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STAFF PAPER

17 - 19 April 2012

FASB | IASB Meeting

Project	**Insurance Contracts**		
Paper topic	The mechanics of using OCI to present specified changes in the insurance contract liability		

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What is this paper about?

1. This is the third paper in a series of four papers on consideration of the use of other comprehensive income. The purpose of this paper is to ask the boards to consider the mechanics of recording changes in the insurance liability arising from changes in the discount rate in OCI.
2. Agenda Paper 2A/82A contains background information on the use of OCI.
3. Agenda Paper 2B/82B asks the boards to consider the use of OCI to record changes in the insurance contract liability arising from changes in specified assumptions.
4. Agenda Paper 2D/82D discusses whether cumulative gains and loss arising from the remeasurement of the insurance liability recognised in OCI should be reclassified from OCI to profit and loss under specified circumstances.
5. Agenda paper 2E/82E provides a comprehensive example of how OCI can be used to present changes in the insurance liability arising from changes in interest rates.
6. This paper will be discussed at a non-decision making joint education session. We plan to ask the boards to make decisions on these issues at the joint meeting in May.

Staff analysis

What should be recognised as interest expense in net income?

7. In agenda paper 2B/82B, the staff recommend that the effect on the insurance liability of changes in the discount rate should be recorded in OCI. In this section we discuss the interest rate that should be used to determine interest expense in net income.

8. The staff considered three alternatives for determining what should be recognized in the profit or loss:

   (a) Interest equal to the expected long term return on assets

   (b) Interest equal to the current rate at the beginning of the reporting period

   (c) Interest at the rate locked in at inception of the contract.

9. Some believe that using an adjusted asset based discount rate (e.g., the expected return on assets) in net income reflects an insurer's business model. Under this approach, an insurer would:

   (a) In net income, report interest expense using the long-term rate the insurer expects to earn on its investments (i.e., a rate determined based on a probability-weighted estimate of the net cash inflows that it expects to earn on its investments, net of expected defaults/losses, after deducting a risk adjustment)

   (b) In OCI, report the difference between discounting the liability using the current discount rate (based on the boards' tentative decision) and the long-term expected rate of return on investments.

10. Using an asset based discount rate in net income would reduce any accounting mismatch between interest income and interest expense. However, it also masks any economic mismatch that exists between the insurance liability and assets backing that liability. In addition, the staff believe using an asset-based discount rate in net income is inconsistent with the boards' decision that the discount rate used to measure the

insurance liability should reflect the characteristics of the liability. Therefore, the staff did not explore this alternative further.

11. Some respondents to the ED stated that it is important that interest expense reported in net income is based on a current rate. However, they believed that the effect of changes in interest rates should be presented in OCI. To achieve this:
    (a) the interest expense reported in net income would be based upon the interest rate at the start of the reporting period;
    (b) the effect of changes in the interest rate from period to period would be shown in OCI.
12. However, this approach has a number of problems:
    (a) It fails to meet one of the objectives of using OCI in that it introduces a new accounting mismatch in net income. Interest expense is based upon the interest rate at the start of the reporting period; however, interest income (if assets are recorded at amortised cost or FV-OCI) is based on a locked-in historic rate.
    (b) Under this approach, amounts recorded in OCI do not naturally reverse to zero by the end of the insurance contract.
13. The staff believe recognizing total interest expense equal to the discount rate at contract initiation (ie the locked-in rate) has the following advantages:
    (a) It achieves one of the objectives of using OCI in that it reduces accounting mismatch in net income if assets are measured at amortised cost or FV-OCI;
    (b) The amount recorded in net income and OCI is easily explained to users. The total interest expense each year is based upon rates locked in at inception (similar to amortised cost); OCI is equal to the difference between the liability at the locked in rate and the current rate.
    (c) The amount recorded in OCI will naturally reverse to zero by the end of the insurance contract

14. Based on the above, the staff believe that total interest expense recorded in net income should be based on the interest rate at contract inception. The rest of this paper assumes that the boards agree with this view.

How should interest expense be presented in net income?

15. The staff has identified two alternatives for how OCI could be used to reflect changes in the discount rate which are illustrated in Appendix A:
    (a) Alternative A—Present interest expense in net income calculated using the discount rate locked in at inception. Present in OCI other changes in the insurance liability arising from changes in the discount rate.
    (b) Alternative B— Present in net income interest expense calculated using the current discount rate plus an amount transferred to/from OCI such that the total interest expense in net income is equal to interest calculated using the discount rate locked in at inception.

Alternative A—Use OCI and present interest expense using the locked in rate

16. Under this alternative, interest expense presented in net income would be calculated using the discount rate at inception. Other changes in the insurance liability arising from changes in the discount rate would be recognized in OCI. Under this approach, the amount included in accumulated other comprehensive income ("AOCI") equals the difference between the present value of the remaining cash flows discounted at the current rate and the present value of the remaining cash flows discounted at the locked in rate.
17. Presenting interest expense using the initial discount rate throughout the life of the liability would be consistent with the effective interest approach in IAS 39, *Financial Instruments, Recognition and Measurement*.

18. This is also consistent with ASC Topic 310-30-35-2

    Upon completion of a transfer of a loan, this Subtopic requires that the investor (transferee) shall recognize the excess of all cash flows expected at acquisition over the investor's initial investment in the loan as interest income on a **level-yield basis over the life of the loan** (accretable yield - The excess of a loan's cash flows expected to be collected over the investor's initial investment in the loan.)

19. In addition, at the January 27, 2012 FASB Board meeting, the Board tentatively decided that, "...for purchased financial assets with an explicit expectation of credit losses, favorable changes in cash flows expected to be collected would be recognized immediately in profit or loss as an adjustment to the impairment expense." Implicit in this tentative decision is that the yield rate is locked in and thus is consistent with this alternative.

Alternative B— Use OCI and present interest expense using the current rate plus an amount transferred from OCI to net income

20. Under this alternative, interest expense presented in net income would be calculated using the current discount rate. An amount would then be shown transferred from net income to OCI such that the total interest expense in net income is equal to interest calculated using the discount rate locked in at inception. As with alternative A, changes in the insurance liability arising from changes in the discount rate would be recognized in OCI. The amount reported in AOCI would equal the difference between the present value of the remaining cash flows discounted at the current rate and the present value of the remaining cash flows discounted at the initial rate.

21. US GAAP has a requirement to identify items that are displayed as part of net income for a period that also had been displayed as part of OCI in that period or earlier periods.

    (a) ASC topic 320-10-50-9 requires entities to disclose "The amount of the net unrealized holding gain or loss on available-for-sale securities for the period that has been included in accumulated other comprehensive income and the amount of gains and losses reclassified out of accumulated other comprehensive income into earnings for the period".

(b) In June 2011, the FASB issued Accounting Standards Update No. 2011-05, *Comprehensive Income (Topic 220): Presentation of Comprehensive Income* which required entities to present reclassification adjustments to show the effect of reclassifications on both the components of other comprehensive income and the components of net income in interim and annual financial statements.

22. Before the issuance of Update 2011-05, under U.S. GAAP, preparers had the option to present reclassification adjustments out of accumulated other comprehensive income either on the face of the financial statement in which comprehensive income is reported or in the notes to the financial statements. Also, before the Update's issuance, U.S. GAAP did not require that the impact of reclassification adjustments on the components of net income be presented in the financial statements. In general, users have indicated a preference to have reclassification adjustments, and their effect on net income, presented on the face of the statement of comprehensive income. Users noted that such a presentation would provide users with more straightforward and detailed information that could be analyzed more easily.

23. Update 2011-05 was deferred based on stakeholder feedback that noted difficulty in gathering the information necessary to present the impact of reclassification adjustments on the face of the statement where net income is presented, particularly for interim financial statements. Collection of this information may be especially difficult for reclassifications of OCI that are initially reported in a balance sheet account (such as certain pension-related costs capitalized as inventory) and subsequently reclassified to net income at a later date together with other items of net income. However, the staff do not believe that the reasons for the deferral apply to the unwind of the discount rate in excess of or less than the discount rate set at contract initiation and therefore could still be a viable adjustment to include in the face financials.

19. Alternative B is akin to the two-step presentation proposal for changes in credit risk in IASB's exposure draft *Fair Value Option for Financial Liabilities.* Under the approach in that ED, the entity would present the entire fair value change in the liability in profit or loss. Secondly, the entity would 'back out' from profit or loss the portion of the fair value change attributable to changes in the liability's credit risk and present that amount in OCI. An alternate one-step approach was presented in the ED whereby the effects of changes in liabilities' credit risk would be reported directly in OCI. Most respondents to the ED did not support the two-step presentation because:

   (a) there is little (if any) added benefit of the 'gross' presentation in the two-step approach and the extra line items on the face of the performance statement result in unnecessary 'clutter'.

   (b) The one-step approach provides users with the same information as the two-step approach but is less complicated and more efficient (eg it requires fewer line items in the performance statement).

