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Project	Insurance Contracts		
Paper topic	Transition: Determination of the discount rate		
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What is this paper about?

1. This is the second in a series of papers on transition. The purpose of this paper is to ask the boards to consider a practical expedient to determine the discount rate in the retrospective period, when determining the discount rate would otherwise be impracticable. The determination of the discount rate will affect:
 - i. The margin for contracts entered into during the retrospective period.
 - ii. The determination of the discount rate to be used as the “locked-in” rate for the recognition of interest expense for the accretion of the discount and to determine the amounts to record to other comprehensive income.

Summary of staff recommendations

2. The staff recommend that for those periods for which it would be impracticable to determine the discount rate that would reflect the characteristics of the liability using one of the approaches tentatively decided by the boards, insurers should:
 - i. Calculate the discount rate in accordance with the standard and determine an observable rate (i.e., AA corporate bond rate) for at least the three most recent years prior to the transition date. If there is not an observable rate, determine the margin between the calculated rate and the observable rate

- ii. Use the same observable reference point to determine the rate (plus or minus a margin if applicable) for each of the years in the retrospective period (i.e., the AA corporate bond rate in each of those years).
- iii. That rate determined in the paragraph above should be used for recognizing interest expense on the accretion of the discount rate.
- iv. That cumulative effect of the difference between that rate and the discount rate determined at the transition date should be recorded to accumulated other comprehensive income.

Background

Relevant previous tentative decisions

- 3. The boards have discussed discounting at numerous meetings, the tentative decisions of which are included below.
- 4. At the 17-18 February, 2011 joint meeting the boards tentatively decided on the following axiom and assumption:
 - a. The accounting model should be based on current estimates, rather than carrying forward estimates made at contract inception and inputs that are consistent with observable market data, where available.
 - b. Money has a time value, and an entity more faithfully represents its position when it measures its liabilities in a way that includes the time value of money.
- 5. Also at that meeting, the boards tentatively decided to confirm the approach in the ED/DP that the objective of the discount rate is to adjust the future cash flows for the time value of money and to reflect the characteristics of the insurance contract liability. The boards tentatively decided not to prescribe a method for determining the discount rate and therefore allow insurers to use a bottom-up approach (i.e., risk-free rate plus a liquidity adjustment) or a top-down approach (see paragraph 7) , but whichever method was used, the discount rate should:
 - a. Be consistent with observable current market prices for instruments with cash flows whose characteristics reflect those of the insurance contract

liability, including timing, currency, and liquidity, but excluding the effect of the insurer's non-performance risk.

- b. Exclude any factors that influence the observed rates but that are not relevant to the insurance contract liability (for example, risks that are not present in the liability but that are present in the instrument for which the market prices are observed, such as any investment risk taken by the insurer that cannot be passed to the policyholder).
 - c. Reflect only the effect of risks and uncertainties that are not reflected elsewhere in the measurement of the insurance contract liability.
6. At the 15, March 2011 joint meeting the boards tentatively decided that, to the extent that the amount, timing, or uncertainty of the cash flows arising from insurance contracts depends wholly or partly on the performance of specific assets (i.e., participating contracts), the insurer should adjust those cash flows using a discount rate that reflects that dependency.
7. At the April 2011 joint meeting, the boards tentatively decided that in applying the top-down approach:
 - a. An insurer should determine an appropriate yield curve based on current market information. The insurer may base its 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.
 - b. 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.
 - c. 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:

- i. 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.
 - ii. 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).
 - d. An insurer using a top-down approach need not make adjustments for remaining differences between the liquidity inherent in the liability cash flows and the liquidity inherent in the asset cash flows.
8. At the 15-16 December 2011 joint meeting the boards tentatively decided to provide a practical expedient that would permit insurers applying the premium allocation approach not to discount portfolios where the incurred claims are expected to be paid within 12 months of the insured event, unless facts and circumstances indicate that payments will no longer occur within 12 months.
9. Finally, at the 22-24 May 2012 joint meeting, the boards tentatively decided that an insurer should:
- a. Present in OCI changes in the insurance liability arising from changes in the discount rate¹
 - b. Present in profit or loss interest expense using the discount rate locked in at inception of the insurance contract. The discount rate locked in at inception of the insurance contract should be applied to changes in expected cash flows

¹ At a future meeting the boards will discuss how this tentative decision applies to participating contracts and universal-life type contracts.

