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# Understanding IFRS 17, Session 4: Statement of Comprehensive Income

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# Introduction to this Slide-Set

- **This is an excerpt from a 2-day workshop, made up of 9 sessions covering the full scope of the IASB's Standard on insurance contracts (IFRS 17)**
    - Throughout the presentation references are made to the complementary material, but key terms are defined where used – please see the Appendix for a full list of abbreviations used
    - The Appendix also contains a full table of contents of the main seminar
    - In any case, as for any excerpt, no conclusions should be drawn from this selected material
  - **Further, any summer 2017 interpretation of IFRS 17 is necessarily at risk of being replaced by industry standards or otherwise developing views. Please see the full disclaimer on the next page**
- 
- **Despite all of the disclaiming above:**
    - I will be happy to present the workshop material in detail on-site,
    - Such in-house workshop can be tailored to your particular needs / portfolio / interested team
    - The slides mainly address the actuarial perspective but have been rated extremely helpful by finance staff as well
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# An Unavoidable Disclaimer

- This is (part of) a seminar about a standard that brings a fundamental change to measurement and presentation and that was issued only recently!
- Practice will evolve over time (sometimes driven by a few large players in the industry and their auditors)
- In other words, future application of the new standard is likely to differ from some of the interpretation presented in here – and no warranty whatsoever is given regarding the applicability of the conclusions in here.

# Agenda 4<sup>th</sup> Session: Statement of Comprehensive Income

- This 4<sup>th</sup> session will cover:

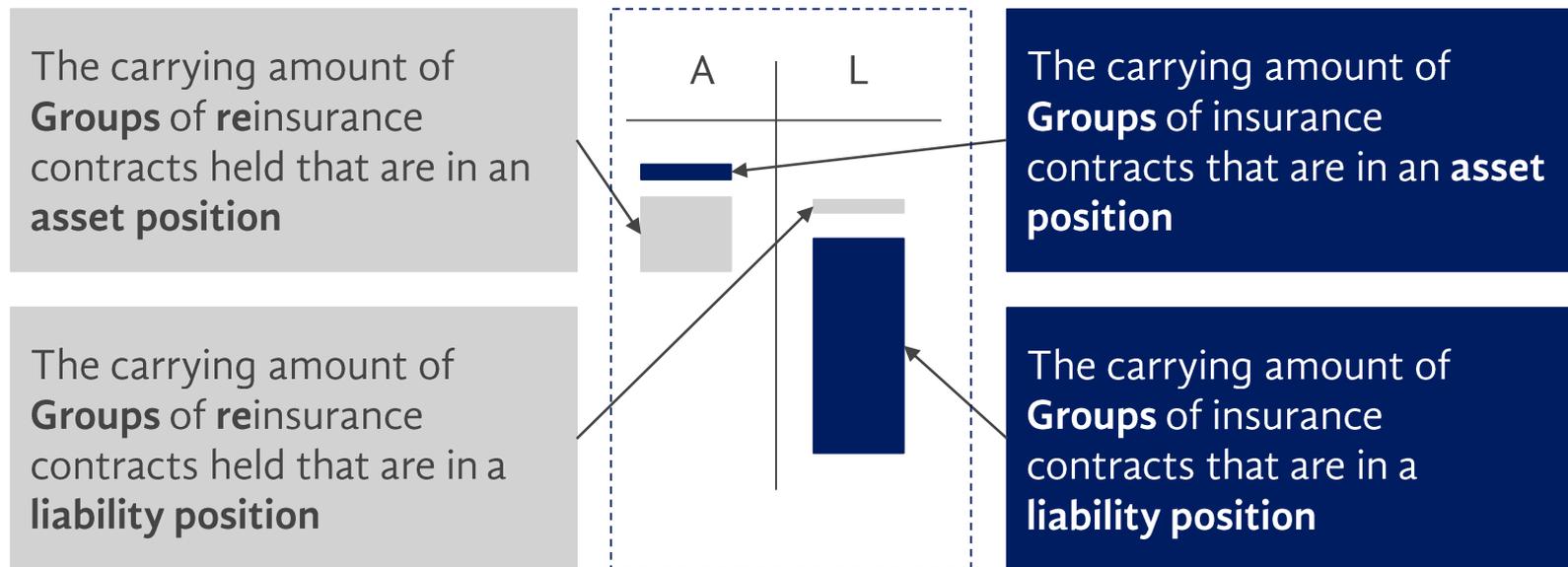
- Balance Sheet presentation of (re)insurance contracts
- Presentation of the performance of insurance contracts in the Statement of Comprehensive Income