Comparison of the approaches

	Alternative A	**Alternative B**
Eliminates an accounting mismatch in net income if the assets are held at fair value through OCI or amortized cost. This reduces volatility in the income statement.	Advantage	Advantage
Short term changes in discount rate are recognized in OCI rather than net income. Some believe that this better reflects the long-term nature of insurance.	Advantage	Advantage
The effects of the changes in the discount rate are segregated in OCI providing useful information while addressing the concerns that the volatility in the discount rate would over shadow the performance of the insurer (see paragraph XX).	Advantage	Advantage
Provides information about the current rate and the amount transferred from OCI to net income	Disadvantage *(could require disclosure)*	Advantage
Accounting mismatch arises in profit and loss when assets are measured at fair value through profit and loss.	Disadvantage	Disadvantage
An entity would have to track the locked in discount rate for each portfolio of contracts and within that	Disadvantage	Disadvantage

portfolio by similar inception dates (as the locked in rate will vary depending on when the contract is issued). These contracts would then need to be tracked through future periods and compared to the present value of the cash flows at the new current rate to determine the adjustment to OCI.[1]		

Staff Views

20. Both alternatives minimize the accounting mismatch caused by recording changes in the insurance liability arising from the changes in the discount rate in net income if assets are recorded at fair value through OCI or amortized cost.

21. The staff recommend Alternative A, under which insurers will present in:

(a) Net income interest expense using the discount rate locked in at inception of the insurance contract;

(b) OCI changes in the liability arising from changes in discount rate.

Question 1: Mechanics
What are the boards views regarding alternative A and alternative B? Alternative A—Present interest expense in net income calculated using the discount rate locked in at inception. Present in OCI other changes in the insurance liability arising from changes in the discount rate. Alternative B— Present in net income interest expense calculated using the current discount rate plus an amount transferred to/from OCI such that the total interest expense in net income is equal to interest calculated using the discount rate locked in at inception.

[1] While this adds complexity, insurers track this today, especially for products that are accounted for using locked in discount rates.

What discount rate should be applied to changes in assumptions?

22. The staff considered whether the current discount rate or the initial locked-in discount rate should be applied to changes in assumptions such as increases in the expected cash outflows when calculating the interest expense to be presented in net income. Example 5 in Appendix A illustrates the alternatives for what discount rate should be applied to changes in expected cash flows.

23. Some believe that in order to properly recognize the full effect of an increase in the expected cash flows in net income at the time expectations change, the increase in the expected cash flows would have to be discounted at the then current rate (with no effect on OCI). In future periods, the current rate would become the locked in rate for those cash flows. This would be consistent with the view that an increase in the liability is the establishment of a new liability. An extreme example is if an insurer believes there are no claims left on an existing portfolio and therefore has no liability recorded. Subsequently, it is determined that the insurer is obligated to pay for claims. This was the case with asbestos claims and other similar situations as well as with many claims that involve lawsuits.

24. In regards to resetting the discount rate for changes in expected cash flows, US GAAP guidance requires the yield to be updated for financial assets in several circumstances.

    (a) ASC Topic 320-10-35-35 states: “In periods after the recognition of an other-than-temporary impairment loss for debt securities, an entity shall account for the other-than-temporarily impaired debt security as if the debt security had been purchased on the measurement date of the other-than-temporary impairment at an amortized cost basis equal to the previous amortized cost basis less the other-than-temporary impairment recognized in earnings.... For all other debt securities, if upon subsequent evaluation, there is a significant increase in the cash flows expected to be collected or if actual cash flows are significantly greater than cash flows previously expected, such changes shall be accounted for as a prospective adjustment to the accretable yield.... Subsequent increases and decreases (if not an other-than-temporary impairment) in the fair value of available-for-sale securities shall be included in other comprehensive income.”

(b) ASC Topic 325-40-35-4, Beneficial Interests in Securitized Financial Assets, states: “If upon evaluation...based on current information and events there is a favorable (or an adverse) change in cash flows expected to be collected from the cash flows previously projected, then the investor shall recalculate the amount of accretable yield for the beneficial interest on the date of evaluation as the excess of cash flows expected to be collected over the beneficial interest's reference amount. The reference amount is equal to the initial investment minus cash received to date minus other-than-temporary impairments recognized in earnings to date ... plus the yield accreted to date…The adjustment shall be accounted for prospectively as a change in estimate in conformity with Topic 250, with the amount of periodic accretion adjusted over the remaining life of the beneficial interest.”

25. However, under the expected interest rate method for financial instruments in IAS 39, changes in expected cash flows are discounted using the original effective interest rate (ie the locked in rate).

26. In addition, a question arises on how to isolate a change in the discount rate applied due to a change in expected payout patterns (e.g., a different rate on the yield curve would be applied to the different timing in expected cash payments) and a change in the discount rate because of market movements (and potential changes in asset mix if using a top-down approach[2] to determine the discount rate).

[2] The Boards tentatively decided that in applying the top-down approach:
1. An insurer should determine an appropriate yield curve based on current market information. This may be based on the insurers’ determination of the yield curve for the insurance contract liability on a yield curve that reflects current market returns for the actual portfolio of assets the insurer holds or for a reference portfolio of assets with characteristics similar to those of the insurance contract liability.
2. If there are no observable market prices for some points on that yield curve, the insurer should use an estimate that is consistent with the Boards' guidance on fair value measurement, in particular for Level 3 fair value measurement.

27. For increases in the expected cash flows or for changes in timing of the cash flows, isolating the changes in the insurance liability related to the change in discount rate would be challenging. For example, the staff believes that an entity would have to layer the cash flows within the liability and the discount rates used to initially recognize the liability and each of the changes to the cash flows. These layers would then need to be tracked through future periods and compared to the present value of the cash flows at the new current rate to determine the adjustment to OCI.

28. The staff considered how the layers described in the preceding paragraph would be consumed by cash out flows. The staff believe that because the changes in the assumptions would impact all contracts within a group of contracts or within the portfolio (for instance an increase in the price of building materials in a geographic area to a property casualty insurer, or change in mortality within a group of life insurance contracts), the layers should be relieved proportionally, unless the actual pattern of payout can be identified differently.

29. The staff also considered how to treat decreases in expected cash flows. However the staff believe that decreases in cash flows could only be unwound at the rate those amounts were initially discounted at.

30. The staff believe that applying the current discount rate to changes in assumptions, such as increases in the expected cash outflows to calculate the amount presented in net income, would significantly complicate the model without much benefit.

Question 2: What discount rate should be used for changes in expected cash flows?

What are the boards views regarding whether interest expense presented in net income in respect of changes in expected cash flows should be based on the discount rate locked in at inception of the insurance contract?

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3. The cash flows of the instruments should be adjusted so that they reflect the characteristics of the cash flows of the insurance contract liability. In adjusting the cash flows, the insurer should make both of the following adjustments: Type I, which adjusts for differences between the timing of the cash flows to ensure that the assets in the portfolio (actual or reference) selected as a starting point are matched with the duration of the liability cash flows; Type II, which adjusts for risks inherent in the assets that are not inherent in the liability. In the absence of an observable market risk premium for risks inherent in the asset but not inherent in the liability, the insurer uses an appropriate technique to determine that market risk premium, consistent with (2).

Appendix A: Illustrative examples

A1. The following examples illustrate alternatives A and B and the effect of discounting changes in cash flows at a current discount rate.

Assumptions

A2. The staff performed an analysis of a portfolio of insurance contracts with expected payouts of CU10 million over 15 years to illustrate Alternatives A and B compared to the IASB's ED and the FASB's DP which required changes to be recorded to profit or loss. The following five examples are presented:

(a) Example 1 is a baseline with a 5% discount rate throughout the 15 years

(b) Example 2 also uses a 5% discount rate with a change at the end of Year 5 to 7%

(c) Example 3 uses the 5% discount rate with a change at the end of Year 5 to 3%

(d) Example 4 demonstrates the impact of annual changes in the discount rate

(e) Example 5 uses a 5% discount rate with a change to 7% at the end of Year 5; expected cash flow change at the end of Year 8 and a discount rate change to 8% at end of Year 10

Summary of Effect on Net Income

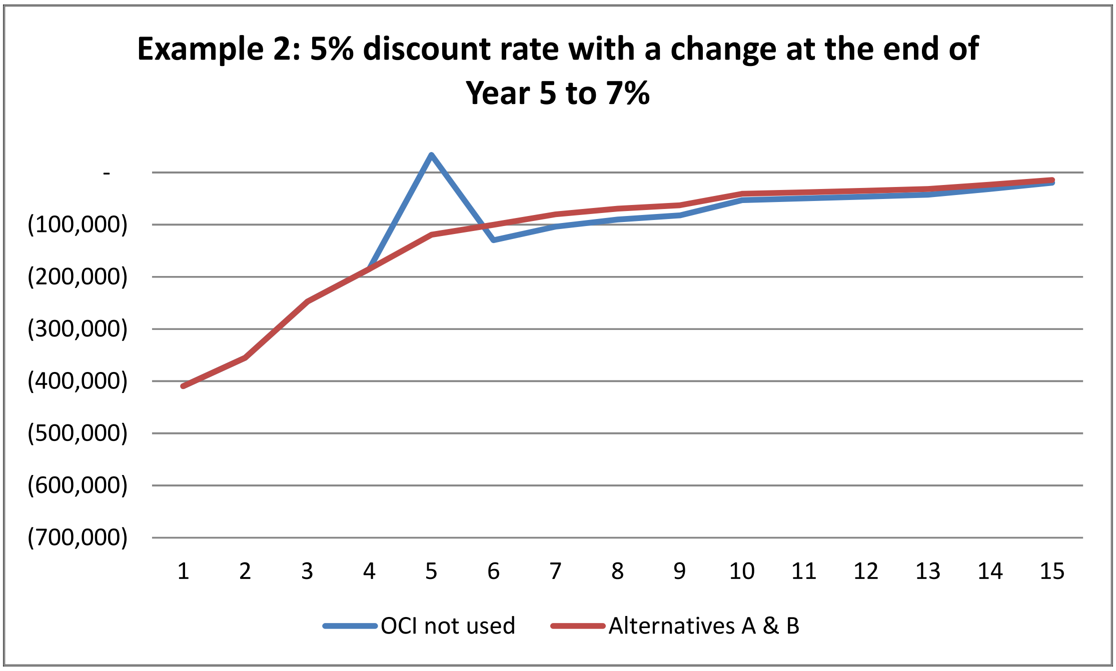
A3. The effects of Alternatives A & B are identical. As such, one line is shown to reflect both alternatives.

