ 2,716,144	\$ 436,149

Scenario 3 - Bonds: FV-OCI; Equities: FV-OCI; Change in liability discount rate: OCI

Income Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Single margin	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041
Interest expense	423	(7,082)	(19,218)	(27,401)	(31,371)	(42,392)	(53,880)	(56,949)	(66,081)	(77,111)	(90,158)	(105,721)	(96,407)	(144,406)	(133,275)
Recycle - liabilities	-	13	4,093	3,614	(1,730)	(724)	(3)	(8,512)	(11,829)	(14,186)	(15,531)	(15,444)	(41,399)	(11,293)	(41,662)
Interest income	7,425	15,345	23,678	32,258	42,900	54,203	66,165	78,128	91,575	106,838	123,915	142,313	161,865	183,563	205,673
Dividend income	238	450	632	785	862	944	1,093	1,413	1,688	2,126	2,580	3,050	3,254	2,833	3,121
Realized gain (loss) - bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47,571
Realized gain (loss) - equities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net income	\$ 15,128	\$ 15,767	\$ 16,226	\$ 16,297	\$ 17,703	\$ 19,073	\$ 20,417	\$ 21,120	\$ 22,394	\$ 24,709	\$ 27,847	\$ 31,239	\$ 34,354	\$ 37,739	\$ 88,469
OCI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Liabilities															
Change in discount rate	\$ (208)	\$ (103,805)	\$ (42,200)	\$ 215,907	\$ (6,643)	\$ (58,128)	\$ (218,515)	\$ 12,977	\$ 21,968	\$ 23,703	\$ 23,571	\$ (78,954)	\$ 83,718	\$ (27,982)	\$ -
Recycle	-	(13)	(4,093)	(3,614)	1,730	724	3	8,512	11,829	14,186	15,531	15,444	41,399	11,293	41,662
Assets															
Bonds	208	8,464	11,877	(54,305)	10,747	20,727	58,894	(35,489)	(60,303)	(35,771)	11,336	30,147	(25,000)	114,072	(55,603)
Recycle - bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equities	1,997	6,661	10,093	11,281	(7,895)	(10,331)	(18,242)	18,335	8,701	3,455	17,511	5,507	(65,553)	26,905	19,243
Recycle - equities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OCI	\$ 1,997	\$ (88,693)	\$ (24,322)	\$ 169,268	\$ (2,062)	\$ (47,009)	\$ (177,861)	\$ 4,335	\$ (17,605)	\$ 5,573	\$ 67,949	\$ (27,856)	\$ 34,564	\$ 124,287	\$ 5,302
Changes in Equity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Beginning equity	\$ -	\$ 17,125	\$ (55,801)	\$ (63,898)	\$ 121,668	\$ 137,309	\$ 109,373	\$ (48,071)	\$ (22,616)	\$ (18,026)	\$ 12,255	\$ 108,051	\$ 111,434	\$ 180,352	\$ 342,378
Net income	15,128	15,767	16,226	16,297	17,703	19,073	20,417	21,120	22,394	24,709	27,847	31,239	34,354	37,739	88,469
OCI	1,997	(88,693)	(24,322)	169,268	(2,062)	(47,009)	(177,861)	4,335	(17,605)	5,573	67,949	(27,856)	34,564	124,287	5,302
Ending equity	\$ 17,125	\$ (55,801)	\$ (63,898)	\$ 121,668	\$ 137,309	\$ 109,373	\$ (48,071)	\$ (22,616)	\$ (18,026)	\$ 12,255	\$ 108,051	\$ 111,434	\$ 180,352	\$ 342,378	\$ 436,149
Balance Sheet	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Assets															