- Note that assets backing insurance contracts are out of the scope of this seminar and thus are not covered

- Note, that **direct participation business** is subject to a different model and thus partially different presentation – it thus also **covered separately** in the **7<sup>th</sup> session**

# Balance Sheet (Minimum Requirements)

- IFRS 17 will define only minimum requirements for presentation of (re)insurance contracts on the “face of the balance sheet”:



- Requirements are no rocket-science, but that the insurer needs to track “migrations” between Groups asset and liability position and vice versa
- Limited numbers of rows intentionally set for non-insurance groups

## Balance Sheet (Remarks)

- **No higher granularity is required, but IAS 1 provides the option for insurers to add further lines**
- **Possible separation considered for**
  - Business subject to Premium Allocation Approach (PAA – 5th session)
  - Business subject to Variable Fee Approach (VFA – 6th session)
  - Reinsurance issued and direct business (in line with some disclosures)
- **This decision is typically made at “Group Accounting” level, and actuaries need to provide data at the required granularity**
- **Note a potential practical difficulty: How can the asset-or-liability position be determined for contracts with IBNR and other reserves (5th session)?**
- **In any case, most of the complex data requirements will stem from disclosures (8th session) and Income Statement (remainder of this session)**

## Balance Sheet (Pre-Recognition CFs)

- An entity shall recognise an asset or liability for any insurance acquisition CFs relating to a Group of issued insurance contracts that the entity pays or receives before the Group is recognised
  - CFs paid (probably the usual case: UW costs etc.) would constitute an Asset (pre-paid expenses)
  - CFs paid for expenses that are directly charged to P/L are excluded (see in particular 5<sup>th</sup> session on the option for PAA-Business)
  - CFs received would constitute a Liability
- This asset or liability is derecognised (against the insurance contract liability or asset) upon initial recognition of the respective contracts
- An entity shall include any such assets or liabilities in the carrying amount of the related groups of insurance contracts issued
- Similar guidance applies to reinsurance contracts held (5<sup>th</sup> session)

# Statement of Comprehensive Income

- The remainder of this section covers the contribution to the Statement of Comprehensive Income (“SCI”) from insurance contracts only
- In essence, it deals with the presentation of changes in the liability occurring between times  $t$  and  $t+1$
- This presentation aspect was subject to much controversy, especially around these questions:
  - **What is the revenue** an insurer earned in a given period?
  - How can **operating and financial performance be presented sensibly** by insurers (and what options should entities have)?
  - How should **changes in estimates be recognised** (and when)?
  - (and yet additional questions were discussed for direct participation contracts)
- The IASB’s attempt to find compromises (plus some accounting driven concepts) lead to a model that is complex (and may be surprising for actuaries)

# Statement of Comprehensive Income – Overview

- The discussion of the overall SCI contribution is grouped into the following topics

(Majority of) Cash Flows + Release of  
CSM and Risk Adjustment



Revenue Model differs fundamentally  
from current premium and claims  
models (see following slides)

Experience Adjustments

Assumption Updates

Effects from changes in Market Factors  
(i.e. discount rates and asset  
dependent cash flows)



Fairly straight-forward model (with  
some technical challenges, however)

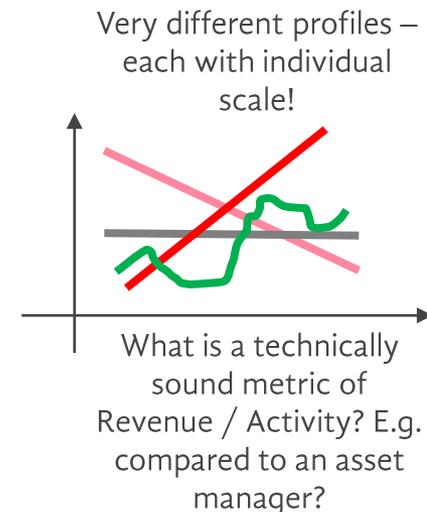
# SCI (From t to t+1)

- Technically, there is little debate about which items need to be dealt with in a current measurement model (with the building blocks used):

Expected CFs @ t	Effect of Discounting @ t	Risk Adjustment @ t	CSM @ t
Expected inflows and outflows		Release* into profit for future coverage	
Effect of Experience Adjustments		Release* into profit for past coverage	
Update for future coverage / service	Unwind of discount for period	Change for future coverage / service	Unlocking (disc. CFs and RA)
Update for past coverage / service	Change in interest rates	Change for past coverage / service	Accrual of interest
Ceded R/I only: Change credit risk		Accrual of interest?!	Release into profit
Expected CFs @ t+1	Effect of Discounting @ t+1	Risk Adjustment @ t+1	CSM @ t+1