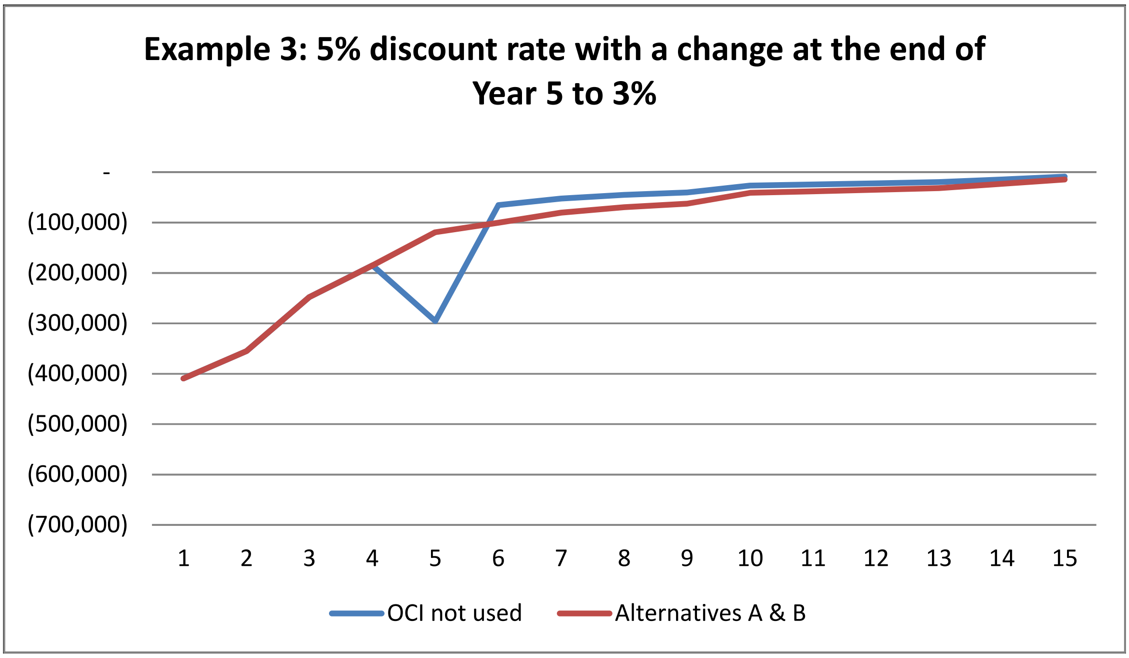
A4. Example 2 shows that when not using OCI a large gain results when the discount rate increases and subsequent earnings are slightly lower.

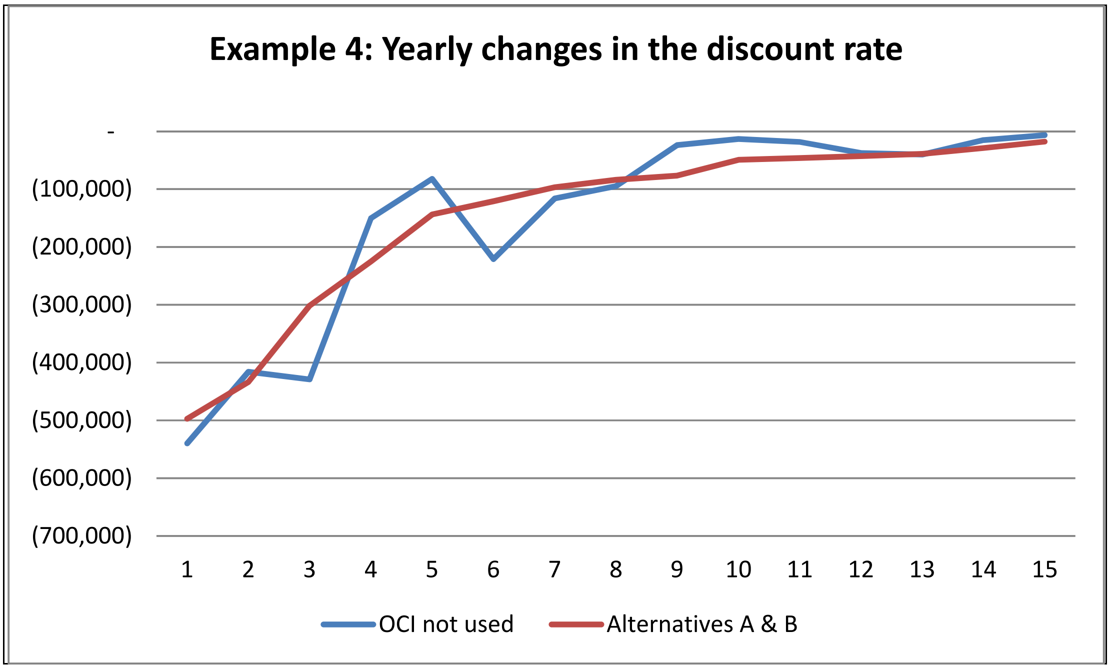
A5. Example 3 shows that when not using OCI a large loss results when the discount rate decreases and subsequent earnings are slightly higher.

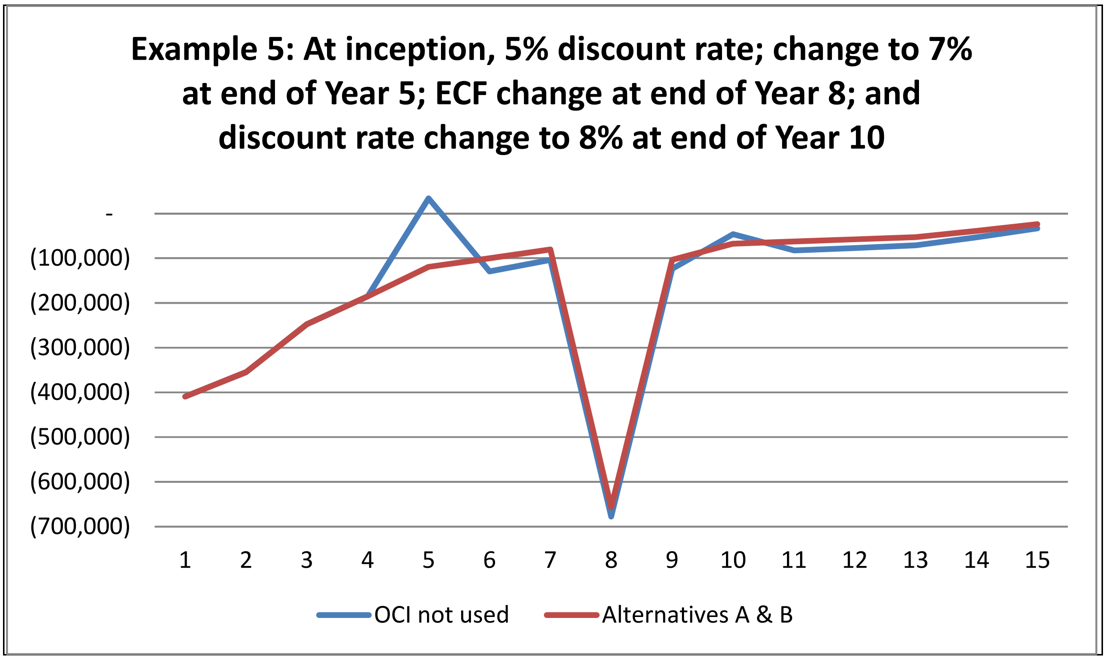
A6. Example 4 shows the same effects as Examples 2 and 3, along with the increased volatility that comes with a rate change each period.

A7. Example 5 illustrates the effect of discounting changes in cash flows at a current discount rate.






