



Project	Insurance Contracts
Topic	Policyholder Behaviour

Purpose

1. This paper reviews the treatment of contractual features that permit policyholders to take actions that change the cash flows that will result from a contract.
2. The IASB has reached tentative decisions on many of the issues discussed in this paper and will be asked to reaffirm those tentative decisions. The FASB has not discussed in depth most of the issues in this paper and will be asked to reach tentative decisions on those issues.

Summary of recommendations

3. The staff recommends that:
 - (a) policyholder options and existing coverage related options, forwards, and guarantees should be included in the measurement of the insurance contract on a look through basis using the expected value of future cash flows (to the extent those options are within the boundary of the existing contract). Among other things, this means no deposit floor would apply.
 - (b) all options, forwards, and guarantees not related to the existing insurance contract coverage should be excluded from the measurement of that contract. They should be recognized and measured as new insurance contracts or other stand-alone instruments according to their nature.

This paper has been prepared by the technical staff of the FAF and the IASCF for discussion at a public meeting of the FASB or the IASB.

The views expressed in this paper are those of the staff preparing the paper. They do not purport to represent the views of any individual members of the FASB or the IASB.

Comments made in relation to the application of IFRSs or U.S. GAAP do not purport to be acceptable or unacceptable application of IFRSs or U.S. GAAP.

The tentative decisions made by the FASB or the IASB at public meetings are reported in *FASB Action Alert* or in *IASB Update*. Official pronouncements of the FASB or the IASB are published only after each board has completed its full due process, including appropriate public consultation and formal voting procedures.

Structure of the paper

4. The rest of this paper is divided into the following sections:
 - (a) Background (paragraphs 6 through 12)
 - (b) Policyholder behaviour (paragraphs 13 through 33)
 - (c) Other options, forwards, and guarantees (paragraphs. 34 through 38)
5. This paper does not address:
 - (a) The boundary of an insurance contract. As noted in paragraph 8(b) below, the IASB has reached a tentative decision on the contract boundary, but asked the staff to do some follow-up work. The FASB has not discussed the contract boundary. The IASB's field test is gathering some input for the follow-up work. We will bring contract boundaries, including the results of the field tests, for further consideration by the boards at a future meeting.
 - (b) The level of aggregation of insurance contracts (e.g., a portfolio or a book of business) used for measuring an insurance contract or contract liability. Please note that, as a practical matter, insurance contract and insurance liability measurements are often made based on a portfolio of similar contracts. We plan to discuss this issue with the Boards at a future meeting.
 - (c) Policyholder participation (including policyholder dividends). The boards discussed that issue in November and we plan a follow-up discussion for February.
 - (d) Financial statement presentation for the balance sheet or results of operations.

Background

Policyholder behaviour

6. Many insurance contracts contain features that enable policyholders to take actions that change the amount, timing, uncertainty or nature of benefits that they will receive. Examples of such features include:

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- (a) Options to cancel a contract (with or without a surrender value)
 - (b) Options to terminate or suspend the payment of premiums
 - (c) Options to increase or decrease the amount of coverage (with or without further underwriting procedures to assess the risks of any increased coverage)
 - (d) Options to add coverage of a different kind
 - (e) Options to withdraw cash from a contract, or to take out a loan secured on the contract.
 - (f) Options to change the nature of the assets underlying investment-linked insurance contracts.
 - (g) Options to change the form of policyholder participation, for example to change from a participating contract to a non-participating contract or vice versa.
7. This paper considers how to deal with such options, and policyholder behaviour in relation to such options, in a measurement that includes future cash flows on an expected value basis. (The term “policyholder behaviour” is often used to describe how policyholders exercise such options.) Such a measurement considers a range of scenarios that reflects the full range of possible outcomes. Each scenario specifies the amount and timing of the cash flows for a particular outcome, and the estimated probability of that outcome. The cash flows from each scenario are discounted and weighted by the estimated probability of that outcome, to derive an expected present value.
8. The IASB tentatively decided in May 2009 that:
- (a) the measurement of the insurance liability should include the expected (ie probability-weighted) cash flows (future premiums and other cash flows resulting from those premiums, eg benefits and claims) resulting from those contracts, including those cash flows whose amount or timing depends on whether policyholders exercise options in the contracts.
 - (b) to identify the boundary between existing contracts and new contracts, the starting point would be to consider whether the insurer can cancel

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the contract or change the pricing or other terms. The staff should develop more specific proposals for identifying the boundary. As noted in paragraph 5(a), this will be discussed at a later meeting.

