

Agenda

- Introduction
- Key implementation challenges
- Discussion
 - Most relevant policy decisions
 - Relevant "technical" challenges

Introduction



An Introduction to Triple A – Risk Finance

We are an independent, innovative, risk management and actuarial consultancy firm that employs insurance experts, risk professionals, actuaries and investment analysts who have gained many years of experience within insurance and pensions, combined with financial risk management in a variety of financial institutions and consultancy companies.

We currently employ over 100 professionals, located in offices in Amsterdam, The Netherlands and Warsaw, , and we are active on the European market for over 10 years now.

The professionals of Triple A - Risk Finance have an actuarial, econometrics or mathematics background combined with thorough knowledge of products and processes within insurance companies, corporate funded pension plans, pension funds and other financial institutions.

IFRS 17 and IFRS 9 coverage

Debit		Credit	
Financial assets at FVtPL	31	Equity	24
AfS investments	80	Debt & borrowings	11
Loans	34	Banking liabilities	10
Banking assets	11	Insurance contracts	114
Reinsurance contracts	1	Investment contracts	2
DAC/VOBA	2	Financial liabilities	4
Other financial assets	5	Deferred tax liabilities	2
Other non-financial assets	4	Other non-financial liabilities	1
Total	168	Total	16 8

IFRS 9 / 17 approach

- New income statement and definition of revenues
- Three measurement approaches: GM, VFA, PAA
- OCI approach is optional for changes in discounting to reduce volatility in P&L
- Measurement for assets and liabilities is done independently (IFRS 9 versus IFRS 17)
- Measurement based on current assumptions
 - Best estimate actuarial assumptions *
 - Market consistent discount rates
 - Market consistent valuation of guarantees
- The 'fulfillment cash flow' is combination of the 'future cash flows', 'discounting' and the 'risk adjustment'
- No day one profits recognised as a CSM and amortised in
 P&L over contract term (based on coverage units) **

Contractual Service Margin

Risk Adjustment

Time Value of Money

Best Estimate
Cash Flows

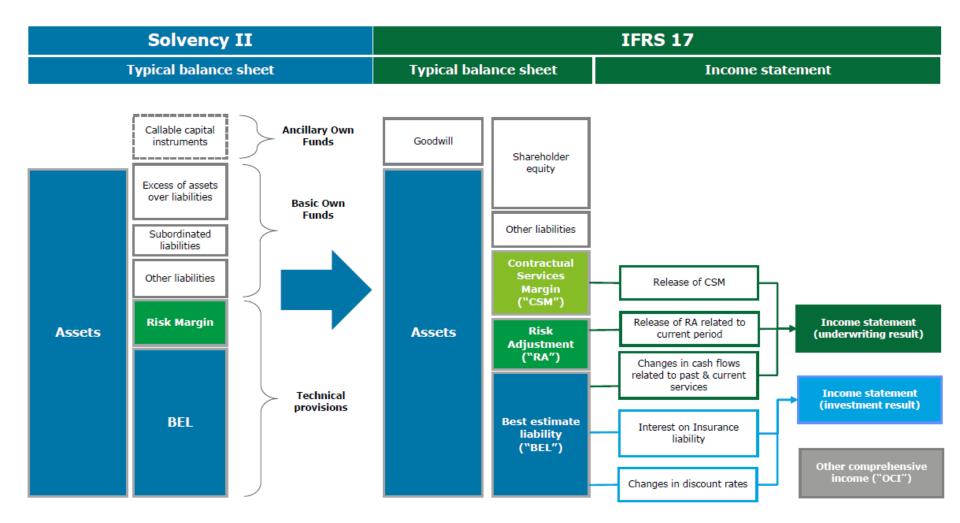
Fulfilment Cashflows



^(*) Unlike Solvency II, insurance acquisition cost will not arise at initial recognition

^(**) At inception of a non-onerous contract, Contractual Service Margin is formed based on as present value of future profits less risk adustment