Example 4: Yearly changes in the discount rate
-
(100,000)
(200,000)
(300,000)
(400,000)
(500,000)
(600,000)
(700,000)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
OCI not used
Alternatives A & B


Example 5: At inception, 5% discount rate; change to 7% at end of Year 5; ECF change at end of Year 8; and discount rate change to 8% at end of Year 10
-
(100,000)
(200,000)
(300,000)
(400,000)
(500,000)
(600,000)
(700,000)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
OCI not used
Alternatives A & B

Example 1 - 5% discount rate with no change

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Expected Cash Outflows	1,500,000	2,500,000	1,500,000	1,500,000	500,000	500,000	300,000	200,000	500,000	100,000	100,000	100,000	200,000	200,000	300,000	10,000,000
Gross ECF remaining	10,000,000	8,500,000	6,000,000	4,500,000	3,000,000	2,500,000	2,000,000	1,700,000	1,500,000	900,000	900,000	800,000	700,000	500,000	300,000	
Less: PV of ECF remaining	8,188,629	7,098,060	4,952,963	3,700,611	2,385,642	2,004,924	1,605,170	1,385,429	1,254,700	817,435	758,307	696,222	631,033	462,585	285,714	
Effect of discounting	1,811,371	1,401,940	1,047,037	799,389	614,358	495,076	394,830	314,571	245,300	82,565	141,693	103,778	68,967	37,415	14,286	
Balance Sheet - ECF Rollforward																
(beginning)	8,188,629	7,098,060	4,952,963	3,700,611	2,385,642	2,004,924	1,605,170	1,385,429	1,254,700	817,435	758,307	696,222	631,033	462,585	285,714	
Accretion on ECF*	409,431	354,903	247,648	185,031	119,282	100,246	80,259	69,271	62,735	40,872	37,915	34,811	31,552	23,129	14,286	1,811,371
Actual payout	(1,500,000)	(2,500,000)	(1,500,000)	(1,500,000)	(500,000)	(500,000)	(300,000)	(200,000)	(500,000)	(100,000)	(100,000)	(100,000)	(200,000)	(200,000)	(300,000)	(10,000,000)
PV of ECF remaining (ending)	7,098,060	4,952,963	3,700,611	2,385,642	2,004,924	1,605,170	1,385,429	1,254,700	817,435	758,307	696,222	631,033	462,585	285,714	(0)	
Income Statement																
ECF Accretion*	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(62,735)	(40,872)	(37,915)	(34,811)	(31,552)	(23,129)	(14,286)	(1,811,371)
Net I/S effect	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(62,735)	(40,872)	(37,915)	(34,811)	(31,552)	(23,129)	(14,286)	(1,811,371)
Balance Sheet - Equity Rollforward																
Beginning Equity	-	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,316,295)	(1,416,541)	(1,496,800)	(1,566,071)	(1,628,806)	(1,669,678)	(1,707,594)	(1,742,405)	(1,773,956)	(1,797,086)	
OCI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Income	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(62,735)	(40,872)	(37,915)	(34,811)	(31,552)	(23,129)	(14,286)	(1,811,371)
Ending Equity	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,316,295)	(1,416,541)	(1,496,800)	(1,566,071)	(1,628,806)	(1,669,678)	(1,707,594)	(1,742,405)	(1,773,956)	(1,797,086)	(1,811,371)	

* ECF Accretion is calculated as the PV of ECF remainning (beginning) multiplied by the current discount rate.

Example 2 - 5% discount rate with a change at the end of Year 5 to 7%

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Expected Cash Outflows	1,500,000	2,500,000	1,500,000	1,500,000	500,000	500,000	300,000	200,000	500,000	100,000	100,000	100,000	200,000	200,000	300,000	10,000,000
Gross ECF remaining	10,000,000	8,500,000	6,000,000	4,500,000	3,000,000	2,500,000	2,000,000	1,700,000	1,500,000	900,000	900,000	800,000	700,000	500,000	300,000	
Less: PV of ECF remaining	8,188,629	7,098,060	4,952,963	3,700,611	2,385,642	1,851,930	1,481,565	1,285,274	1,175,244	757,511	710,536	660,274	606,493	448,948	280,374	
Effect of discounting	1,811,371	1,401,940	1,047,037	799,389	614,358	648,070	518,435	414,726	324,756	142,489	189,464	139,726	93,507	51,052	19,626	
Balance Sheet - ECF Rollforward																
(beginning)	8,188,629	7,098,060	4,952,963	3,700,611	2,385,642	1,851,930	1,481,565	1,285,274	1,175,244	757,511	710,536	660,274	606,493	448,948	280,374	
Accretion on ECF*	409,431	354,903	247,648	185,031	119,282	129,635	103,710	89,969	82,267	53,026	49,738	46,219	42,455	31,426	19,626	1,964,366
Change in discount rate	-	-	-	-	(152,994)	-	-	-	-	-	-	-	-	-	-	(152,994)
Actual payout	(1,500,000)	(2,500,000)	(1,500,000)	(1,500,000)	(500,000)	(500,000)	(300,000)	(200,000)	(500,000)	(100,000)	(100,000)	(100,000)	(200,000)	(200,000)	(300,000)	(10,000,000)
PV of ECF remaining (ending)	7,098,060	4,952,963	3,700,611	2,385,642	1,851,930	1,481,565	1,285,274	1,175,244	757,511	710,536	660,274	606,493	448,948	280,374	-	
Income Statement (if OCI not used)																
Accretion*	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(129,635)	(103,710)	(89,969)	(82,267)	(53,026)	(49,738)	(46,219)	(42,455)	(31,426)	(19,626)	(1,964,366)
Change in discount rate	-	-	-	-	152,994	-	-	-	-	-	-	-	-	-	-	152,994
Net I/S effect	(409,431)	(354,903)	(247,648)	(185,031)	33,712	(129,635)	(103,710)	(89,969)	(82,267)	(53,026)	(49,738)	(46,219)	(42,455)	(31,426)	(19,626)	(1,811,371)
Balance Sheet - Equity Rollforward																
Beginning Equity	-	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,163,301)	(1,292,936)	(1,396,646)	(1,486,615)	(1,568,882)	(1,621,908)	(1,671,645)	(1,717,864)	(1,760,319)	(1,791,745)	
OCI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Income	(409,431)	(354,903)	(247,648)	(185,031)	33,712	(129,635)	(103,710)	(89,969)	(82,267)	(53,026)	(49,738)	(46,219)	(42,455)	(31,426)	(19,626)	(1,811,371)
Ending Equity	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,163,301)	(1,292,936)	(1,396,646)	(1,486,615)	(1,568,882)	(1,621,908)	(1,671,645)	(1,717,864)	(1,760,319)	(1,791,745)	(1,811,371)	

Alternative A: Use OCI and lock in the accretion presented in NI																
Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**Total**
OCI/AOCI																
Change in discount rate	-	-	-	-	152,994	-	-	-	-	-	-	-	-	-	-	152,994
Transfer out of AOCI	-	-	-	-	-	(29,389)	(23,451)	(20,698)	(19,532)	(12,154)	(11,822)	(11,408)	(10,903)	(8,297)	(5,340)	(152,994)
AOCI	-	-	-	-	152,994	123,605	100,154	79,457	59,925	47,771	35,948	24,540	13,638	5,340	(0)	-
Income Statement																
ECF Accretion**	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(62,735)	(40,872)	(37,915)	(34,811)	(31,552)	(23,129)	(14,286)	(1,811,371)
Net I/S effect	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(62,735)	(40,872)	(37,915)	(34,811)	(31,552)	(23,129)	(14,286)	(1,811,371)
Balance Sheet - Equity Rollforward																
Beginning Equity	-	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,163,301)	(1,292,936)	(1,396,646)	(1,486,615)	(1,568,882)	(1,621,908)	(1,671,645)	(1,717,864)	(1,760,319)	(1,791,745)	
OCI	-	-	-	-	152,994	(29,389)	(23,451)	(20,698)	(19,532)	(12,154)	(11,822)	(11,408)	(10,903)	(8,297)	(5,340)	(0)
Net Income	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(62,735)	(40,872)	(37,915)	(34,811)	(31,552)	(23,129)	(14,286)	(1,811,371)
Ending Equity	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,163,301)	(1,292,936)	(1,396,646)	(1,486,615)	(1,568,882)	(1,621,908)	(1,671,645)	(1,717,864)	(1,760,319)	(1,791,745)	(1,811,371)	

Alternative B: Use OCI and present accretion at current rate and present amount reclassified to NI																
Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**Total**
OCI/AOCI																
Change in discount rate	-	-	-	-	152,994	-	-	-	-	-	-	-	-	-	-	152,994
Reclassification to NI***	-	-	-	-	-	(29,389)	(23,451)	(20,698)	(19,532)	(12,154)	(11,822)	(11,408)	(10,903)	(8,297)	(5,340)	(152,994)
AOCI	-		-	-	152,994	123,605	100,154	79,457	59,925	47,771	35,948	24,540	13,638	5,340	(0)	-
Income Statement																
ECF Accretion*	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(129,635)	(103,710)	(89,969)	(82,267)	(53,026)	(49,738)	(46,219)	(42,455)	(31,426)	(19,626)	(1,964,366)
Reclassification - OCI***	-	-	-	-	-	29,389	23,451	20,698	19,532	12,154	11,822	11,408	10,903	8,297	5,340	152,994
Net I/S effect	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(62,735)	(40,872)	(37,915)	(34,811)	(31,552)	(23,129)	(14,286)	(1,811,371)
Balance Sheet - Equity Rollforward																
Beginning Equity	-	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,163,301)	(1,292,936)	(1,396,646)	(1,486,615)	(1,568,882)	(1,621,908)	(1,671,645)	(1,717,864)	(1,760,319)	(1,791,745)	
OCI	-	-	-	-	152,994	(29,389)	(23,451)	(20,698)	(19,532)	(12,154)	(11,822)	(11,408)	(10,903)	(8,297)	(5,340)	(0)
Net Income	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(62,735)	(40,872)	(37,915)	(34,811)	(31,552)	(23,129)	(14,286)	(1,811,371)
Ending Equity	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,163,301)	(1,292,936)	(1,396,646)	(1,486,615)	(1,568,882)	(1,621,908)	(1,671,645)	(1,717,864)	(1,760,319)	(1,791,745)	(1,811,371)	

Calulations Used in Alternatives A and B

The calculations below are used to show the movement in the liability based on the movement in the discount rate. However, the movement in the liability based on the movement in the discount rate would not be shown in the financial statements.