# Excursion: Revenue for Insurance Contracts

- For (most) Non-Life Business in (most) accounting regimes (including US-GAAP), the earned premium matches the services provided:
  - Providing insurance coverage (incl. claims regulation)
  - Administering the contract
- In life insurance, contracts regularly cover a broad range of services, each with differing “profile” in time:
  - Insurance coverage (often **declining**)
  - Administering the contract (mostly level)
  - Investment Management (often **increasing**)
  - Providing a Guarantee (**unpredictable**)
- Nonetheless, often in life insurance a level premium and thus a level revenue / top-line is presented
- And: Often the price for the services does not match the premium, because the latter contains a deposit component



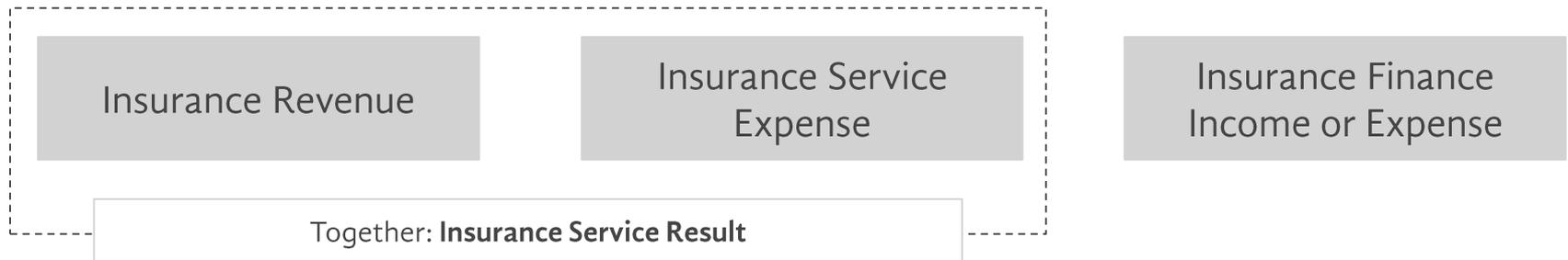
# Statement of Comprehensive Income

- For the reasons on the previous slide, the earned premium (= turnover or Revenue) is very simple under most accounting regimes in Non-Life
  - German / Swiss etc. local GAAP
  - US-GAAP (with a different approach to treating acquisition costs)
  - IFRS 17 (under the PAA – as discussed in the 5<sup>th</sup> session)
- And for the same reasons approaches differ sometimes substantially in life insurance:



# Statement of Comprehensive Income

- This is why IFRS 17 guidance is dealing to a substantial degree with assuring Revenue is measured consistently:
  - Among insurers with different types of business, and
  - Between insurers and entities from other industries
- IFRS 17 requires only three accounts to report the financial performance of insurance contracts (§80):

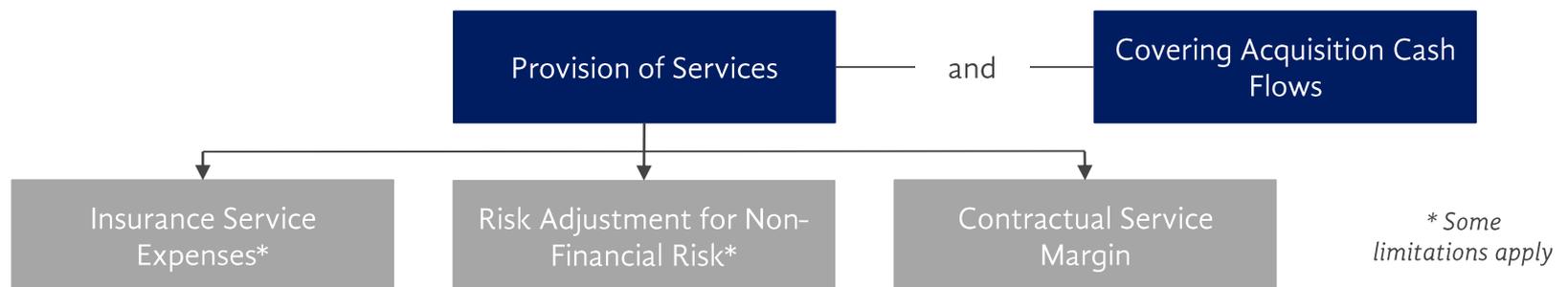


- The first – and most complex – step is to determine “Insurance Revenue”

# Revenue Model – Introductory Comments

**Insurance revenue** shall depict the provision of coverage and other services arising from the group of insurance contracts at an amount that reflects the consideration to which the entity expects to be entitled in exchange for those services.