Cash	\$ 1,957	\$ 2,219	\$ 3,418	\$ 5,056	\$ 6,553	\$ 7,149	\$ 8,716	\$ 10,088	\$ 11,588	\$ 12,563	\$ 14,141	\$ 18,065	\$ 18,450	\$ 22,544	\$ 266,368
Investment in bonds	186,429	300,722	425,876	494,160	637,930	804,022	1,018,930	1,152,714	1,274,479	1,436,710	1,563,035	1,925,811	2,155,609	2,543,062	-
Investment in equities	21,481	37,847	57,774	77,870	79,217	78,070	69,506	96,736	115,132	128,574	156,013	170,330	114,713	150,539	169,781
Total assets	\$ 209,868	\$ 340,788	\$ 487,068	\$ 577,086	\$ 723,700	\$ 889,242	\$ 1,097,152	\$ 1,259,538	\$ 1,401,200	\$ 1,577,847	\$ 1,833,189	\$ 2,114,206	\$ 2,288,771	\$ 2,716,144	\$ 436,149
Liabilities															
Insurance ECFs	\$ 94,163	\$ 305,050	\$ 466,468	\$ 377,962	\$ 515,976	\$ 716,496	\$ 1,088,892	\$ 1,232,864	\$ 1,376,977	\$ 1,530,384	\$ 1,696,972	\$ 1,981,648	\$ 2,094,337	\$ 2,366,725	\$ -
CM remaining	98,580	91,539	84,497	77,456	70,415	63,373	56,332	49,290	42,249	35,207	28,166	21,124	14,083	7,041	-
Total liabilities	\$ 192,743	\$ 396,589	\$ 550,965	\$ 455,418	\$ 586,391	\$ 779,869	\$ 1,145,223	\$ 1,282,154	\$ 1,419,226	\$ 1,565,592	\$ 1,725,138	\$ 2,002,772	\$ 2,108,420	\$ 2,373,766	\$ -
Stockholders' equity															
AOCI	\$ 1,997	\$ (86,696)	\$ (111,019)	\$ 58,250	\$ 56,188	\$ 9,178	\$ (168,682)	\$ (164,347)	\$ (182,152)	\$ (176,579)	\$ (108,630)	\$ (136,487)	\$ (101,923)	\$ 22,364	\$ 27,667
Retained earnings	15,128	30,895	47,121	63,418	81,121	100,194	120,611	141,731	164,126	188,834	216,682	247,920	282,275	320,013	408,483
Total SE	\$ 17,125	\$ (55,801)	\$ (63,898)	\$ 121,668	\$ 137,309	\$ 109,373	\$ (48,071)	\$ (22,616)	\$ (18,026)	\$ 12,255	\$ 108,051	\$ 111,434	\$ 180,352	\$ 342,378	\$ 436,149
Total Liabilities and SE	\$ 209,868	\$ 340,788	\$ 487,068	\$ 577,086	\$ 723,700	\$ 889,242	\$ 1,097,152	\$ 1,259,538	\$ 1,401,200	\$ 1,577,847	\$ 1,833,189	\$ 2,114,206	\$ 2,288,771	\$ 2,716,144	\$ 436,149

Scenario 4 - Bonds: FV-NI; Equities: FV-NI; Change in liability discount rate: NI

Income Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Single margin	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041	\$ 7,041
Interest expense	423	(7,082)	(19,218)	(27,401)	(31,371)	(42,392)	(53,880)	(56,949)	(66,081)	(77,111)	(90,158)	(105,721)	(96,407)	(144,405)	(133,275)
Change in discount rate	(208)	(103,805)	(42,200)	215,907	(6,643)	(58,128)	(218,515)	12,977	21,968	23,703	23,571	(78,954)	83,718	(27,982)	-
Interest income	7,425	15,345	23,678	32,258	42,900	54,203	66,165	78,128	91,575	106,838	123,915	142,313	161,865	183,563	205,673
Dividend income	238	450	632	785	862	944	1,093	1,413	1,688	2,126	2,580	3,050	3,254	2,833	3,121
Realized gain (loss) - bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47,571
Realized gain (loss) - equities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unrealized gain (loss) - bonds	208	8,464	11,877	(54,305)	10,747	20,727	58,894	(35,489)	(60,303)	(35,771)	11,336	30,147	(25,000)	114,072	(55,603)
