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Hedging of insurance liabilities: input received

Background

- 1 In October 2014 EFRAG staff distributed a questionnaire in order to understand current hedge accounting practices regarding insurance liabilities. This note summarises the feedback received from constituents.

Respondents

- 2 A breakdown of respondents applying (or not applying) hedging and hedge accounting is as follows:

Respondents applying (or not applying) hedging and hedge accounting					
Respondents by country	A = B+E	B. Applying hedging B = C+D	C. Of which apply hedge accounting	D. Of which not apply hedge accounting	E. Not applying hedging
Belgium	2	1		1	1
Denmark	1	1		1	
Finland	3				3
France	1	1	1		
Germany	1	1	1		
Italy	1	1		1	
Netherlands	1	1		1	
Sweden	1	1		1	
UK	2	2		2	
	13	9	2	7	4

General input

- 3 Main reasons for not applying hedge accounting:
 - (a) IFRS 4 insurance contracts are out of scope of IAS 39 *Financial Instruments: Recognition and Measurement*. In addition, IAS 39 paragraph 82 only allows designation of non-financial liabilities as hedged items (a) for foreign currency risk or (b) in their entirety for all risks. In addition, risk components are not allowed to be designated for hedge accounting, while insurers hedge risk components of insurance liabilities;
 - (b) For some hedges the changes in value of derivatives will create a natural offset to the change in value of specific bifurcated components of the insurance liability where the insurance liability is at current value through profit or loss, so there is no need to apply hedge accounting under current IFRS 4;
 - (c) The ability to use hedge accounting principles under the current IAS 39 standard is limited for insurance companies, in particular as the standard is based on a single risk perspective that is applied on a one to one basis in

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closed portfolios, which is not reflective of how insurers manage risks from insurance portfolios;

- (d) There are constraints in IAS 39 that limit the ability of hedge accounting and/or result in volatility in the profit & loss such as:
- (i) The use of options in cash flow hedge relationships results in volatility through the profit or loss due to the time value component;
 - (ii) Non-contractual inflation risk is not an eligible risk item;
 - (iii) Hedge accounting for hedging of surrender, mortality and longevity risks within the insurance liabilities cannot be established as the risk cannot be separately identifiable and reliably measured within invested assets backing the insurance contracts;
 - (iv) Difficulties in supporting a high measurable correlation between the fair value of the derivative and the fair value of the hedged risk;
 - (v) Pre-hedging of interest rate risk for new business to be written cannot be established in a hedge accounting relationship due to the uncertainty of the future amounts (does not meet the eligibility criteria as a hedged item); and
 - (vi) Limitation of designating a group of items to be hedged to include only those that the change in fair value attributable to the hedged risk for each individual item changes approximately in proportion to the overall change in fair value of the group of items.
- 4 Respondents also provided background as to why a hedge accounting solution is necessary in IFRS 4 phase II.
- 5 Without a hedging solution, significant non-economic financial statement volatility would be reported in profit or loss related solely to the accounting mismatch from the different accounting related to options, guarantees, longevity and other risks and the derivatives used to hedge them. This volatility does not faithfully represent the economics of the transaction, since hedging reduces economic volatility.
- 6 To provide a workable hedging solution for insurance contracts, one respondent believed that the change in value of the options and guarantees should interact with the change in value of the derivative financial instrument in the financial statements. Differences between current and prior estimates of the present value of future cash flows attributable to options and guarantees, if hedged with a financial instrument, should be allowed to be presented in profit or loss to match the change in value of the derivative financial instrument that is also recorded in profit and loss. The respondent noted that this should be an exception to the general measurement principles under IFRS 4 phase II, both for participating and non-participating contracts.
- 7 The respondent additionally noted that while this exception would help resolve a significant hedging concern of life insurers, they believed further hedging solutions could be needed in the future after the insurance contract standard is finalised. Such solutions might be addressed in the IASB's macro-hedging project or might need a separate amendment to the insurance contracts standard at a later date.

Technical input

- 8 Respondents provided the following on risk types in insurance liabilities which are being hedged:

Risk type in insurance liabilities	Number of respondents hedging
Guaranteed interest rate risk	8
Interest rate discount risk	7
Foreign currency risk	8
Contractual inflation risk	8
Non-contractual inflation risk	2
Mortality risk	4
Longevity risk	5
Credit risk	1
Option risk	3
Equity risk	4
Default risk	1

How are the risks identified?

- 9 One respondent referred to product design which was coupled with regular risk reviews. The respondent made no distinction between risk types. Another respondent noted that for interest rate discount risk the sensitivity of the asset portfolio was determined for several time buckets. The gaps defined per time-bucket consisted of duration gaps between assets and liabilities. The asset mix was adjusted to close the gap.
- 10 One respondent referred to the following parameters to identify all risk types: economic value, solvency 2 and cash flow projections. Two respondents relied on duration mismatches between assets and liabilities to identify interest rate risk.

Which yield curve is used to discount future cash flows of the hedged item?

- 11 Respondents indicated that they relied on the following discount curves:
- (a) An approximation of the risk-free rate increased with a liquidity premium (one respondent);
 - (b) A rate set by regulation and which is close to current discount rates. For short-term liabilities, no discounting was applied (one respondent);
 - (c) The swap or LIBOR rate (two respondents). One respondent added that the swap or LIBOR rate was for some risk types increased with a credit spread.