- This definition is detailed in §§B120-B127, both conceptually and with regard to key technical aspects
- In particular, B121 clarifies that an insurer receives consideration (i.e. premiums!) for



- Note, that total Revenue is limited to the Cash received (as premium) – an entity must not show more turnover than Cash inflows (adjusted for time value of money)

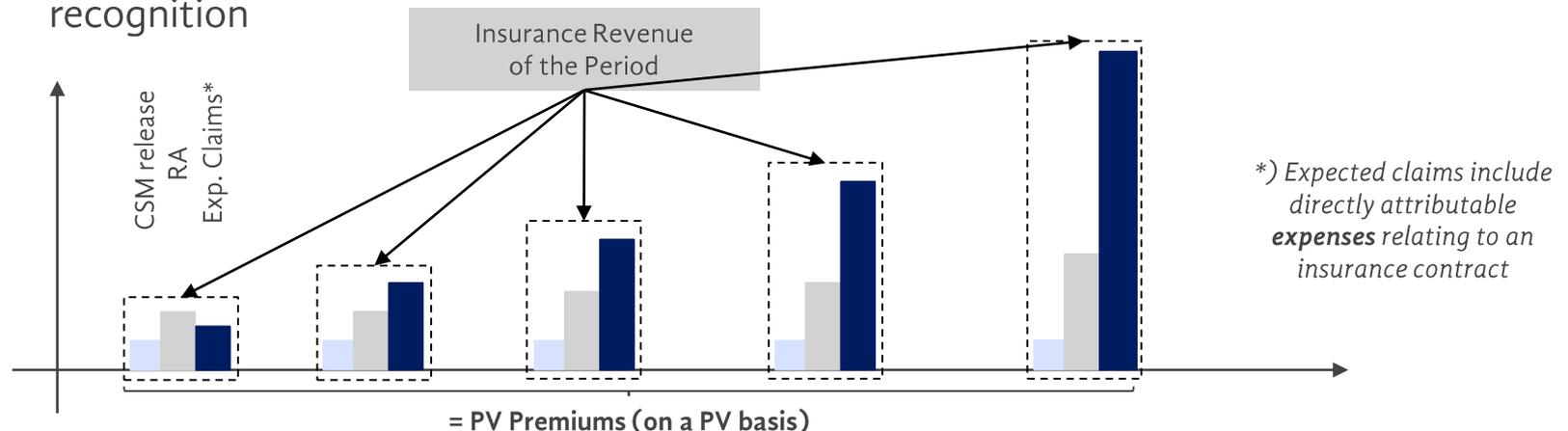
# Revenue (Concept)

- For a profitable contract, at inception we have:

$$\text{CSM} = \text{PV\_Prem} - \text{PV\_Claims}^* - \text{RA (a PV)}$$

$$\Leftrightarrow \text{PV\_Prem} = \text{PV\_Claims}^* + \text{RA (a PV)} + \text{CSM}$$

- Simply put (i.e. ignoring some constraints), the Revenue model aims at
  - Presenting top line numbers following the profit contribution from the three components depicted above; and
  - Equalling, **on a PV-basis**, the numbers that would have resulted from premium recognition



# Statement of Comprehensive Performance

- In this concept – which reconciles with the approach per IFRS 15 for basically any transaction with a customer – premium is not needed to determine the top-line (but to reconcile it)
- Note that all references to claims are meant to refer to
  - Expected and
  - Future Claims (including other services)
- As a result, Revenue results from a release of the Liability of Remaining Coverage only (cf. §§B123-B124)
- There are some constraints to the generic summary of items contributing to Revenue, cf. later part of this presentation
  - Repayments of Investment Components – these are not considered to be related to service
  - Any amounts (of claims and risk adjustment) that contribute to a loss component – no premium is received for those

# Revenue (Simple Example (1))

## Simple Contract for Illustration

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100 Single Premium  
3 Yr Coverage Period  
4% Flat interest Rate

## All claims payable end of year (as is risk):

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10 Expected Benefit Yr 1  
23 Expected Benefit Yr 2  
50 Expected Benefit Yr 3  
5 Risk Adjustment Yr 1  
6 Risk Adjustment Yr 2  
7 Risk Adjustment Yr 3  
91,9 PV Risk Adjusted Cash Out