The amount transferred out of AOCI is calculated such that at the end of each period, the amount in AOCI is equal to the difference between the PV of the ECF remaining (ending) using the original discount rate and the PV of the ECF remaining (ending) using the current discount rate. As such, the amount reclassified out of OCI each period is calculated as follows:

	5	6	7	8	9	10	11	12	13	14	15
PV of ECF remaining (beginning) using original discount rate	2,385,642	2,004,924	1,605,170	1,385,429	1,254,700	817,435	758,307	696,222	631,033	462,585	285,714
PV of ECF remaining (beginning) using current discount rate	2,385,642	1,851,930	1,481,565	1,285,274	1,175,244	757,511	710,536	660,274	606,493	448,948	280,374
Beginning AOCI	-	152,994	123,605	100,154	79,457	59,925	47,771	35,948	24,540	13,638	5,340
PV of ECF remaining (ending) using original discount rate	2,004,924	1,605,170	1,385,429	1,254,700	817,435	758,307	696,222	631,033	462,585	285,714	-
PV of ECF remaining (ending) using current discount rate	1,851,930	1,481,565	1,285,274	1,175,244	757,511	710,536	660,274	606,493	448,948	280,374	-
Ending AOCI	152,994	123,605	100,154	79,457	59,925	47,771	35,948	24,540	13,638	5,340	-
Difference in Beginning and Ending AOCI (Current OCI)	152,994	(29,389)	(23,451)	(20,698)	(19,532)	(12,154)	(11,822)	(11,408)	(10,903)	(8,297)	(5,340)

* ECF Accretion is calculated as the PV of ECF remainning (beginning) multiplied by the current discount rate.

** ECF Accretion is calculated as if the discount rate did not change (that is, the PV of ECF remaining assuming the original discount rate multiplied by the original discount rate).

*** The amount transferred out of AOCI is the same for Alternatives A and B and is calculated as shown below Alternatives A and B.

Example 3 - 5% discount rate with a change at the end of Year 5 to 3%

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Expected Cash Outflows	1,500,000	2,500,000	1,500,000	1,500,000	500,000	500,000	300,000	200,000	500,000	100,000	100,000	100,000	200,000	200,000	300,000	10,000,000
Gross ECF remaining	10,000,000	8,500,000	6,000,000	4,500,000	3,000,000	2,500,000	2,000,000	1,700,000	1,500,000	900,000	900,000	800,000	700,000	500,000	300,000	
Less: PV of ECF remaining	8,188,629	7,098,060	4,952,963	3,700,611	2,385,642	2,181,199	1,746,635	1,499,034	1,344,005	884,326	810,855	735,181	657,236	476,954	291,262	
Effect of discounting	1,811,371	1,401,940	1,047,037	799,389	614,358	318,801	253,365	200,966	155,995	15,674	89,145	64,819	42,764	23,046	8,738	
Balance Sheet - ECF Rollforward																
(beginning)	8,188,629	7,098,060	4,952,963	3,700,611	2,385,642	2,181,199	1,746,635	1,499,034	1,344,005	884,326	810,855	735,181	657,236	476,954	291,262	
Accretion on ECF*	409,431	354,903	247,648	185,031	119,282	65,436	52,399	44,971	40,320	26,530	24,326	22,055	19,717	14,309	8,738	1,635,096
Change in discount rate	-	-	-	-	176,275	-	-	-	-	-	-	-	-	-	-	176,275
Actual payout	(1,500,000)	(2,500,000)	(1,500,000)	(1,500,000)	(500,000)	(500,000)	(300,000)	(200,000)	(500,000)	(100,000)	(100,000)	(100,000)	(200,000)	(200,000)	(300,000)	(10,000,000)
PV of ECF remaining (ending)	7,098,060	4,952,963	3,700,611	2,385,642	2,181,199	1,746,635	1,499,034	1,344,005	884,326	810,855	735,181	657,236	476,954	291,262	-	
Income Statement (if OCI not used)																
Accretion*	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(65,436)	(52,399)	(44,971)	(40,320)	(26,530)	(24,326)	(22,055)	(19,717)	(14,309)	(8,738)	(1,635,096)
Change in discount rate	-	-	-	-	(176,275)	-	-	-	-	-	-	-	-	-	-	(176,275)
Net I/S effect	(409,431)	(354,903)	(247,648)	(185,031)	(295,557)	(65,436)	(52,399)	(44,971)	(40,320)	(26,530)	(24,326)	(22,055)	(19,717)	(14,309)	(8,738)	(1,811,371)
Balance Sheet - Equity Rollforward																
Beginning Equity	-	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,492,571)	(1,558,007)	(1,610,406)	(1,655,377)	(1,695,697)	(1,722,227)	(1,746,552)	(1,768,608)	(1,788,325)	(1,802,633)	
OCI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Income	(409,431)	(354,903)	(247,648)	(185,031)	(295,557)	(65,436)	(52,399)	(44,971)	(40,320)	(26,530)	(24,326)	(22,055)	(19,717)	(14,309)	(8,738)	(1,811,371)
Ending Equity	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,492,571)	(1,558,007)	(1,610,406)	(1,655,377)	(1,695,697)	(1,722,227)	(1,746,552)	(1,768,608)	(1,788,325)	(1,802,633)	(1,811,371)	

Alternative A: Use OCI and lock in the accretion presented in NI																
Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**Total**
OCI/AOCI																
Change in discount rate	-	-	-	-	(176,275)	-	-	-	-	-	-	-	-	-	-	(176,275)
Transfer out of AOCI	-	-	-	-	-	34,810	27,859	24,300	22,415	14,342	13,590	12,756	11,835	8,821	5,548	176,275
AOCI	-	-	-	-	(176,275)	(141,465)	(113,606)	(89,305)	(66,890)	(52,548)	(38,959)	(26,203)	(14,368)	(5,548)	(0)	(0)
Income Statement																
ECF Accretion**	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(62,735)	(40,872)	(37,915)	(34,811)	(31,552)	(23,129)	(14,286)	(1,811,371)
Net I/S effect	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(62,735)	(40,872)	(37,915)	(34,811)	(31,552)	(23,129)	(14,286)	(1,811,371)
Balance Sheet - Equity Rollforward																
Beginning Equity	-	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,492,571)	(1,558,007)	(1,610,406)	(1,655,377)	(1,695,697)	(1,722,227)	(1,746,552)	(1,768,608)	(1,788,325)	(1,802,633)	
OCI	-	-	-	-	(176,275)	34,810	27,859	24,300	22,415	14,342	13,590	12,756	11,835	8,821	5,548	(0)
Net Income	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(62,735)	(40,872)	(37,915)	(34,811)	(31,552)	(23,129)	(14,286)	(1,811,371)
Ending Equity	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,492,571)	(1,558,007)	(1,610,406)	(1,655,377)	(1,695,697)	(1,722,227)	(1,746,552)	(1,768,608)	(1,788,325)	(1,802,633)	(1,811,371)	

Alternative B: Use OCI and present accretion at current rate and present amount reclassified to NI																
Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**Total**
OCI/AOCI																
Change in discount rate	-	-	-	-	(176,275)	-	-	-	-	-	-	-	-	-	-	(176,275)
Reclassification to NI***	-	-	-	-	-	34,810	27,859	24,300	22,415	14,342	13,590	12,756	11,835	8,821	5,548	176,275
AOCI	-		-	-	(176,275)	(141,465)	(113,606)	(89,305)	(66,890)	(52,548)	(38,959)	(26,203)	(14,368)	(5,548)	(0)	(0)
Income Statement																
ECF Accretion*	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(65,436)	(52,399)	(44,971)	(40,320)	(26,530)	(24,326)	(22,055)	(19,717)	(14,309)	(8,738)	(1,635,096)
Reclassification - OCI***	-	-	-	-	-	(34,810)	(27,859)	(24,300)	(22,415)	(14,342)	(13,590)	(12,756)	(11,835)	(8,821)	(5,548)	(176,275)
Net I/S effect	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(62,735)	(40,872)	(37,915)	(34,811)	(31,552)	(23,129)	(14,286)	(1,811,371)
Balance Sheet - Equity Rollforward																
Beginning Equity	-	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,492,571)	(1,558,007)	(1,610,406)	(1,655,377)	(1,695,697)	(1,722,227)	(1,746,552)	(1,768,608)	(1,788,325)	(1,802,633)	
OCI	-	-	-	-	(176,275)	34,810	27,859	24,300	22,415	14,342	13,590	12,756	11,835	8,821	5,548	(0)
Net Income	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(62,735)	(40,872)	(37,915)	(34,811)	(31,552)	(23,129)	(14,286)	(1,811,371)
Ending Equity	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,492,571)	(1,558,007)	(1,610,406)	(1,655,377)	(1,695,697)	(1,722,227)	(1,746,552)	(1,768,608)	(1,788,325)	(1,802,633)	(1,811,371)	