Staff analysis

Objectives

10. When dealing with the two issues in this paper it is important to keep in mind the objectives that the staff identified in Agenda Paper 2B/89B.
 - a. **Objective #1:** Achieve *consistent measurement of the insurance contracts liability and the margin* (that is, single or residual margin) on the insurance contracts inforce at the date of transition and contracts written subsequent to transition.
 - b. **Objective #2:** Allow for *comparability of earnings* on the inforce insurance contracts at the transition date and on new contracts written subsequent to the date of transition. That is, the amount of single or residual margin earned and the volume information that is recognized (i.e., premium and claims).
 - c. **Objective #3:** Be *practical* and meet the *cost-benefit test*. That is, the benefits of providing that information should justify the costs.
11. The discount rate is one of the key assumptions in the measurement of the insurance liability and plays a key factor in determining the margin at the inception date of a portfolio of insurance contracts. The margin is equal to the difference between the premium charged and the present value of the expected cash flows (plus a risk adjustment under the IASB approach). Therefore the discount rate applied at a contract's inception has a significant impact on the determination of the margin. In addition, the boards tentatively decided that the impact from changes in the discount rate since inception of the contract should be recorded to other comprehensive income while interest expense accreted using the discount rate at inception of the contract should be recorded in profit or loss.
12. Based on the board's tentative decision, insurers may find it operationally challenging to determine the discount rate using either the top-down or bottom-up approach. Using a top-down approach, insurers most likely do not have the data regarding the yields expected at past dates on their past portfolios. In addition, the expected and unexpected default on that portfolio may not be available and if available would be difficult to determine without using hindsight. Finally,

determining the duration mismatch and the adjustment for that mismatch could be challenging. Using a bottom-up approach may be simpler although the same arguments that led the boards to allow the top-down approach to be used would apply for the retrospective period. That is, there may be no distinct method to determine the liquidity adjustment to make the discount rate using the bottom-up approach reflect the characteristics of the portfolio of insurance contracts.

Determination of the discount rate in calculating the margin

13. Retrospective application of a new accounting principle requires distinguishing information that:
 - a. provides evidence of circumstances that existed on the date(s) as at which the transaction, other event or condition occurred, and
 - b. would have been available when the financial statements for that prior period were authorized for issue.
14. IAS 8 paragraph 52 acknowledges that for some types of estimates, such as a fair value measurement that uses significant unobservable inputs, it is impracticable to distinguish these types of information. IAS 8 states that when retrospective application or retrospective restatement would require making a significant estimate for which it is impossible to distinguish these two types of information, it is impracticable to apply the new accounting policy retrospectively. Some would analogize the discount rate to a fair value measurement.
15. Based on these factors the staff considered the following alternatives to determine the initial discount rate for portfolios of contracts written during the retrospective period:
 - a. *Alternative 1*: The discount rate at transition.
 - b. *Alternative 2*: The discount rate applied under current accounting standards
 - c. *Alternative 3*: A market observable rate that is equivalent to the discount rate determined for the periods between the transition date and the year-end in which the standard is effective.

Alternative 1, the discount rate at transition

16. Under Alternative 1 an insurer would discount the insurance liabilities at transition using a current top-down or bottom-up discount rate that reflects the characteristics of the insurance liabilities. For participating contracts, the insurer shall adjust the current discount rate to reflect the nature and extent of dependency between the insurance liabilities and the assets backing such liabilities.
17. This alternative may be the most simple and least costly however, it would not reflect the assumptions of the insurer at the inception date of the contracts nor the underlying economics of the portfolio of insurance contracts written prior to the transition date. Life insurers may have priced the contracts assuming a high interest rate environment, high investment income and a high profit margin at inception. As a result, alternative 1 could have unintended consequences on insurer's performance by unduly minimizing the estimated margins.
18. Additionally, the discount rate to be applied to the expected cash flows and therefore the determination of the margin, is dependent on the market at transition. While the boards have not yet determined the transition date for the proposed insurance guidance, insurers have noted that applying the boards' tentative decisions in a low interest rate environment (e.g., 2% to 3%) could result in a significant adverse impact on an insurer's capital.
19. This may not be reflective of the capital adequacy of the insurer especially for insurance contracts that originated in a high interest rate environment (6% to 9%). Because these contracts were written at a time with higher interest rates (and therefore higher discount rates) the liability would have been lower at contract inception resulting in a higher expected margin. While the low rates will be reflected in the measurement of the liability, the changes from contract inception will be reflected in other comprehensive income which could be interpreted by users to mean the insurers have lower capital when in fact analysis shows that they don't expect to have losses. In addition, because the margin is partially dependent on the discount rate used at inception of the contract, the lower the discount rate, the lower the margin. This lower margin that will be released over time may not be reflective of the profit earned on the insurance contracts.