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**8,1 CSM**

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## CSM Release Pattern:

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8,1 Opening Balance  
0,3 Interest @ 4%  
-2,8 Release by Passage of Time  
5,6 Balance end of Yr 1  
0,2 Interest @ 4%  
-2,9 Release by Passage of Time  
2,9 Balance end of Yr 2  
0,1 Interest @ 4%  
-3,0 Release by Passage of Time  
0,0 Balance end of Yr 3

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- Consider the following very simple policy as displayed on the left
- Here: Single Premium (Cash IN)  
– risk adjusted claims OUT  
= CSM at initial recognition
- Locked in rates determine the release pattern of the CSM
  - For simplicity, a flat 4% interest rate curve is assumed in this example

# Revenue (Simple Example (2))

## Premium Pattern (most current regimes)

100 Yr 1 (Single Premium)

0 Yr 2 (None)

0 Yr 3 (None)

## IFRS 17 Revenue Pattern

17,8 Yr 1

10,0 of which: expected claim

5,0 of which: release from risk

2,8 of which: release CSM

31,9 Yr 2

23,0 of which: expected claim

6,0 of which: release from risk

2,9 of which: release CSM

60,0 Yr 3

50,0 of which: expected claim

7,0 of which: release from risk

3,0 of which: release CSM

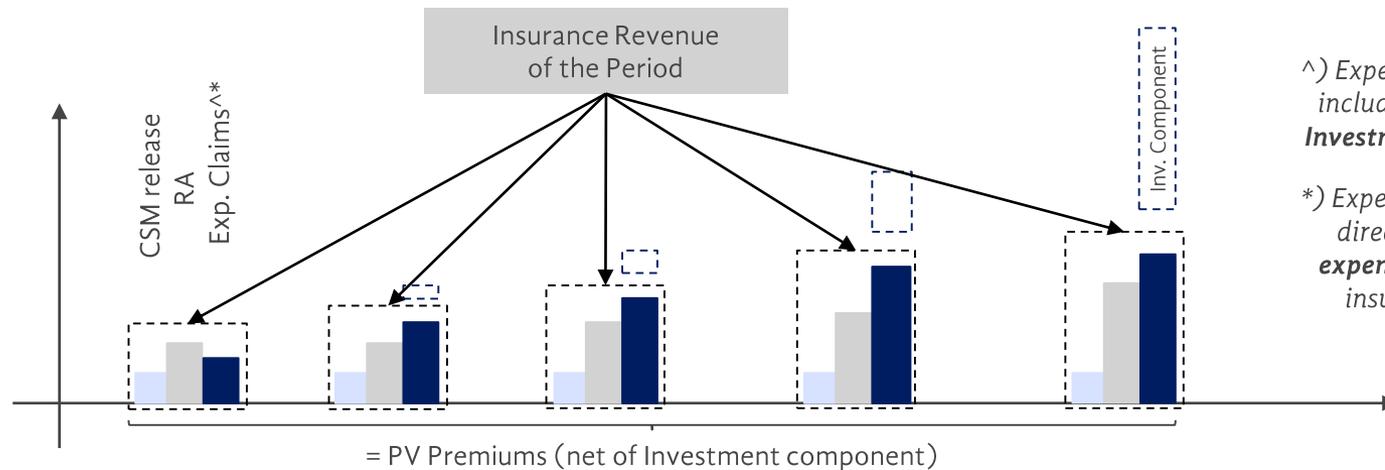
**100,0 Present Value of Revenue**

- What is the basic Revenue Pattern?
- In other words: What is the top-line of the insurer?
- The Revenue of each year directly stems from the change in each component of the LRC
  - Items to be reported by actuaries to accountants (**expected** claims)
  - Anyway coming from the model
- Ultimately, on a PV basis Revenue equals premium

# Revenue (Investment Component)

- A contract may contain a non-distinct Investment Component (IC), i.e. benefits that are paid out irrespective of the occurrence of an insured event
- Such payments must be excluded from those claims that are part of insurance Revenue (the IASB views them as mere deposits):

$$\text{PV\_Prem} - \text{PV\_IC} = \text{PV\_Claims}^{\wedge*} + \text{RA (a PV)} + \text{CSM}$$



<sup>^</sup>) Expected claims do **not** include payments from **Investment Components**

<sup>\*</sup>) Expected claims include directly attributable **expenses** relating to an insurance contract