Calulations Used in Alternatives A and B

The calculations below are used to show the movement in the liability based on the movement in the discount rate. However, the movement in the liability based on the movement in the discount rate would not be shown in the financial statements.
The amount transferred out of AOCI is calculated such that at the end of each period, the amount in AOCI is equal to the difference between the PV of the ECF remaining (ending) using the original discount rate and the PV of the ECF remaining (ending) using the current discount rate. As such, the amount reclassified out of OCI each period is calculated as follows:

	5	6	7	8	9	10	11	12	13	14	15
PV of ECF remaining (beginning) using original discount rate	2,385,642	2,004,924	1,605,170	1,385,429	1,254,700	817,435	758,307	696,222	631,033	462,585	285,714
PV of ECF remaining (beginning) using current discount rate	2,385,642	2,181,199	1,746,635	1,499,034	1,344,005	884,326	810,855	735,181	657,236	476,954	291,262
Beginning AOCI	-	(176,275)	(141,465)	(113,606)	(89,305)	(66,890)	(52,548)	(38,959)	(26,203)	(14,368)	(5,548)
PV of ECF remaining (ending) using original discount rate	2,004,924	1,605,170	1,385,429	1,254,700	817,435	758,307	696,222	631,033	462,585	285,714	-
PV of ECF remaining (ending) using current discount rate	2,181,199	1,746,635	1,499,034	1,344,005	884,326	810,855	735,181	657,236	476,954	291,262	-
Ending AOCI	(176,275)	(141,465)	(113,606)	(89,305)	(66,890)	(52,548)	(38,959)	(26,203)	(14,368)	(5,548)	-
Difference in Beginning and Ending AOCI (Current OCI)	(176,275)	34,810	27,859	24,300	22,415	14,342	13,590	12,756	11,835	8,821	5,548

* ECF Accretion is calculated as the PV of ECF remainning (beginning) multiplied by the current discount rate.
** ECF Accretion is calculated as if the discount rate did not change (that is, the PV of ECF remaining assuming the original discount rate multiplied by the original discount rate).
*** The amount transferred out of AOCI is the same for Alternatives A and B and is calculated as shown below Alternatives A and B.

Example 4 - Yearly changes in the discount rate

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	
Beginning discount rate	6.38%	6.18%	6.22%	5.15%	5.55%	6.16%	4.56%	3.82%	2.97%	3.43%	4.05%	4.75%	4.43%	2.80%	2.20%	
Ending discount rate	6.18%	6.22%	5.15%	5.55%	6.16%	4.56%	3.82%	2.97%	3.43%	4.05%	4.75%	4.43%	2.80%	2.20%	1.93%	
Expected Cash Outflows	1,500,000	2,500,000	1,500,000	1,500,000	500,000	500,000	300,000	200,000	500,000	100,000	100,000	100,000	200,000	200,000	300,000	10,000,000
Gross ECF remaining	10,000,000	8,500,000	6,000,000	4,500,000	3,000,000	2,500,000	2,000,000	1,700,000	1,500,000	1,000,000	900,000	800,000	700,000	500,000	300,000	
Less: PV of ECF remaining	7,795,897	6,835,690	4,751,811	3,681,035	2,331,319	1,913,617	1,634,652	1,450,687	1,345,428	869,308	782,636	700,921	638,325	478,433	293,542	
Effect of discounting	2,204,103	1,664,310	1,248,189	818,965	668,681	586,383	365,348	249,313	154,572	130,692	117,364	99,079	61,675	21,567	6,458	
Balance Sheet - ECF Rollforward																
PV of ECF remaining (beginning)	7,795,897	6,835,690	4,751,811	3,681,035	2,331,319	1,913,617	1,634,652	1,450,687	1,345,428	869,308	782,636	700,921	638,325	478,433	293,542	
Accretion on ECF*	497,378	422,446	295,563	189,573	129,388	117,879	74,540	55,416	39,959	29,817	31,697	33,294	28,278	13,396	6,458	1,965,082
Accretion (unwind of discount) -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Change in discount rate	42,415	(6,325)	133,661	(39,289)	(47,091)	103,156	41,495	39,325	(16,079)	(16,489)	(13,412)	4,111	11,829	1,713	-	239,021
Actual payout	(1,500,000)	(2,500,000)	(1,500,000)	(1,500,000)	(500,000)	(500,000)	(300,000)	(200,000)	(500,000)	(100,000)	(100,000)	(100,000)	(200,000)	(200,000)	(300,000)	(10,000,000)
PV of ECF remaining (ending)	6,835,690	4,751,811	3,681,035	2,331,319	1,913,617	1,634,652	1,450,687	1,345,428	869,308	782,636	700,921	638,325	478,433	293,542	(0)	
Income Statement (if OCI not used)																
Accretion*	(497,378)	(422,446)	(295,563)	(189,573)	(129,388)	(117,879)	(74,540)	(55,416)	(39,959)	(29,817)	(31,697)	(33,294)	(28,278)	(13,396)	(6,458)	(1,965,082)
Change in discount rate	(42,415)	6,325	(133,661)	39,289	47,091	(103,156)	(41,495)	(39,325)	16,079	16,489	13,412	(4,111)	(11,829)	(1,713)	-	(239,021)
Net I/S effect	(539,793)	(416,121)	(429,224)	(150,284)	(82,297)	(221,035)	(116,035)	(94,741)	(23,880)	(13,329)	(18,285)	(37,404)	(40,107)	(15,109)	(6,458)	(2,204,103)
Balance Sheet - Equity Rollforward																
Beginning Equity	-	(539,793)	(955,914)	(1,385,138)	(1,535,422)	(1,617,719)	(1,838,754)	(1,954,790)	(2,049,530)	(2,073,410)	(2,086,739)	(2,105,024)	(2,142,428)	(2,182,535)	(2,197,645)	
OCI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Income	(539,793)	(416,121)	(429,224)	(150,284)	(82,297)	(221,035)	(116,035)	(94,741)	(23,880)	(13,329)	(18,285)	(37,404)	(40,107)	(15,109)	(6,458)	(2,204,103)
Ending Equity	(539,793)	(955,914)	(1,385,138)	(1,535,422)	(1,617,719)	(1,838,754)	(1,954,790)	(2,049,530)	(2,073,410)	(2,086,739)	(2,105,024)	(2,142,428)	(2,182,535)	(2,197,645)	(2,204,103)	
Alternative A: Use OCI and lock in the accretion presented in NI																
Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	
OCI/AOCI																
Change in discount rate	(42,415)	6,325	(133,661)	39,289	47,091	(103,156)	(41,495)	(39,325)	16,079	16,489	13,412	(4,111)	(11,829)	(1,713)	-	(239,021)
Transfer out of AOCI	-	10,965	6,000	35,529	14,376	3,157	22,318	28,481	36,531	19,653	14,550	9,523	10,891	15,512	11,534	239,021
AOCI	(42,415)	(25,125)	(152,786)	(77,968)	(16,501)	(116,500)	(135,677)	(146,521)	(93,910)	(57,769)	(29,807)	(24,394)	(25,333)	(11,534)	-	-
Income Statement																
ECF Accretion**	(497,378)	(433,411)	(301,563)	(225,102)	(143,764)	(121,036)	(96,858)	(83,898)	(76,490)	(49,470)	(46,247)	(42,817)	(39,169)	(28,908)	(17,992)	(2,204,103)
Net I/S effect	(497,378)	(433,411)	(301,563)	(225,102)	(143,764)	(121,036)	(96,858)	(83,898)	(76,490)	(49,470)	(46,247)	(42,817)	(39,169)	(28,908)	(17,992)	(2,204,103)
Balance Sheet - Equity Rollforward																
Beginning Equity	-	(539,793)	(955,914)	(1,385,138)	(1,535,422)	(1,617,719)	(1,838,754)	(1,954,790)	(2,049,530)	(2,073,410)	(2,086,739)	(2,105,024)	(2,142,428)	(2,182,535)	(2,197,645)	
OCI	(42,415)	17,290	(127,661)	74,818	61,467	(99,999)	(19,177)	(10,843)	52,610	36,142	27,962	5,413	(938)	13,798	11,534	-
Net Income	(497,378)	(433,411)	(301,563)	(225,102)	(143,764)	(121,036)	(96,858)	(83,898)	(76,490)	(49,470)	(46,247)	(42,817)	(39,169)	(28,908)	(17,992)	(2,204,103)
Ending Equity	(539,793)	(955,914)	(1,385,138)	(1,535,422)	(1,617,719)	(1,838,754)	(1,954,790)	(2,049,530)	(2,073,410)	(2,086,739)	(2,105,024)	(2,142,428)	(2,182,535)	(2,197,645)	(2,204,103)	