Unrealized gain (loss) - equities	1,997	6,661	10,093	11,281	(7,895)	(10,331)	(18,242)	18,335	8,701	3,455	17,511	5,507	(65,553)	26,905	19,243
Net income	\$ 17,125	\$ (72,926)	\$ (8,097)	\$ 185,565	\$ 15,641	\$ (27,936)	\$ (157,444)	\$ 25,455	\$ 4,589	\$ 30,282	\$ 95,796	\$ 3,383	\$ 68,918	\$ 162,025	\$ 93,771
Changes in Equity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Beginning equity	\$ -	\$ 17,125	\$ (55,801)	\$ (63,898)	\$ 121,668	\$ 137,309	\$ 109,373	\$ (48,071)	\$ (22,616)	\$ (18,026)	\$ 12,255	\$ 108,051	\$ 111,434	\$ 180,352	\$ 342,378
Net income	17,125	(72,926)	(8,097)	185,565	15,641	(27,936)	(157,444)	25,455	4,589	30,282	95,796	3,383	68,918	162,025	93,771
Ending equity	\$ 17,125	\$ (55,801)	\$ (63,898)	\$ 121,668	\$ 137,309	\$ 109,373	\$ (48,071)	\$ (22,616)	\$ (18,026)	\$ 12,255	\$ 108,051	\$ 111,434	\$ 180,352	\$ 342,378	\$ 436,149
Balance Sheet	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Assets															
Cash	\$ 1,957	\$ 2,219	\$ 3,418	\$ 5,056	\$ 6,553	\$ 7,149	\$ 8,716	\$ 10,088	\$ 11,588	\$ 12,563	\$ 14,141	\$ 18,065	\$ 18,450	\$ 22,544	\$ 266,368
Investment in bonds	186,429	300,722	425,876	494,160	637,930	804,022	1,018,930	1,152,714	1,274,479	1,436,710	1,663,035	1,925,811	2,155,609	2,543,062	-
Investment in equities	21,481	37,847	57,774	77,870	79,217	78,070	69,506	96,736	115,132	128,574	156,013	170,330	114,713	150,539	169,781
Total assets	\$ 209,868	\$ 340,788	\$ 487,068	\$ 577,086	\$ 723,700	\$ 889,242	\$ 1,097,152	\$ 1,259,538	\$ 1,401,200	\$ 1,577,847	\$ 1,833,189	\$ 2,114,206	\$ 2,288,771	\$ 2,716,144	\$ 436,149
Liabilities															
Insurance ECFs	\$ 94,163	\$ 305,050	\$ 466,468	\$ 377,962	\$ 515,976	\$ 716,496	\$ 1,088,892	\$ 1,232,864	\$ 1,376,977	\$ 1,530,384	\$ 1,696,972	\$ 1,981,648	\$ 2,094,337	\$ 2,366,725	\$ -
CM remaining	98,580	91,539	84,497	77,456	70,415	63,373	56,332	49,290	42,249	35,207	28,166	21,124	14,083	7,041	-
Total liabilities	\$ 192,743	\$ 396,589	\$ 550,965	\$ 455,418	\$ 586,391	\$ 779,869	\$ 1,145,223	\$ 1,282,154	\$ 1,419,226	\$ 1,565,592	\$ 1,725,138	\$ 2,002,772	\$ 2,108,420	\$ 2,373,766	\$ -
Stockholders' equity															
AOCI	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retained earnings	17,125	(55,801)	(63,898)	121,668	137,309	109,373	(48,071)	(22,616)	(18,026)	12,255	108,051	111,434	180,352	342,378	436,149
Total SE	\$ 17,125	\$ (55,801)	\$ (63,898)	\$ 121,668	\$ 137,309	\$ 109,373	\$ (48,071)	\$ (22,616)	\$ (18,026)	\$ 12,255	\$ 108,051	\$ 111,434	\$ 180,352	\$ 342,378	\$ 436,149
Total Liabilities and SE	\$ 209,868	\$ 340,788	\$ 487,068	\$ 577,086	\$ 723,700	\$ 889,242	\$ 1,097,152	\$ 1,259,538	\$ 1,401,200	\$ 1,577,847	\$ 1,833,189	\$ 2,114,206	\$ 2,288,771	\$ 2,716,144	\$ 436,149