# Revenue (Simple Example (3 – IC))

## Expected Claims net of IC

2,0 Expected Benefit Yr 1  
4,6 Expected Benefit Yr 2  
10,0 Expected Benefit Yr 3

## IFRS 17 Revenue Pattern (excl. IC)

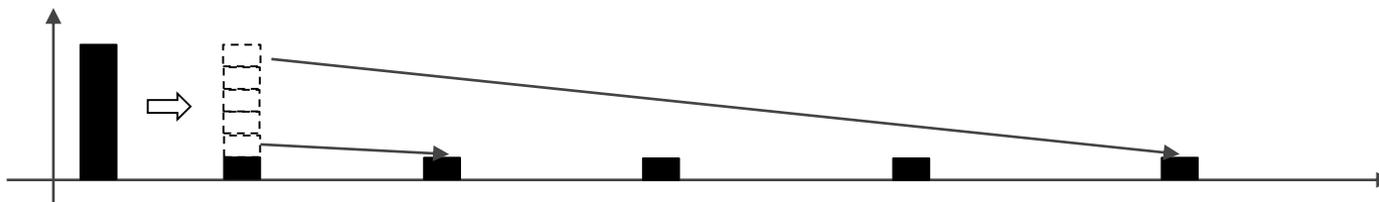
9,8 Yr 1  
2,0 of which: expected claim  
5,0 of which: release from risk  
2,8 of which: release CSM  
13,5 Yr 2  
4,6 of which: expected claim  
6,0 of which: release from risk  
2,9 of which: release CSM  
20,0 Yr 3  
10,0 of which: expected claim  
7,0 of which: release from risk  
3,0 of which: release CSM

**39,7 Present Value of Revenue**

- **Assume the contract has an non-distinct IC**
  - 80% of expected benefits
  - All other facts unchanged
- **Revenue is reduced by IC amounts**
  - Similar to some US-GAAP guidance for FAS 97 contracts
  - But details differ
- **Note that the change in Revenue-relevant CFs does not necessarily change CSM amount or pattern**
- **Difference in PV of Revenue equals the PV of Investment Component CFs**

# Revenue (Acquisition Costs)

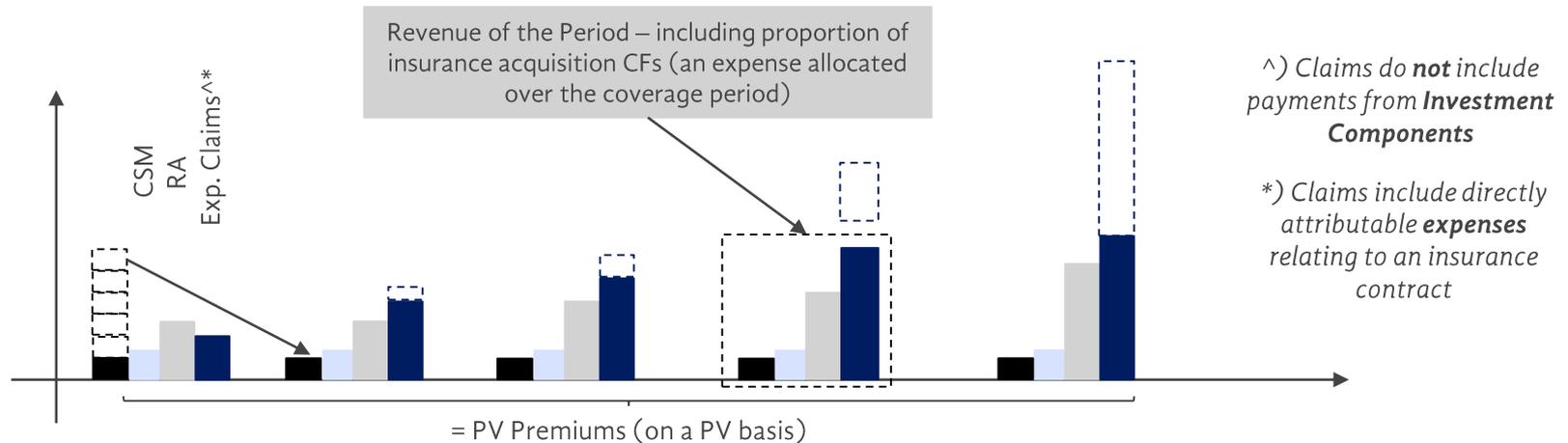
- **Directly attributable Acquisition Costs (AC) are part of the fulfilment CFs**
  - Thus they reflect a service offered by the insurer
  - Thus they will be recognised as revenue
  - However, e.g. a commission must not be treated as revenue in the period it is paid:
- **AC must be allocated over the coverage period in a systematic way that best reflects the transfer of services**
  - Note that there will be NO separate DAC Asset on the face of the B/S
  - Actuaries must develop a suitable pattern