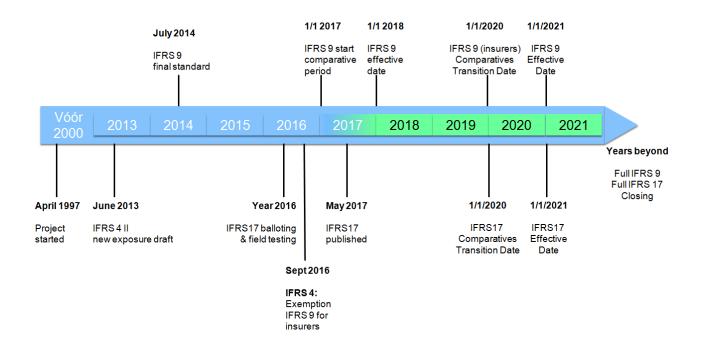
IFRS 9 / 17 approach



Key implementation challenges



Timelines



- Development & implementation: 2017 2019
- Day 1 balance sheet 1/1/2020: 2019 2020
- Shadow runs: 2020
- Possible first application: 2020 or 2021

Key implementation challenges

- Key policy decisions
 - Unit of account underlying CSM calculation
 - What transition approach to be used
 - Prevent (unnecessary) accounting mismatches
- Solving more technical topics, mainly relating to definition fulfilment cash flows
 - Selection of measurement approach
 - Set contract boundaries
 - Define and setting expense and investment expense cash flows
 - Define coverage units
 - Risk adjustment methodology
 - More specific (e.g. incorporate reinsurance held, separation of different contracts, etc)
- Select and implement desired infrastructure

Key implementation challenges

 Shape overall project to key design principles to achieve (cost) effectiveness, simplicity, consistency across the company

Management and auditor perspective

- (1) Implementation should be compliant with IFRS9 and IFRS17 requirements
- (2) The implemented solution should be understandable by investors and should not negatively impact the dividend strategy
- (3) Solution should result in a meaningful level of contractual service margin whilst balancing the transition impact on current and future value

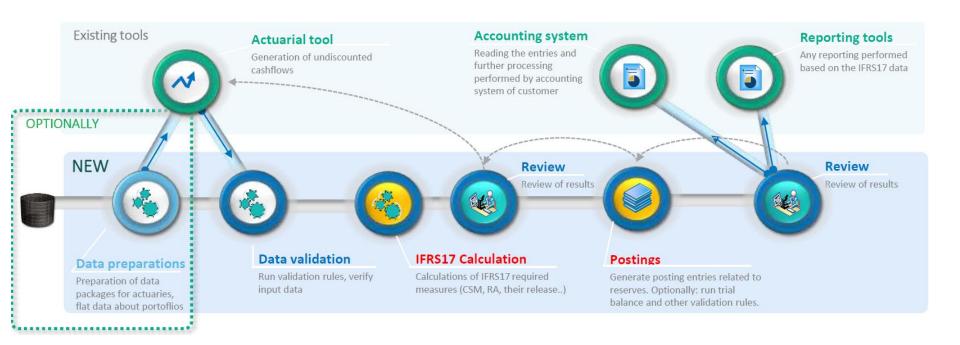
Financial and actuarial perspective

- (4) Implemented solution should be as simple and cost effective as possible, with the minimum amount of change
- (5) Implemented solution should be consistent across the insurer where possible
- (6) Insurer should learn and benefit from the efforts of different peers throughout the implementation

IT and data perspective

- (7) The implemented solution should utilise automated data feeds where this is deemed beneficial and cost effective
- (8) Implemented solution should align to existing metrics to optimise efficiencies in processes and data
- (9) The implemented solution should support the development of flexible, reusable and scalable IT infrastructure and processes

High level business process



Desired infrastructure — Central datawarehouse is key

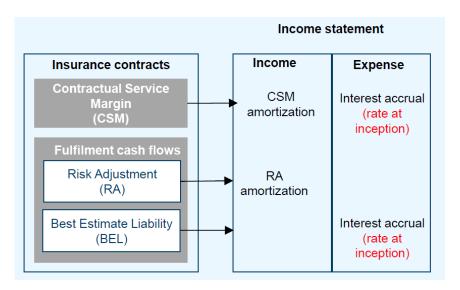
- Required infrastructure extremely broad
- Many disciplines involved