Alternative B: Use OCI and present accretion at current rate and present amount reclassified to NI

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
OCI/AOCI																
Change in discount rate	(42,415)	6,325	(133,661)	39,289	47,091	(103,156)	(41,495)	(39,325)	16,079	16,489	13,412	(4,111)	(11,829)	(1,713)	-	(239,021)
Reclassification to NI***	-	10,965	6,000	35,529	14,376	3,157	22,318	28,481	36,531	19,653	14,550	9,523	10,891	15,512	11,534	239,021
AOCI	(42,415)	(25,125)	(152,786)	(77,968)	(16,501)	(116,500)	(135,677)	(146,521)	(93,910)	(57,769)	(29,807)	(24,394)	(25,333)	(11,534)	-	-
Income Statement																
ECF Accretion*	(497,378)	(422,446)	(295,563)	(189,573)	(129,388)	(117,879)	(74,540)	(55,416)	(39,959)	(29,817)	(31,697)	(33,294)	(28,278)	(13,396)	(6,458)	(1,965,082)
Reclassification - OCI***	-	(10,965)	(6,000)	(35,529)	(14,376)	(3,157)	(22,318)	(28,481)	(36,531)	(19,653)	(14,550)	(9,523)	(10,891)	(15,512)	(11,534)	(239,021)
Net I/S effect	(497,378)	(433,411)	(301,563)	(225,102)	(143,764)	(121,036)	(96,858)	(83,898)	(76,490)	(49,470)	(46,247)	(42,817)	(39,169)	(28,908)	(17,992)	(2,204,103)
Balance Sheet - Equity Rollforward																
Beginning Equity	-	(539,793)	(955,914)	(1,385,138)	(1,535,422)	(1,617,719)	(1,838,754)	(1,954,790)	(2,049,530)	(2,073,410)	(2,086,739)	(2,105,024)	(2,142,428)	(2,182,535)	(2,197,645)	
OCI	(42,415)	17,290	(127,661)	74,818	61,467	(99,999)	(19,177)	(10,843)	52,610	36,142	27,962	5,413	(938)	13,798	11,534	(0)
Net Income	(497,378)	(433,411)	(301,563)	(225,102)	(143,764)	(121,036)	(96,858)	(83,898)	(76,490)	(49,470)	(46,247)	(42,817)	(39,169)	(28,908)	(17,992)	(2,204,103)
Ending Equity	(539,793)	(955,914)	(1,385,138)	(1,535,422)	(1,617,719)	(1,838,754)	(1,954,790)	(2,049,530)	(2,073,410)	(2,086,739)	(2,105,024)	(2,142,428)	(2,182,535)	(2,197,645)	(2,204,103)	

Calulations Used in Alternatives A and B

The calculations in the highlighted section show the movement in the liability based on the movement in the discount rate. However, the movement in the liability based on the movement in the discount rate would not be shown in the financial statements.

The amount transferred out of AOCI is calculated such that at the end of each period, the amount in AOCI is equal to the difference between the PV of the ECF remaining (ending) using the original discount rate and the PV of the ECF remaining (ending) using the current discount rate. As such, the amount reclassified out of OCI each period is calculated as follows:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PV of ECF remaining (beginning) using original discount rate	7,795,897	6,793,276	4,726,687	3,528,249	2,253,352	1,897,115	1,518,151	1,315,009	1,198,907	775,397	724,868	671,114	613,931	453,100	282,008
PV of ECF remaining (beginning) using current discount rate	7,795,897	6,835,690	4,751,811	3,681,035	2,331,319	1,913,617	1,634,652	1,450,687	1,345,428	869,308	782,636	700,921	638,325	478,433	293,542
Beginning AOCI	-	(42,415)	(25,125)	(152,786)	(77,968)	(16,501)	(116,500)	(135,677)	(146,521)	(93,910)	(57,769)	(29,807)	(24,394)	(25,333)	(11,534)
PV of ECF remaining (ending) using original discount rate	6,793,276	4,726,687	3,528,249	2,253,352	1,897,115	1,518,151	1,315,009	1,198,907	775,397	724,868	671,114	613,931	453,100	282,008	-
PV of ECF remaining (ending) using current discount rate	6,835,690	4,751,811	3,681,035	2,331,319	1,913,617	1,634,652	1,450,687	1,345,428	869,308	782,636	700,921	638,325	478,433	293,542	-
Ending AOCI	(42,415)	(25,125)	(152,786)	(77,968)	(16,501)	(116,500)	(135,677)	(146,521)	(93,910)	(57,769)	(29,807)	(24,394)	(25,333)	(11,534)	-
AOCI (Current OCI)	(42,415)	17,290	(127,661)	74,818	61,467	(99,999)	(19,177)	(10,843)	52,610	36,142	27,962	5,413	(938)	13,798	11,534

* ECF Accretion is calculated as the PV of ECF remainning (beginning) multiplied by the current discount rate.

** ECF Accretion is calculated as if the discount rate did not change (that is, the PV of ECF remaining assuming the original discount rate multiplied by the original discount rate).

*** The amount transferred out of AOCI is the same for Alternatives A and B and is calculated as shown below Alternatives A and B.

Example 5: At inception, 5% discount rate; change to 7% at end of Year 5; ECF change at end of Year 8; and discount rate change to 8% at end of Year 10

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Beginning discount rate	5%	5%	5%	5%	5%	7%	7%	7%	7%	7%	8%	8%	8%	8%	8%	
Ending discount rate	5%	5%	5%	5%	7%	7%	7%	7%	7%	8%	8%	8%	8%	8%	8%	
Expected Cash Outflows (original)	1,500,000	2,500,000	1,500,000	1,500,000	500,000	500,000	300,000	200,000	500,000	100,000	100,000	100,000	200,000	200,000	300,000	10,000,000
Layer 2 (Added end of Year 8)									250,000	50,000	50,000	50,000	100,000	100,000	150,000	
ECF (end of Year 8)	1,500,000	2,500,000	1,500,000	1,500,000	500,000	500,000	300,000	200,000	750,000	150,000	150,000	150,000	300,000	300,000	450,000	10,750,000
Gross ECF remaining	10,000,000	8,500,000	6,000,000	4,500,000	3,000,000	2,500,000	2,000,000	1,700,000	2,250,000	1,500,000	1,350,000	1,200,000	1,050,000	750,000	450,000	
Less: PV of ECF remaining	8,188,629	7,098,060	4,952,963	3,700,611	2,385,642	1,851,930	1,481,565	1,285,274	1,762,865	1,136,266	1,032,411	965,004	892,204	663,580	416,667	
Effect of discounting	1,811,371	1,401,940	1,047,037	799,389	614,358	648,070	518,435	414,726	487,135	363,734	317,589	234,996	157,796	86,420	33,333	
Balance Sheet - Layer 1																
PV of ECF remaining (beginning)	8,188,629	7,098,060	4,952,963	3,700,611	2,385,642	1,851,930	1,481,565	1,285,274	1,175,244	757,511	688,274	643,336	594,803	442,387	277,778	
Accretion on ECF*	409,431	354,903	247,648	185,031	119,282	129,635	103,710	89,969	82,267	53,026	55,062	51,467	47,584	35,391	22,222	1,986,628
Change in discount rate	-	-	-	-	(152,994)	-	-	-	-	(22,262)	-	-	-	-	-	(175,257)
Changes in estimate																-
Actual payout	(1,500,000)	(2,500,000)	(1,500,000)	(1,500,000)	(500,000)	(500,000)	(300,000)	(200,000)	(500,000)	(100,000)	(100,000)	(100,000)	(200,000)	(200,000)	(300,000)	(10,000,000)
PV of ECF remaining (ending)	7,098,060	4,952,963	3,700,611	2,385,642	1,851,930	1,481,565	1,285,274	1,175,244	757,511	688,274	643,336	594,803	442,387	277,778	-	
Balance Sheet - Layer 2																
PV of ECF remaining (beginning)			-	-	-	-	-	-	587,622	378,755	344,137	321,668	297,401	221,193	138,889	
Accretion on ECF*									41,134	26,513	27,531	25,733	23,792	17,695	11,111	173,509
Change in discount rate										(11,131)						(11,131)
Changes in estimate								587,622		-						587,622
Actual payout									(250,000)	(50,000)	(50,000)	(50,000)	(100,000)	(100,000)	(150,000)	(750,000)
PV of ECF remaining (ending)			-	-	-	-	-	587,622	378,755	344,137	321,668	297,401	221,193	138,889	-	
Balance Sheet - Total ECF Rollforward																
PV of ECF remaining (beginning)	8,188,629	7,098,060	4,952,963	3,700,611	2,385,642	1,851,930	1,481,565	1,285,274	1,762,865	1,136,266	1,032,411	965,004	892,204	663,580	416,667	
Accretion on ECF*	409,431	354,903	247,648	185,031	119,282	129,635	103,710	89,969	123,401	79,539	82,593	77,200	71,376	53,086	33,333	2,160,137
Change in discount rate	-	-	-	-	(152,994)	-	-	-	-	(33,394)	-	-	-	-	-	(186,388)
Changes in estimate	-	-	-	-	-	-	-	587,622	-	-	-	-	-	-	-	587,622
Actual payout	(1,500,000)	(2,500,000)	(1,500,000)	(1,500,000)	(500,000)	(500,000)	(300,000)	(200,000)	(750,000)	(150,000)	(150,000)	(150,000)	(300,000)	(300,000)	(450,000)	(10,750,000)
PV of ECF remaining (ending)	7,098,060	4,952,963	3,700,611	2,385,642	1,851,930	1,481,565	1,285,274	1,762,865	1,136,266	1,032,411	965,004	892,204	663,580	416,667	-	
Income Statement (if OCI not used)																
Accretion*	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(129,635)	(103,710)	(89,969)	(123,401)	(79,539)	(82,593)	(77,200)	(71,376)	(53,086)	(33,333)	(2,160,137)
Change in discount rate	-	-	-	-	152,994	-	-	-	-	33,394	-	-	-	-	-	186,388
Change in estimate	-	-	-	-	-	-	-	(587,622)	-	-	-	-	-	-	-	(587,622)
Net I/S effect	(409,431)	(354,903)	(247,648)	(185,031)	33,712	(129,635)	(103,710)	(677,591)	(123,401)	(46,145)	(82,593)	(77,200)	(71,376)	(53,086)	(33,333)	(2,561,371)
Balance Sheet - Equity Rollforward																
Beginning Equity	-	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,163,301)	(1,292,936)	(1,396,646)	(2,074,237)	(2,197,637)	(2,243,782)	(2,326,375)	(2,403,575)	(2,474,952)	(2,528,038)	
OCI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Income	(409,431)	(354,903)	(247,648)	(185,031)	33,712	(129,635)	(103,710)	(677,591)	(123,401)	(46,145)	(82,593)	(77,200)	(71,376)	(53,086)	(33,333)	(2,561,371)
Ending Equity	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,163,301)	(1,292,936)	(1,396,646)	(2,074,237)	(2,197,637)	(2,243,782)	(2,326,375)	(2,403,575)	(2,474,952)	(2,528,038)	(2,561,371)	