9. Because there is no market for insurance renewal options or any formulaic approach (e.g., Black Scholes) for directly valuing or determining an intrinsic value for an insurance contract renewal option, the principal alternative is to “look through” the option and base the option’s value on the future expected cash flows resulting from expected (probability-weighted) policyholder behaviour.

Contract boundary

10. The contract boundary contains all cash flows that relate to the existing insurance contract. All cash flows arising outside that boundary form part of a different contract.
11. The IASB has tentatively adopted the contract boundary principle that a current insurance contract terminates when the insurer has the unrestricted right to reunderwrite and reprice that contract. However, in adopting that principle, the IASB asked the staff to investigate whether additional guidance is necessary to implement the principle. As noted in paragraph 5(a), the staff will follow up at a future meeting.

FASB actions on these issues

12. The FASB has not deliberated policyholder behaviour or contract boundaries but the staff believes it is important for the boards to discuss these critical issues in a joint meeting. Policyholder behaviour will be discussed at this meeting and contract boundaries at a future meeting.

Policyholder behaviour

The Discussion Paper view of policyholder behaviour

13. The 2007 IASB Discussion Paper, *Preliminary Views on Insurance Contracts*, proposed a current exit value measurement of the insurance liability based on

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building blocks like those described in agenda paper 6A (FASB memorandum 35A), Measurement objective and risk adjustment, (except that no residual margin was included, thus allowing the possibility of a gain at inception).

14. The Discussion Paper would have included in the measurement future premiums (and resulting additional cash outflows, such as claims additional and other policyholder benefits) if they met one of the following conditions:
 - (a) The insurer could compel the policyholder to pay those future premiums.
 - (b) The receipt of those future premiums is unfavourable to the insurer i.e., their risk-adjusted expected present value is less than the risk-adjusted expected present value of the resulting additional future contract benefits for policyholders.
 - (c) The contract provides the policyholder with guaranteed insurability—i.e., so long as the policyholder continues to pay the premiums, the insurer is obligated to continue the policyholder's insurance coverage. The Discussion Paper characterized this circumstance as creating a customer intangible asset, but decided that it would be arbitrary to separate it from the measurement of the contract liability and therefore simply proposed including the net benefit (ie the future premium cash inflows less the resulting benefit and claims cash outflows) as part of the measurement of that contract.
15. The condition in paragraph 14(a) is noncontroversial and is not discussed further in this paper. However, the respondents to the Discussion Paper took exception to criteria 14(b) and 14(c). They commented that neither criterion was practicable or even feasible to implement. Typically, the insurer would not have information to determine (a) whether the receipt of future premiums for a particular contract (or sub-group of contracts) would be unfavourable to the insurer and (b) determining whether guaranteed insurability was the motivating factor for the policyholder to renew a contract would be virtually impossible to determine.

Approaches for accounting for policyholder options

16. Below are two approaches to accounting for policyholder's options within an insurance contract:
- (a) An approach that treats the contract as forming a single liability or asset at the time when the contract itself qualifies for recognition—i.e., when the insurer enters into the contract or otherwise becomes obligated to the policyholder. The measurement of that liability or asset would include the expected (ie probability-weighted) present value of all future cash flows arising within the contract boundary.
 - (b) A components approach which would require each contractual right and contractual obligation to satisfy the definition of an asset or liability in order to qualify for recognition. As noted in paragraph 21(a), proponents of this approach argue that the insurer has no asset in relation to future premiums specified in the contract if the insurer cannot require to require the policyholder to pay those premiums.
17. The measurement of the amount described in paragraph 16(b) would require valuing the option. Three approaches have been identified for that valuation:
- (a) Value the option based on a similar market component. Since insurance contract renewal options are occasionally bought or sold, there is a possibility that such a value could be discerned. However, since the option for each type of contract written by a specified insurer to policyholders with particular characteristics is arguably a unique instrument—any “market” based valuation is unlikely to be readily or reliably determined.
 - (b) Value the option based on a mathematical model such as Black Scholes. The staff is not aware that any such model has been considered, let alone developed, for options considered in this paper.
 - (c) Value the option (the look through approach)—i.e., value the option based on the expected future cash flows related to that option. This also would involve valuing all options (and resulting future cash flows that fall within the boundary of the contract). Note that this method would require a probabilistic evaluation of future cash flows related to

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the contract and appears to be not dissimilar from the lattice approach of valuing options permitted by the boards for valuing employee stock options. It also treats the contract as forming a single liability or asset at the time when the contract itself qualifies for recognition).