20. On the contrary, if there is a high interest rate environment at the time of transition, the discount rate is likely to be higher, reducing the present value of future cash flows and increasing the margin at transition. Because the discount rate would not reflect the economics at the time the contracts were sold, insurers may show reduced profitability which results not from changes in assumptions but rather from the discount rate determined solely at the date of transition to the new standard.
21. Additionally, as previously noted, the boards tentatively decided that interest expense for the accretion of the discount on the liability should be based on the initial locked-in rate determined at contract inception. Using a low discount rate that is not reflective of the pricing could potentially result in too little interest expense being recognized each period.

Alternative 2: The discount rate applied under current accounting standards

22. Under alternative 2 the discount rate at transition shall be based on the current discount rate that insurers apply under current accounting standards. Most insurers will have this discount rate for specific portfolios of contracts that are in-force at the transition date. However, because the discount rate is updated each period for other portfolios of contracts the insurer may not have the initial discount rate. Still other portfolios, such as non-life insurance liabilities, are not discounted in many jurisdictions under current accounting.
23. An advantage of alternative 2 is that for portfolios of contract in which the insurer has access to the initial discount rate (i.e., the locked-in discount rate) the time and costs in determining the discount rate would be minimal. A disadvantage of alternative 2 is that the discount rate used to determine the present value of expected cash flows and therefore the margin, would not be consistent with the discount rate applied to contracts written after the transition date. This would make it difficult for financial statement users to compare trends in accretion and margin over time.

Alternative 3: An observable rate for the respective periods that is equivalent to the discount rate determined in accordance with the standard

24. Under alternative 3, insurers would determine the discount rate using the proposed insurance contracts standard for a minimum of the most recent three years leading up to the transition date. That rate would be compared to an observable market for those respective years' to determine the best corresponding rate. Using that observable market, the discount rate to be applied to the expected cash flows would be the equivalent rate for each of the years in which the insurer applies the standard retrospectively.
25. Such observable rates may include:
- a. high-quality corporate bond rate (applied in for example IAS 19 *Employee benefits*),
 - b. high-quality fixed-income debt instruments (applied in for example the *Compensation – Retirement Benefits Topic (715)* of the FASB Accounting Standards Codification, first introduced to US GAAP by FAS 87 *Employers' Accounting for Pensions* and FAS 106 *Employers' Accounting for Postretirement Benefits Other Than Pensions.*)
 - c. government bond yield
 - d. corporate borrowing rate

See Appendix A for examples of yield curves that may be used.

26. The staff do not believe that the boards should specify an observable market. In Agenda Paper 3G/60G, *Practical Expedient for the Discount Rate*, from the February 2011 joint board meeting, the staff indicated the difficult in selecting a specific rate that could be applied in multiple jurisdictions. For example:
- a. If a government rate was required, adjustments may need to be made for jurisdictions with government rates that reflect credit risks and high inflation. Alternatively if a government rate for a neighboring, more stable jurisdiction was applied, an adjustment would need to be made to reflect the different macroeconomic environment.
 - b. If a high quality corporate bond rate was required the boards would need to define what "high quality" means and whether this would be determined

from a local or international perspective. In addition, there are jurisdictions in which the corporate bond market is not sufficiently deep to determine a discount rate by reference to a high quality corporate bond.

27. Insurers in some jurisdictions may still find it difficult to determine an equivalent observable yield to that which they calculate using either the bottom-up or top-down approach. In these situations insurers should interpolate to an observable rate (i.e., the differential between the rate determined using the bottom-up or top-down rate and an observable rate, adjusted for changes within the insurers organization and the products sold for the retrospective period).
28. An argument against this approach is that the rate applied may not be identical to the rate that would be used if the insurer determined the discount rate using a top-down or bottom-up approach for each year in the retrospective period. However, the staff believe it is a valid proxy. Because the yield chosen for the practical expedient is based on an equivalent yield (or nearest proxy) to that which is determined applying the board's tentative decisions (i.e., either bottom-up or top-down approach), the staff believe that there is support for the rate that would be used in the retrospective period. The staff believe that using only one year as a reference could be considered an anomaly whereas requiring three years could be considered a trend. In addition, the staff do not believe that three years would be unduly burdensome or impractical.