- **No specific guidance is given in the Standard, but the wording is similar to that for releasing CSM into profit**

# Revenue (Acquisition Costs)

- So again, on a PV basis Revenue does not change but the pattern is affected



- This requires the actuary to calculate a balance of “not-yet-recognised-AC”
  - Again, be advised that this balance is **not recognised** on the B/S
  - It is rather an amount yet to be included in Revenue
  - Actuaries and Accountants are recommended to constantly monitor the equivalence of revenue already and yet to be recognised with expected total premiums – on a PV basis, that is

# Revenue (Simple Example (4 – AC))

## Expected Claims net of IC incl. Acquisition

4,0 Acquisition Cost (here: Yr 1 only)  
2,0 Expected Benefit Yr 1  
4,6 Expected Benefit Yr 2  
10,0 Expected Benefit Yr 3

## IFRS 17 Revenue Pattern (excl. IC; incl. AC)

9,8 Yr 1  
2,0 of which: expected claim  
1,4 of which: allocation of AC  
5,0 of which: release from risk  
1,4 of which: release CSM  
13,5 Yr 2  
4,6 of which: expected claim  
1,4 of which: allocation of AC  
6,0 of which: release from risk  
1,5 of which: release CSM  
20,0 Yr 3  
10,0 of which: expected claim  
1,5 of which: allocation of AC  
7,0 of which: release from risk  
1,5 of which: release CSM

**39,7 Present Value of Revenue**

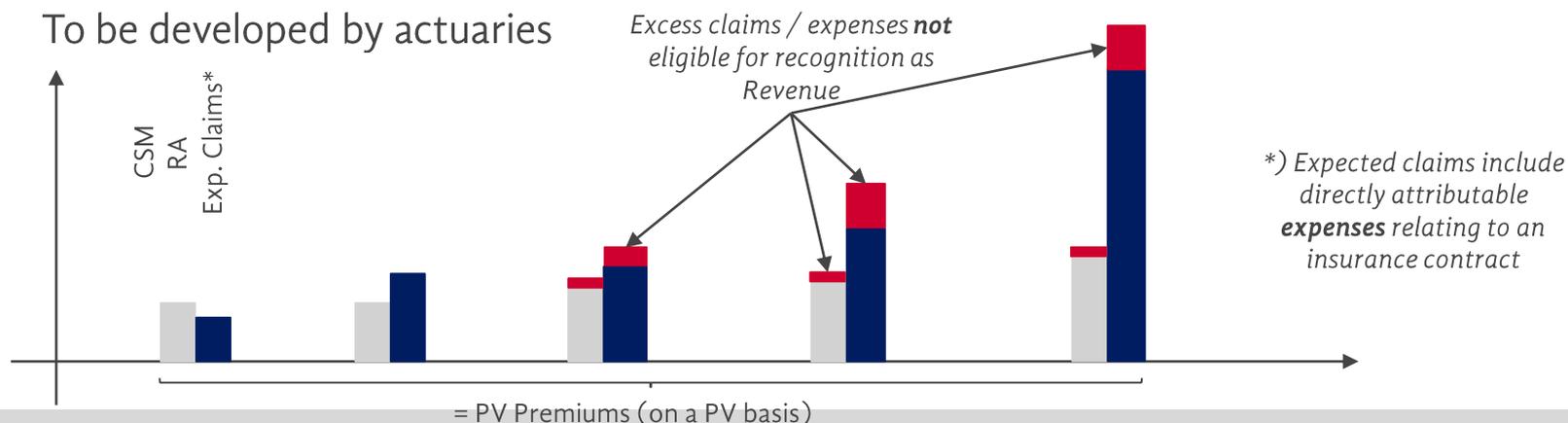
- **Assume further, that the insurer incurs acquisition costs**
  - For sake of simplicity, assume one payment in Yr 1
  - E.g. commission
- **Such additional payment out reduces the CSM accordingly**
  - It is not a claim
  - Consequently, all else equal it would reduce Revenue
- **Thus IFRS 17 requires an additional element in Revenue**
  - AC must be spread over coverage period
  - Overall, on a PV basis Revenue will equal premiums (net of IC) again

# Revenue (Onerous Contracts)

- For a non-profitable (i.e. onerous) contract, at inception we have:

$$\text{PV\_Prem} = \text{PV\_Claims*} + \text{RA (a PV)} - \text{Loss @ Inception}$$