18. Because of the impracticality of approaches in paragraph 17(a) and (b) and the lack of usefulness of the resulting information, the staff recommends the approach in paragraph 17(c)—the look through approach, an approach which is similar to the basic expected value approach used for measuring the contract obligation using the expected value of the premium and benefit and claims cash flows. It also gives a similar result to the approach described in paragraph 16(a) (treat the contract as forming a single liability or asset at the time when the contract itself qualifies for recognition).

Application of an expected cash flow approach

19. Of course, the probability weighted present value of net future cash flows approach is one of the building blocks tentatively adopted by the boards for measuring insurance contract obligations. Including the cash flows related to policyholder options in this approach simply adds another contractual element to the measurement of the insurance contract.
20. A simple example, taken from IASB Agenda Paper 4C for the IASB's October 2009 meeting, will demonstrate this approach:

Background

Insurer A enters into an endowment contract with a duration of two years. The premium is CU120 for year 1, payable at inception, and CU130 for year 2, payable at the beginning of year 2. The policyholder has no option to surrender the contract. However, the policyholder can decide not to pay the premium for year 2. In that case no death coverage will be provided for year 2. If the policyholder pays both premiums, the benefit paid out at maturity is CU200. If the policyholder pays only the premium for year 1, the benefit paid out at maturity is CU100.

For mortality, the insurer considers the following pay-outs:

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	Benefits	Probability	Expected value
Year 1	CU500	1%	CU5
Year 2	CU500	2%	CU10

The insurer estimates the probability of the policyholder not paying the additional premiums at the end of year 1 at 10% and, accordingly, the probability that the policyholder continues to pay the premium at 90%.

For simplicity, the example ignores time value of money and margins.

In the following three cases we look at the measurement of the liability at the end of year 1.

Case 1

The outcomes of the scenarios for year 2 are:

	Premiums	Benefits*	Probability	Outcome**
Lapse	-	98	10%	10
No Lapse	(130)	206	90%	68
Expected value				78

Note that the expected cash flows if there are no lapses are CU76 (CU206-CU130).

*The expected benefits of CU98 in case of lapse are determined as 98%*CU100. The expected benefits of CU206 in case of no lapse are determined as 2%*CU500 + 98%*CU200.

** Rounded to CU1

At the end of year 1, the liability is measured at CU78.

21. In case 1, at the end of year 1, the policyholder has two choices: lapse (with an expected value of CU98) or pay the additional premium (with an expected value of CU76, determined as the expected benefits of CU206 less the additional premium for year 2 of CU130). The IASB's tentative decision in May requires the insurer to measure the liability at the expected value of the net cash outflows (CU78 = [90% of CU76] plus [10% of 98]). The staff continues to support this approach, for reasons explained in more detail in agenda papers 16A and 16B for the IASB's meeting in May 2009. (Agenda paper 16B was a re-issue of

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FASB memo 20. Agenda paper 16A was not issued as an FASB memo, but will be made available to FASB for the January meeting).

Case 2

The fact pattern is the same as in case 1, but with the addition that during year 1 the policyholder becomes unhealthy. There is now a 10% probability that the policyholder will die in year 2. The new pay-out for mortality in year 2 is as follows, if the policyholder continues to pay the premium:

	Benefits	Chance	Expected
Year 2	CU500	10%	CU50

This results in the following outcomes:

	Premiums	Benefits*	Probability	Outcome
Lapse	-	90	10%	9
No Lapse	(130)	230	90%	90
Expected value				99

Note that the expected cash flows if there are no lapses are determined as CU100 (CU230-CU130).

*The expected benefits in case of lapse of CU90 are 90%*CU100. The expected benefits in case of no lapse of CU230 are 10%*CU500 + 90%*CU200.

At the end of year 1, the liability is measured at CU99.