Central datawarehouse Figure 1 Datawarehouse ٨ Accounting **Policy** Collections & **CF Models** Post-Processing **General Ledger** Administration Systems **Booking Journal** · Policyholder data Payments and Cash Flow Scaling Data platform for Product features collections towards projections Out of model accounting Entries for Balance Business Events adjustments Sheet and P&L bank relevant data Creation of journal Discounting Creation Journal entries for · Risk Adjustment Entries for GL transactions Reconciliation CSM calculations

Figure 2 Flow of data through the IFRS17 solutions CF models/ administration Data warehouse Data warehouse calculation engine engine IFRS 17 reporting containing e.g. CSM **Policy Data Mutation Data** Actuarial Data Accounting Data Journaling data Data regarding Data regarding Output from the based on initial policies and changes in policies Actuarial Cash Flow reserving, premium contracts on a and contracts during Models receival, certain moment a period (e.g. # disbursements and mortality, status reserve updates changes) during the year

Desired infrastructure — Positioning of actuarial projection models

 Under IFRS17, revenues and profitability are predominantly driven by releases of actuarial reserves (release of Risk Adjustment and release of CSM)



If an insurer is able to obtain more historical policy information, it is expected that it will achieve a higher future IFRS result because the release in CSM is usually higher

- In order to optimize IFRS profits, it is advisable to implement a sufficiently robust infrastructure^(*) to meet the additional requirements:
 - Additional functionality needed
 - Additional data (e.g. historical policy data) needed
 - Increased number of calculations



(*)

Key implementation Challenges – policy decisions



Key policy decisions — CSM determination / Unit of account

- Retrospective determination of CSM
- Order of the adjustments can affect the amount of the CSM recognized during reporting period
- The order in which CSM movements are to be performed is not prescribed, with the exception that release of the CSM (based on coverage units) has to occur last

CSM at start of the period	200
New contracts added to group	20
Accretion of interest	10
Changes in future CFs relating to future service - positive	-50
Changes in future CFs relating to future service - negative	30
Currency exchange differences	5
CSM release reflecting transfer of services during period	-20
CSM at end of period	195

- ➤ How many groups ? → Determined by unit of account
- CSM release -> Provided service during period (coverage units)

Key policy decisions — CSM determination / Unit of account

"A portfolio comprises contracts subject to similar risks and managed together"

Insurance Contracts Portfolio (Life / Non-Life / Branches / HRG's)

"permitted to subdivide the groups, for example distinguishing different levels of profitability"

"based upon the likelyhood of changes in assumptions and using information provided by the entity's internal reporting"

"An entity shall not include contracts issued more than one year apart in the same group" Contracts that at initial recognition have no significant possibility of becoming onerous subsequently (if any)

II
Group of remaining
'profitable' contracts in
the portfolio (if any)

Contracts that are onerous at initial recognition (if any)

Year 2017 Year 2017 Year 2017 Year 2018 Year 2018 Year 2018 Year 2019 Year 2019 Year 2019 Year 2020 Year 2020 Year 2020 Year 2021 Year 2021 Year 2021 Year 2022 and beyond Year 2022 and beyond Year 2022 and beyond

Unearned profit is recognised as part of the liability (CSM) and released over the duration of the insurance contract

Recognise loss in P&L

Importance Annual cohorts

- The annual cohort requirement will provide useful trend information about profitability of contracts written in different periods
- The profit of a group of contracts will be recognised in the period the service is provided—and not averaged with profits of other groups and recognised over the period of which service is provided for all the groups