Which hedging instruments are being used?

Hedging instruments used	Number of respondents using them
Interest rate swaps	8
Foreign exchange forwards	3
Cross-currency basis swaps	3
Credit default swaps	2
Longevity index swaps	1
Inflation swaps	5
Constant maturity swaps	2
Forward starting swaps	1
Total return swaps	1
Futures (bond, equity)	4
Forward (bond)	3
Swaptions	4
Equity options	2
Caps/floors	2
Index linked assets	1
Bonds, treasury bills (floating, fixed rate, inflation linked, mortality)	7
Reinsurance	3

Do risk exposures being identified and hedged relate to the total insurance liability or a component of the insurance liability?

- 12 Two respondents mentioned that the business was managed in components. Another respondent added that only a part of the liability was being hedged.
- 13 One respondent mentioned that risk exposures were identified and hedged both for the whole insurance liability and its components. The respondent made a further distinction between the following risk types:
- (a) Guaranteed interest rate risk was bifurcated from the main contract as a definable separate component. Contractual inflation risk was identified as a separate component as well as longevity risk; and
 - (b) Other interest rate sensitivities were hedged based on the entire portfolio.
- 14 One respondent noted that hedging depended on the risk exposures. For example interest rate risk exposures from annuities were hedged based on total liabilities. For other types (for example cost of guarantees) only a component of the liabilities was being hedged.
- 15 One respondent noted that identification was done based upon:
- (a) The nature of the risk being hedged by detecting which risk factors impacted the volatility of a list of metrics such as profit or loss, market consistent embedded value, economic or regulatory solvency ratios;
 - (b) The hedged item, a portion of a portfolio or identifying the group of assets and liabilities generating the net position as the hedged item; and
 - (c) The financial instruments to be used (derivatives or not).

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- 16 The respondent further noted that components of the insurance liability to be hedged were identified either via one of the following:
- (a) A risk mapping of :
 - (i) The main regulatory and contractual constraints, and
 - (ii) The behaviour of the liability driven by change in some exogenous variables such as dynamic policyholder behaviour (dynamic lapses or arbitrage).
 - (b) Sensitivities to asset and liability risk factors (for valuation purposes).

Are risk exposures identified on an individual instrument basis or a portfolio basis? Are portfolios open or closed?

- 17 Six respondents mention that items were (mainly) identified and hedged on a portfolio basis. One respondent relied both on portfolios as on individual instruments depending on the hedged risk.
- 18 Four respondents note that open portfolios are used. Two respondents relied both on open and closed portfolios depending on the insurance product.
- 19 One respondent noted that risk components were identified on a legal entity basis or on a portfolio basis.

When changes in the identified risk exposures occur, how is the hedging relationship adapted (i.e. rebalanced)?

- 20 One respondent noted that regular monitoring of the risk exposures and risk appetites lead to investment decisions. Two respondents noted that rebalancing was done based on asset and liability management analysis, for example when asset and liability management changed the appetite of the interest rate risk level or when risk limits were (close to be) breached.
- 21 One respondent noted that rebalancing could be done on an instrument-by-instrument basis or on a macro perspective.
- (a) For guarantees, rebalancing took place within the portfolio of derivatives; and
 - (b) For other interest rate sensitivities, rebalancing took place within the asset portfolio. Mortgage loans were not sold.
- 22 One respondent noted a difference between dynamic hedging (weekly rebalanced) and static hedging (annually rebalanced).

Is ineffectiveness calculated? If so how?

- 23 One respondent mentioned that hedge ineffectiveness was assessed on portfolio basis. Another respondent noted that for the dynamic hedging strategy, hedge effectiveness was calculated based on the economic profit or loss arising in each month as a result of differences between changes in the value of hedging assets and changes in the value of the liabilities arising from movements in the factors (e.g. equity level, interest rate) which were intended to be covered by the hedge. For static hedging, a similar method was used but monitored less frequently.

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- 24 One respondent noted that effectiveness was proven before, throughout and after the transaction calculating sensitivities on various Key Risk Indicators (KRIs), such as:
- (a) IFRS profit or loss;
 - (b) Economic or regulatory solvency ratios above a certain threshold (depending on the risk tolerance of the company / group);
 - (c) Buffer of the portfolio (unrealised capital gains / unallocated reserves);
 - (d) Present value of future profits or market consistent embedded value for life business;
 - (e) Credited rates for life business; and
 - (f) Local GAAP metrics.
- 25 One respondent noted that proving effectiveness was generally difficult because it was difficult to isolate a non-linear risk in the insurance portfolios due to the variety of external factors which can influence an individual policy (e.g. salary increases, employees joining or leaving a plan).
- 26 Two respondents noted no ineffectiveness was calculated in analogy with general hedge accounting requirements.

When hedging your exposures, do you distinguish between exposures arising from insurance liabilities in participating contracts and those arising from liabilities in non-participating contracts?

Participants distinguishing between par and non-par contracts when hedging	6
Participants not distinguishing between par and non-par contracts when hedging	2

- 27 One respondent mentioned that different risk-return preferences and regulation required different hedging approaches. Three respondents differentiated between participating and non-participating contracts. One respondent noted that for life insurance all contracts were identified as having discretionary participating features. For non-life contracts a difference was made between participating and non-participating contracts.