22. In case 2, at the end of year 1, the policyholder has two choices: lapse (with an expected value of CU90) or pay the additional premium (with an expected value of CU100, determined as the expected benefits of CU230 less the additional premium for year 2 of CU130). The IASB's tentative decision in May requires the insurer to measure the liability at the expected value of the net cash outflows (CU99 = [90% of CU100] plus [10% of 90]). As noted above, the staff continues to support this approach.
23. Note that in both cases 1 and 2, the liability is measured at the expected (present) value of the cash flows. Although the policyholder has two choices, the measurement does **not** require the insurer to select the policyholder option that results in the greater monetary amount.

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Is there a separate customer intangible?

24. We now move on to consider a third case, based on the same fact pattern as cases 1 and 2. Case 3 illustrates:
- (a) the role of pooling of risks within portfolios of insurance contracts.
 - (b) why, in the staff's view, the analysis of this issue in the discussion paper *Preliminary view on insurance contracts* (DP) is not viable. The DP argued that the cash flows resulting from these contracts arise from two separate components: the contract itself and a customer intangible.

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Case 3

At the end of year 1, the fact pattern in this case has 800 healthy policyholders like those in case 1 and 200 unhealthy policyholders like those in case 2. The following table shows the expected present value of future cash flows from the two sub-populations (healthy and unhealthy) at the end of year 1.

	Healthy	Unhealthy	Total
Number of policyholders	800	200	1,000
<i>Future cash flows (end of year 1):</i>			
If all lapse	78,400	18,000	96,400
If none lapse	60,800	20,000	80,800
Based on expected lapses	62,560	19,800	82,360
Assuming least favourable treatment (lapse for healthy, no lapse for unhealthy)	78,400	20,000	98,400

This case, like cases 1 and 2, focuses on measurement at the end of year 1. There are 5 possible measurement assumptions to consider at the end of year 1, as shown below: The amounts at the right are the net cash outflows at the end of year one under the conditions noted.

1. Assume everyone lapses	96,400
2. Assume no-one lapses	80,800
3. Expected lapses (probability-weighted)	82,360
4. All healthy lapse and all unhealthy renew (worst case for insurer = 78,400 + 20,000)	98,400
5. DP approach:	
Insurance liability (all healthy lapse = 78,400, expected value for unhealthy = 19,800)	98,200
“Customer intangible”	<u>(15,840)</u>
Net liability	<u>82,360</u>

Note: The above applies approach 5 in the manner described in the DP. A variant on this approach would use the least favourable outcome for both favourable and unfavourable (98,400), and deduct from this a customer intangible of 16,040 to arrive at the same net amount of 82,360.

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25. The DP took the view that the split between the insurance contract and the “customer intangible” was conceptually right, but permitted an aggregated, net, presentation, on the grounds that it was too difficult to identify the components separately in practice.
26. However, in the staff’s view, this split is not a faithful representation of the insurer’s rights and obligation, even conceptually. It is not possible, even in principle, to write a contract at the end of year 1 that transfers to another party just one of the two sets of cash flows that the DP approach purports to identify, ie the 98,200 without the 15,840, or the 15,840 without the 98,200. It is possible to transfer the total 82,360. It is also possible to carve up the 82,360 in other ways. But is not possible, even in principle, to make the split the DP indicates.
27. The reason for this is that the insurer does not know which policyholders have become unhealthy. So there is no way for it to know which cash flows must be transferred. And there is no way for it to determine retrospectively which cash flows in year 2 resulted from policyholders who were unhealthy at the end of year 1. Thus, the two “components” do **not** correspond to any economic phenomenon in the real world. There are entirely artificial constructs. The aggregate **does** correspond to things in the real world. The aggregate **could** be carved up in other ways that correspond to things in the real world. But the “components” identified in the DP do **not**.
28. In conclusion, the staff continues to support the IASB’s tentative decision that the measurement should reflect the expected cash flows that arise within the contract boundaries, with no artificial separation of a “customer intangible”.

Should there be a deposit floor?

29. We now consider whether the measurement model for insurance contract would include a deposit floor. The deposit floor is a term often used to describe the requirement in paragraph 49 of IAS 39 *Financial Instruments: Recognition and Measurement*. This states:

The fair value of a financial liability with a demand feature (eg a demand deposit) is not less than the amount payable on demand,

discounted from the first date that the amount could be required to be paid.

30. To illustrate this issue, we now consider a fourth case,¹ in which the policyholder has an option to receive an immediate cash payment instead of paying a further premium.