Key policy decisions — Transition approaches

- First time application is challenging, especially the calculation of CSM at date of inception
- Hierarchy of approaches defined to determine CSM at transition date
 - Full retrospective approach requires all pricing and historical datato estimate fullfillment cashflows and CSM at inception and roll forward to transition date.
 - Modified retrospective method: achieve closest outcome to retrospective application possible using reasonable, supportable information. Using approximated yield curve for at least three years before transition.
 - Fair value approach: Determine CSM at transition date as differences between fair value of the insurance contract and fullfillment cash flows measured at that date.

impracticable

Key policy decisions — Recent example of Fair Value approach application

- Fair Value approach considered to a large extent although significant lower CSM expected
- IFRS15 applies but guidelines are subjective (interpretation of parties involved)
- Example: note 44 of Annual report NN Group on Delta Lloyd acquisition.
- FV determined based on best estimate cash flows, discount rate based on market based interest rate.

44 Companies and businesses acquired and divested Continued

Accounting at the acquisition date

The acquisition date of Delta Lloyd by NN Group for acquisition accounting under IFRS is 7 April 2017. On this date, NN Group acquired 79.9% of the ordinary shares in Delta Lloyd and thus obtained control. Furthermore, the announced legal merger as approved by Delta Lloyd at its Extraordinary General Meeting on 29 March 2017 provided certainty that NN Group would acquire full ownership of Delta Lloyd under the same conditions. Therefore, for acquisition accounting under IFRS, NN Group acquired full ownership of Delta Lloyd on 7 April 2017. NN Group used 1 April 2017 as a proxy for the acquisition date for practical reasons as the developments between 1 April 2017 and 7 April 2017 had no material impact. As a result, Delta Lloyd is included in the NN Group consolidation from 1 April 2017.

The initial accounting for Delta Lloyd as at 1 April 2017 is ongoing and as such all values are provisional. NN Group has accounted for the acquisition using the provisional values disclosed below and will recognise any adjustments to these provisional values within a twelve month period from the acquisition date as amendments to the initial accounting.

The difference between the net assets acquired of EUR 1,317 million and the purchase consideration of EUR 2,463 million represents goodwill and is capitalised in the NN Group balance sheet. This resulting goodwill of EUR 1,146 million is not amortised, but will be tested for impairment at least annually going forward. The amount of goodwill recognised on the acquisition of Delta Lloyd represents mainly the value of synergies to the extent that these are not reflected in the acquisition balance sheet. The goodwill is not tax deductible. For the purpose of the goodwill impairment test, goodwill is allocated to cash generating units (reporting units). This allocation is performed based on the synergy value of the acquisition. The provisional allocation is disclosed in Note 9 'Intangible assets'.

Total fair value of the purchase consideration

	Acquisition date
Fair value of Delta Lloyd shares held previous to transaction	244
Cash paid to acquire Delta Lloyd shares	2,054
Fair value of NN Group shares issued to acquire Delta Lloyd shares	165
Total fair value of the purchase consideration	2,463

Cash flow on acquisition

	Acquisition date
Cash paid to acquire Delta Lloyd shares	-2,054
Cash in company acquired	2,961
Cash flow on acquisition	907

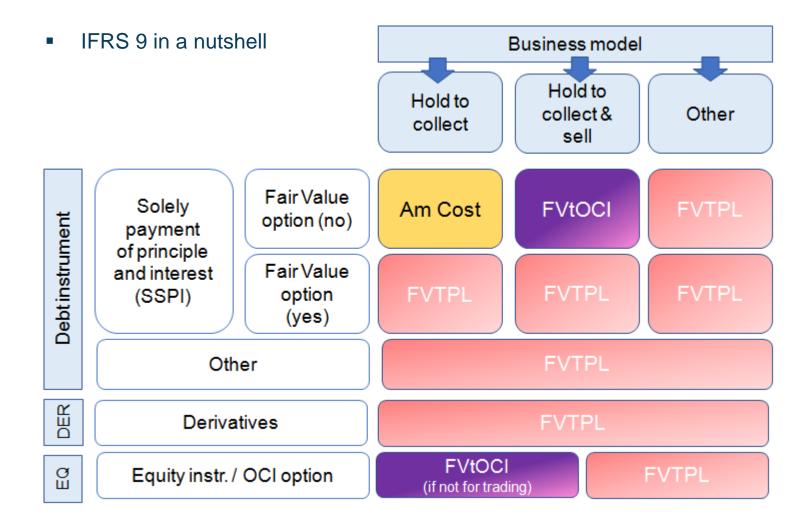
Key policy decisions — Different transition approach per unit of account