Alternative A: Use OCI and lock in the accretion presented in NI

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**Total**
OCI/AOCI																
Change in discount rate	-	-	-	-	152,994	-	-	-	-	33,394	-	-	-	-	-	186,388
Transfer out of AOCI	-	-	-	-	-	(29,389)	(23,451)	(20,698)	(19,532)	(12,154)	(19,809)	(19,280)	(18,597)	(14,244)	(9,235)	(186,388)
AOCI	-	-	-	-	152,994	123,605	100,154	79,457	59,925	81,164	61,356	42,076	23,479	9,235	-	-
Income Statement																
Change in estimate	-	-	-	-	-	-	-	(587,622)	-	-	-	-	-	-	-	(587,622)
ECF Accretion**	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(69,271)	(103,869)	(67,385)	(62,784)	(57,921)	(52,779)	(38,842)	(24,099)	(1,973,750)
Net I/S effect	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(656,893)	(103,869)	(67,385)	(62,784)	(57,921)	(52,779)	(38,842)	(24,099)	(2,561,371)
Balance Sheet - Equity Rollforward																
Beginning Equity	-	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,163,301)	(1,292,936)	(1,396,646)	(2,074,237)	(2,197,637)	(2,243,782)	(2,326,375)	(2,403,575)	(2,474,952)	(2,528,038)	
OCI	-	-	-	-	152,994	(29,389)	(23,451)	(20,698)	(19,532)	21,240	(19,809)	(19,280)	(18,597)	(14,244)	(9,235)	-
Net Income	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(656,893)	(103,869)	(67,385)	(62,784)	(57,921)	(52,779)	(38,842)	(24,099)	(2,561,371)
Ending Equity	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,163,301)	(1,292,936)	(1,396,646)	(2,074,237)	(2,197,637)	(2,243,782)	(2,326,375)	(2,403,575)	(2,474,952)	(2,528,038)	(2,561,371)	

Alternative B: Use OCI and present accretion at current rate and present amount reclassified to NI

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**Total**
OCI/AOCI																
Change in discount rate	-	-	-	-	152,994	-	-	-	-	33,394	-	-	-	-	-	186,388
Reclassification to NI***	-	-	-	-	-	(29,389)	(23,451)	(20,698)	(19,532)	(12,154)	(19,809)	(19,280)	(18,597)	(14,244)	(9,235)	(186,388)
AOCI	-	-	-	-	152,994	123,605	100,154	79,457	59,925	81,164	61,356	42,076	23,479	9,235	-	-
Income Statement																
ECF Accretion*	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(129,635)	(103,710)	(89,969)	(123,401)	(79,539)	(82,593)	(77,200)	(71,376)	(53,086)	(33,333)	(2,160,137)
Change in estimate	-	-	-	-	-	-	-	(587,622)	-	-	-	-	-	-	-	(587,622)
Reclassification - OCI***	-	-	-	-	-	29,389	23,451	20,698	19,532	12,154	19,809	19,280	18,597	14,244	9,235	186,388
Net I/S effect	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(656,893)	(103,869)	(67,385)	(62,784)	(57,921)	(52,779)	(38,842)	(24,099)	(2,561,371)
Balance Sheet - Equity Rollforward																
Beginning Equity	-	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,163,301)	(1,292,936)	(1,396,646)	(2,074,237)	(2,197,637)	(2,243,782)	(2,326,375)	(2,403,575)	(2,474,952)	(2,528,038)	
OCI	-	-	-	-	152,994	(29,389)	(23,451)	(20,698)	(19,532)	21,240	(19,809)	(19,280)	(18,597)	(14,244)	(9,235)	-
Net Income	(409,431)	(354,903)	(247,648)	(185,031)	(119,282)	(100,246)	(80,259)	(656,893)	(103,869)	(67,385)	(62,784)	(57,921)	(52,779)	(38,842)	(24,099)	(2,561,371)
Ending Equity	(409,431)	(764,334)	(1,011,983)	(1,197,013)	(1,163,301)	(1,292,936)	(1,396,646)	(2,074,237)	(2,197,637)	(2,243,782)	(2,326,375)	(2,403,575)	(2,474,952)	(2,528,038)	(2,561,371)	

Calulations Used in Alternatives A and B

The calculations below are used to show the movement in the liability based on the movement in the discount rate. However, the movement in the liability based on the movement in the discount rate would not be shown in the financial statements.

The amount transferred out of AOCI is calculated such that at the end of each period, the amount in AOCI is equal to the difference between the PV of the ECF remaining (ending) using the original discount rate and the PV of the ECF remaining (ending) using the current discount rate. As such, the amount reclassified out of OCI each period is calculated as follows:

Layer 1 - ECF at inception											
PV of ECF remaining (beginning) using original discount rate	2,385,642	2,004,924	1,605,170	1,385,429	1,254,700	817,435	758,307	696,222	631,033	462,585	285,714
PV of ECF remaining (beginning) using current discount rate	2,385,642	1,851,930	1,481,565	1,285,274	1,175,244	757,511	688,274	643,336	594,803	442,387	277,778
Beginning AOCI (Layer 1)	-	152,994	123,605	100,154	79,457	59,925	70,033	52,886	36,231	20,198	7,937
PV of ECF remaining (ending) using original discount rate	2,004,924	1,605,170	1,385,429	1,254,700	817,435	758,307	696,222	631,033	462,585	285,714	-
PV of ECF remaining (ending) using current discount rate	1,851,930	1,481,565	1,285,274	1,175,244	757,511	688,274	643,336	594,803	442,387	277,778	-
Ending AOCI (Layer 1)	152,994	123,605	100,154	79,457	59,925	70,033	52,886	36,231	20,198	7,937	-
Layer 2 - ECF change at end of Year 8											
PV of ECF remaining (beginning) using rate at time of ECF change						378,755	355,268	330,137	303,246	224,474	140,187
PV of ECF remaining (beginning) using current rate						378,755	344,137	321,668	297,401	221,193	138,889
Beginning AOCI (layer 2)						-	11,131	8,469	5,845	3,280	1,298
PV of ECF remaining (ending) using rate at time of ECF change						355,268	330,137	303,246	224,474	140,187	-
PV of ECF remaining (ending) using current rate						344,137	321,668	297,401	221,193	138,889	-
Ending AOCI (Layer 2)						11,131	8,469	5,845	3,280	1,298	-
Total Beginning AOCI (Layer 1 + Layer 2)	-	152,994	123,605	100,154	79,457	59,925	81,164	61,356	42,076	23,479	9,235
Total Ending AOCI (Layer 1 + Layer 2)	152,994	123,605	100,154	79,457	59,925	81,164	61,356	42,076	23,479	9,235	-
Difference in Beginning and Ending AOCI	152,994	(29,389)	(23,451)	(20,698)	(19,532)	21,240	(19,809)	(19,280)	(18,597)	(14,244)	(9,235)

* ECF Accretion is calculated as the PV of ECF remainning (beginning) multiplied by the current discount rate.

** ECF Accretion is calculated as if the discount rate did not change (that is, the PV of ECF remaining assuming the original discount rate multiplied by the original discount rate).

*** The amount transferred out of AOCI is the same for Alternatives A and B and is calculated as shown below Alternatives A and B.