Determination of the discount rate to be used as the “locked-in” rate for the recognition of interest expense for the accretion of the discount and to determine the amounts to record to other comprehensive income

29. The staff considered whether the “locked-in” discount rate for determining the interest expense for the accretion of the discount and to determine the amounts to record to other comprehensive income should be different than that which is determined in the section above.
30. The staff do not believe there is a compelling reason to use a different rate. Therefore the initial discount rate applied to portfolios of contracts written before

transition to the new standard should be the discount rate that is locked in to determine interest expense subsequently presented in profit or loss.

Staff recommendation

31. Although the boards tentatively decided not to provide a practical expedient for determining the discount rate to be applied in the measurement of the insurance contract liability, as previously stated, the staff believe that for transition a practical expedient should be allowed for cases when retrospective application of the discount rate required by the standard would be impracticable.
32. The staff recommend Alternative 3: An observable rate for the respective periods that is equivalent to the discount rate determined in accordance with the standard for the three most recent years prior to the transition date.
33. The staff also recommend that the discount rate determined at the inception of the contracts or the earliest practical period would be deemed to be the locked-in discount rate for purposes of the recognition of interest expense for the accretion of the discount and to determine the amounts to record to other comprehensive income.

Question 2: Practical expedient for determining the discount rate to be applied in those periods for which it would be impracticable to determine the discount rate using the boards' tentative decision

Do boards agree with the staff recommendation that:

For those periods for which it would be impracticable to determine the discount rate that would reflect the characteristics of the liability using one of the approaches tentatively decided by the boards, insurers should:

- a. Calculate the discount rate in accordance with the standard and determine an observable rate (i.e., AA corporate bond rate) for at least the three most recent years prior to the transition date. If there is not an observable rate, determine the margin between the calculated rate and the observable rate
- b. Use the same observable reference point to determine the rate (plus or minus a margin if applicable) for each of the years in the retrospective period (i.e., the AA corporate bond rate in each of those years)
- c. That rate determined in the paragraph above should be used for recognizing interest expense on the accretion of the discount rate.
- d. The cumulative effect of the difference between that rate and the discount rate determined at the transition date should be recorded to accumulated other comprehensive income.

Appendix A: Examples of observable market yields (data as of 5 September 2012)**Government Treasury Bond Rates (Source: Forexpros)**

Country	3 month	6 month	1 year	2 year	3 year	5 year	10 year	20 year	30 year
US	0.106	0.136	0.162	0.238	0.309	0.622	1.594	NA	2.694
UK	0.444	0.416	0.097	0.117	0.137	0.616	1.656	2.508	2.963
Japan	0.114	0.12	0.099	0.094	0.105	0.2	0.8	1.642	1.869
S. Korea	NA	NA	2.75	2.76	2.75	2.83	2.99	3.04	NA
Brazil	NA	NA	7.595	8.245	8.32	8.99	9.69	NA	NA
Germany	-0.089	0.007	0.022	-0.008	0.042	0.394	1.441	2.112	2.251
India	8.2	8.2	7.996	7.975	7.998	8.167	8.18	NA	8.611
Greece	6.04	6.28	NA	347.605	146.617	61.145	21.966	NA	18.786
South Africa	5.3	NA	NA	NA	5.405	5.875	6.645	7.85	8.075

US Bond Rates (Source: ValuBond)

	AAA				AA				A			
	2 year	5 year	10 year	20 year	2 year	5 year	10 year	20 year	2 year	5 year	10 year	20 year
Municipal Bonds	0.39	0.77	1.74	3.44	0.55	1.01	1.68	2.98	0.72	1.39	2.16	2.99
Corporate Bonds		0.84	2.58	3.72	0.49	1.24	2.21	3.59	0.83	1.8	2.47	3.88

**10 Year Government Bond Spreads
(Source: Financial Times Market Data)**

Country	Latest yield	Spread vs bund	Spread vs T-bonds
Australia	2.98%	1.54	1.39
Austria	1.98%	0.54	0.39
Belgium	2.67%	1.23	1.09
Canada	1.76%	0.32	0.18
Denmark	1.51%	0.07	-0.08
Finland	1.80%	0.36	0.22
France	2.24%	0.8	0.66
Germany	1.44%	--	-0.14
Greece	21.97%	20.53	20.38
Ireland	5.96%	4.52	4.38
Italy	5.50%	4.06	3.92
Japan	0.80%	-0.64	-0.78
Netherlands	1.83%	0.39	0.25

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New Zealand	3.50%	2.06	1.91
Portugal	9.13%	7.69	7.54
Spain	6.44%	5	4.85
Sweden	1.42%	-0.02	-0.16
Switzerland	0.52%	-0.92	-1.06
UK	1.63%	0.19	0.05
US	1.58%	0.14	--