- What contracts fall under transition approach
 - All existing contracts entered into before 1 January 2020
- Approach & disclosure
 - Measure as if IFRS 17 had always been applied
 - Disclose the CSM and revenue separately for the groups where modified approach and the fair value approach is applied

Example: possible application

of transition approach

 Full retrospective: 	Sufficient historical data exist	2020201920182017
 Modified retrospective: 	Not all historical data is available but some information about historical cash flows is available or can be constructed	 2016 2015 2014 2013 2012 2011
 Fair value method: 	When no historical information is available	2010 2009 2008 2007



Movements in the value of Assets

Movements in the value of Insurance Obligations

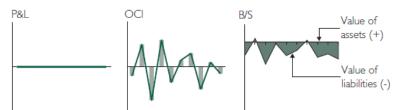
Profit & Loss
Other Comprehensive Income

This needs to correspond in a sensible manner

- For <u>Building block approach</u> and <u>Premium allocation approach</u>, insurer can select the
 "OCI option" as a policy choice
 - Yes: Change in discount rate and other financial risk variables are recognised in OCI, and interest expense at the original rate is recognised in P&L
 - No: determine interest expense and unwind of other financial risk variables in PL based on the current discount rate
- In case the <u>Variable Fee approach</u> is applied, the following two options are available
 - If underlying assets are held: Changes in discount rate and other financial risk variables are recognised in P&L or OCI depending on the treatment of the underlying assets
 - If underlying assets are not held: Changes in discount rate and other financial risk variables are recognised in P&L or OCI depending on the accounting policy choice

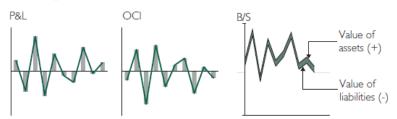
I) Amortised cost (assets) and OCI option (liabilities)

- Value of liabilities change as a result of impact of changes in the interest rate on the discount rate (change goes through OCI)
- Accounting value of assets not affected by interest rate movements (although impacted by amortisation / impairment)



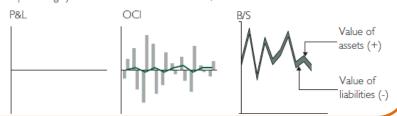
2) Fair value through P&L (assets) and OCI option (liabilities)

- Change in value of assets (as a result of changing interest rates) to P&L
- . Change in the value of liabilities (discount rate) to OCI
- · Impacts largely offset in balance sheet, but mismatch in P&L and OCI



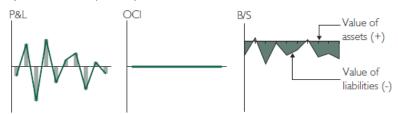
3) Fair value through OCI (assets) and OCI option (liabilities)

- · Change in value of assets (as a result of changing interest rates) to OCI
- · Change in the value of liabilities (discount rate) to OCI
- Impacts largely offset in balance sheet and OCI, minimal mismatch



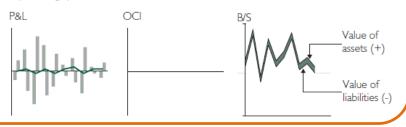
4) Amortised cost (assets) and P&L option (liabilities)

- Value of liabilities change as a result of impact of changes in the interest rate on the discount rate (change goes through P&L)
- Accounting value of assets not affected by interest rate movements (although impacted by amortisation / impairment)



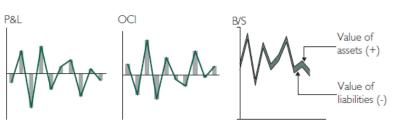
5) Fair value through P&L (assets) and P&L option (liabilities)