Case 4				
In this case, the fact pattern is the same as for case 1, with the addition that the policyholder has the option to surrender the contract at the end of year 1 and receive a payment then of CU100.				
	Premiums	Benefits*	Probability	Outcome
Lapse	-	100	10%	10
No Lapse	(130)	206	90%	68
Expected value				78
Note that the expected cash flows if there are no lapses are CU76 (CU206-CU130).				
*The expected benefits in case of lapse of CU100 are determined as 100%*CU100 (the surrender value). The expected benefits in case of no lapse of CU206 are determined as 2%*CU500 + 98%*CU200.				

31. In case 4, at the end of year 1, the policyholder has two choices: surrender (with an expected value = surrender value of CU100) or pay the additional premium (with an expected value of CU76). The IASB's tentative decision in May requires the insurer to measure the liability at the expected value of the net cash outflows (CU78, as in case 1).
32. If a deposit floor were applied in case 4, the insurer would measure the liability at CU100 (higher of CU 100 and CU78).
33. Applying the deposit floor in case 4 would, in effect, require that whenever a contract gives the policyholder an option, the insurer must measure the liability assuming that the policyholder exercises that option in the way that is least favourable to the insurer. Such a requirement would, of course, contradict the

¹ Case 4 originally appeared in agenda paper 4C for the IASB's meeting in October 2009, labelled as case 3.

requirement to consider future cash flows on a probability-weighted basis. Put differently, such a requirement would ignore all scenarios other than those involve the exercise of policyholder options in the way that is least favourable to the insurer. Therefore, the staff recommend no deposit floor should be applied.

Staff recommendation and question for the boards

The staff recommends that policyholder options be measured on a look through basis using the expected value of future cash flows related to the option (to the extent they are within the boundary of the existing contract). Among other things, this means no deposit floor would apply.

Do the boards agree with the staff recommendation?

Other options, forwards, and guarantees included in an insurance contract

34. Questions have been raised concerning options other than those related to the current insurance contract coverage and/or results. These questions relate to whether the measurement of an insurance contract should include the expected present value of cash flows arising from an embedded policyholder option to buy additional coverage (or other goods or services) *unrelated* to the primary risk covered by the insurance contract. Examples cited included options that:
- (a) give the policyholder the right to buy insurance coverage other than the coverage specified by the current contract (e.g., different type of coverage, different periods);
 - (b) provide other (potential) policyholders (e.g. the policyholder's spouse) with the opportunity to buy insurance coverage at specified terms or conditions (e.g., with a discount).
 - (c) give the policyholder the right to buy other goods or services at specified terms or conditions (e.g., with a discount).
35. If the underwriting and pricing are constrained (such as the options described in paragraph 31(a) and (b)), the option likely falls within the contract boundary (see earlier discussion of contract boundary). If, the insurer includes the measurement of the embedded option in the measurement of the whole contract, the result would be the same as if that option is excluded and treated as a free-

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standing option: in both cases insurer would recognise the option when it enters into the insurance contract and measure that contract throughout its life using the prospective model for insurance contracts.

36. If the policyholder option is to buy the additional coverage at a price or conditions that are **not** constrained (for example, at the price the insurer would set if it issued a new contract when the policyholder exercises the option), that option would not fall within the boundaries of the existing contract and would therefore not be included in the measurement of the liability.
37. Two practical reasons for separating options that allow the existing contract holder to purchase forms of insurance not related to the existing coverage are:
 - (a) by regulation (at least in the U.S.) the contracts would need to be separately written and possibly even written by another insurance company (property and liability vs. life insurance)
 - (b) ultimately the measurements are going to be done by portfolio which suggests that only similar contracts should be grouped together
38. Finally, although the boards have not completed their discussion of unbundling, in the staff's view it is clear that an embedded option for the policyholder to buy other goods or services (paragraph 31(c)) would not be treated as part of the insurance contract and would be within the scope of the boards' respective standards on revenue recognition.

Questions for the boards

Do the Boards agree with the staff recommendation that expected cash flows from options, forwards, and guarantees not related to the contractual coverage in the insurance contract should be excluded from the expected insurance cash flows for that contract in measuring that contract?

Do the boards agree that these options, forwards, and guarantees should be accounted for in accordance with IFRS or GAAP for that instrument, e.g., insurance contract accounting for those options which themselves result in insurance contracts?