- . Change in value of assets (as a result of changing interest rates) to P&L
- . Change in the value of liabilities (discount rate) to P&L
- · Impacts largely offset in P&L and balance sheet, minimal mismatch



6) Fair value through OCI (assets) and P&L option (liabilities)

- Change in value of assets (as a result of changing interest rates) to OCI
- · Change in the value of liabilities (discount rate) to P&L
- · Impacts largely offset in balance sheet, but mismatch in P&L and OCI



- Different treatment with respect to embedded options and guarantees
 - General model (BBA) requires cash flows related to embedded guarantees to be absorbed within the CSM *
 which will be amortized over the life of the policy
 - Variable Fee Aproach (VFA) allows for possibility to report effects of changes of guarantees in profit or loss if the underlying guarantees are hedged (risk mitigation solution)
- All hedging instruments against the guarantees are recorded through P&L account. This will create an accounting mismatch
- Two important issues arise in current practice
 - Risk mitigation solution provided for in IFRS 17 is limited in scope to contracts accounted for under the variable fee approach and is not available for contracts with indirect participation contracts
 - IFRS9 hedge accounting is complex and eligibility for "fair value hedge of the interest rate risk exposure of a portfolio" not present in IFRS9 but only present in IAS 39

TRIPLE A
RISK FINANCE

Key implementation Challenges – technical topics



Letter from EFRAG to IFRS Foundation

- The European Financial Reporting Advisory Group (EFRAG) is an organization founded in 2001 with the support of the European Commission to serve the general interest by influencing international financial reporting standards from a European perspective
- Letter 3 September 2018 from EFRAG Board to Hans Hoogervorst (Chief IFRS Foundation).
 EFRAG Board has reviewed concerns raised by industry and that may impact the EU endorsement advice. The following topics will merit further consideration by the IASB
 - Acquisition costs (for costs incurred in expectation of contract renewals)
 - CSM amortization (impact on contracts that include investment services)
 - Reinsurance (onerous contracts that are profitable after reinsurance, contract boundary for contracts that have not been issued)
 - Transition (extent of relief offered by modified retrospective approach and challenges in applying fair value approach)
 - Annual cohorts (cost-benefit-trade-off, including for VFA contracts)
 - Balance sheet presentation (cost-benefit trade-off of separate disclosures of groups in an asset position and groups in a liability position and non-separation of receivables and/or payables)

Transition resource group — General

 The Transition Resource Group for IFRS 17 (TRG) is one of the ways the IFRS Board is supporting implementation of the new Standard.

Purpose

- provide a public forum for stakeholders to follow the discussion of questions raised on implementation; and
- inform the Board in order to help the Board determine what, if any, action will be needed to address those questions. Possible actions include providing supporting materials such as webinars, case studies and/or referral to the Board or Interpretation Committee.

Meetings

- 6 February 2018
- 2 May 2018
- 26 September 2018
- 4 December 2018

Transition resource group — Feb meeting

1.1 Separation of insurance components in a single contract	Finalized in 6 Feb meeting
1.2 Boundary of contracts with annual repricing mechanisms	Finalized in 6 Feb meeting
1.3 Boundary of reinsurance contracts held	Finalized in 6 Feb meeting
1.4 Insurance acquisition cash flows paid on an initially written contract	Finalized in 6 Feb meeting
1.5 Determining the quantity of benefits for identifying coverage units	Further follow-up in May 3 meeting
1.6 Insurance acquisition cash flows when using Fair Value method at transition	Finalized in 6 Feb meeting
1.7 Reporting on other questions submitted	Further follow-up expected

Transition resource group – May meeting

2.1 Combination of insurance contracts	Finalized in 3 May meeting
2.2 Risk adjustment in a group of entities	Further follow-up expected
2.3 Cash flows within contract boundary	Finalized in 3 May meeting
2.4 Boundary of reinsurance contracts held with repricing mechanisms	Finalized in 3 May meeting
2.5 Determining the quantity of benefits for identifying coverage units	Further follow-up expected
2.6 Implementation challenges outreach report *	Further follow-up expected
2.7 Reporting on other questions submitted	Finalized in 3 May meeting

^{*} Suggestions that outreach be performed by the IASB staff to gain a deeper understanding of the implementation challenges relating to:

⁽a) presentation of groups of insurance contracts in the statement of financial position;

⁽b) premiums received applying the premium allocation approach (PAA); and

⁽c) subsequent treatment of insurance contracts acquired in their settlement period.

Technical topics — Technical questions

- What expenses to include?
 - Inclusion of holding / overhead expenses
 - One-off project expenses?
 - Definition of wasted labour
- Should investment expenses be part of the fulfillment cash flows?
- How to deal with Deferred Acquisition Costs?
- What approach: General Model or Variable Fee approach
 - Immediate annuity
 - Savings mortgage
 - Unit linked with 90% / 110% / fixed amount
 - Separated accounts
 - Group life ORA contracts

Technical topics — Technical questions

- How to determine units of account
 - Per year, per quarter?
 - Solvency II homogeneous groups
 - Group life with 5 year contract duration
- How to determine coverage units
 - Amortize CSM based on expected benefits?
- Derive risk adjustment
 - Cost of capital?
 - Diversification benefit?
 - Differences across entities?
- Treatment of reinsurance held
 - With / without risk adjustment
 - With / without CSM
 - Insurance contracts that have not been sold yet?



Technical topics — Technical questions

- What transition approach for different products
 - Full retrospective approach
 - Modified retrospective approach
 - Fair value approach
- Determine CSM using fair value approach

Technical topics — Cash Flows Solvency II versus IFRS17

- Best estimate of the cash flows expected to fulfill the insurance contract. Fulfillment: 'probability weighted estimate' of future outgoing cashflows minus future incoming cashflows
- This estimate has to be current and unbiased
- Similar best estimate assumptions as used for Solvency II but differences in
 - IFRS17 includes directly attributable costs where Solvency II includes all expenses including overheads
 - Long term expense level based on normal scale (excluding wasted labour)
 - Under IFRS 17, acquisition costs are realised over contract duration
 - Risk adjustment and CSM reinsurance presented separately
- This value is then discounted against the current discount rate

Technical topics — Contract boundaries Solvency II versus IFRS17

- Solvency II: Contract boundary ends in case of unilateral right to:
 - Terminate policy
 - Reject premium
 - Adjust premium to a level required to cover the risks
- IFRS 17: Contract boundary ends in case insurance company will:
 - Reinstate premium at the individual level
 - Reinstate premium at group level and premium was always determined on a risk basis

Within boundary of the contract	Outside boundary of the contract
Policyholder obliged to pay related premiums	Policyholder is not obliged to pay related premiums
Insurer is not able to reprice risks of the particular policyholder to reflect the risks	Insurer is able to reprice risks of the particular policyholder to reflect the risks
Insurer is not able to reprice portfolio of contracts to reflect the risks and premiums reflect risks beyond the coverage period	Insurer is able to reprice portfolio of contracts to reflect the risks and premiums do not reflect risks beyond the coverage period

Technical topics — Contract boundaries Group Pension business

- Group pension contracts with a term of 4 year; The contract is renegotiated after 4 years.
- Policyholder has the option to leave the accumulated defined benefit rights with the insurer.
 So effectively price changes can only relate to future rights
- IFRS 4: the original and renegotiated contracts are treated as one.
- IFRS 17 (like SII):
 - The pension contract could be seen as a series of 4-year agreements.
 - The contract has a long contract boundary (i.e. beyond 4-year period), but only for the rights that accrue in the contractual period of 4 years.
 - If the contract renews, then the rights that accrue in the second (4 year) contract period are considered a new insurance contract.
- Each "tranche" has a different locked-in rate for the calculation of the CSM and the finance income reported in P/L (if OCI option is used)