- In other words:
  - PV(Claims & Expenses) and RA are not fully covered by Premiums
  - No obvious answer as to which claims / expenses / risk adjustment actually exceed the premium: one could use any of earliest / latest / highest / ... amounts
- Such excess of expected risk adjusted losses over premium must not become Revenue – because no consideration is paid for them
  - Some kind of “capping required”
  - To be developed by actuaries



# Revenue (Simple Example (5 – Onerous Contract))

## All claims payable end of year (as is risk) :

12 Expected Benefit Yr 1

26 Expected Benefit Yr 2

59 Expected Benefit Yr 3

5 Risk Adjustment Yr 1

6 Risk Adjustment Yr 2

7 Risk Adjustment Yr 3

104,6 PV Risk Adjusted Cash Out

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**-4,6 "negative" CSM**

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## IFRS 17 Revenue Pattern

16,4 Yr 1

11,4 of which: capped expected claim

5,0 of which: release from risk

0,0 of which: release CSM

30,6 Yr 2

24,6 of which: capped expected claim

6,0 of which: release from risk

0,0 of which: release CSM

62,9 Yr 3

55,9 of which: capped expected claim

7,0 of which: release from risk

0,0 of which: release CSM

**100,0 Present Value of Revenue**

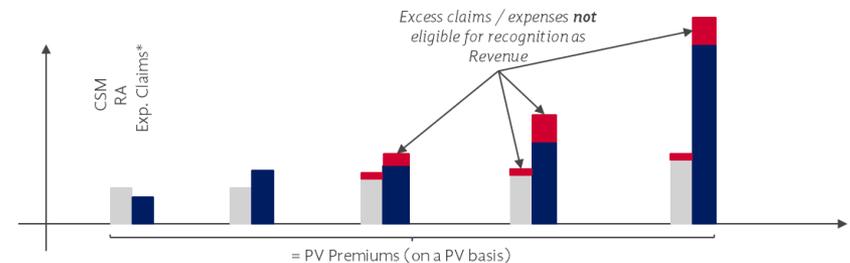
- Revenue must equal premiums (on a PV basis)
- So if risk-adjusted claims exceed premiums
  - Contract is onerous
  - Excess amount is recognised in P/L directly
  - **Excess must not be included in Revenue**
- This is regardless of whether the excess is determined
  - At inception, or
  - Later in the coverage period
- Allocation may be tricky in practice (here: set in proportion to claims payment for contract that is onerous at inception)

# Some Comments on Revenue

- **For the avoidance of doubt**
  - Release of **Risk Adjustment** is **Revenue** only to the extent it relates to **future claims** and services
  - Release of RA for past coverage is profit, though
  - Generally, RA for past coverage has been recognised as Revenue before, since claims would be risk adjusted
- **Total nominal Revenue can be influenced by the entity to some extent**
  - Changing the release pattern for CSM, acquisition costs and risk adjustment (for future coverage) will increase amounts recognised due to interest accruals
  - Limitations apply as Revenue recognition ends after coverage period
  - Note that higher Risk Adjustment leads to lower CSM and vice versa
  - By definition, PV of Revenue is always the same – in theory...
- **Capping – as just discussed – would also be required if the contract becomes (more) onerous subsequently to initial recognition**

# Audit Perspective on Revenue

- Revenue is one of the key metrics in financial statements and gets a lot of attention by users
- It is yet to be seen, if the Revenue concept applied to insurance contracts will get the same level of attention, as both preparers and user are used to premium as the “activity” metric
- In any case, given the relevance and the complexity of Revenue numbers, auditors will lay focus on these numbers
- Insurers (and their actuaries...) are well advised to established robust and auditable models for Revenue
  - Assumption changes
  - Changes in market variables
  - Business becoming onerous
  - Business no longer onerous



# Insurance Service Expenses

- **Insurance service expenses arising from a GIC comprises:**
  - **Incurred claims** (excluding repayments of investment components) – note that this is the **actual amount**
  - Other incurred insurance service expenses and
  - Amortisation of insurance acquisition cash flows – note “amortisation” **does not** imply that there is anything such a **DAC is involved**
  - Changes that relate to past service, i.e. changes in fulfilment cash flows relating to the **liability for incurred claims** (this never affects Revenue, by the way)
  - Those changes in the LRC that relate to future service and that are **losses on onerous GICs** and **reversals of such losses**.
- **Expected claims and incurred costs (including acquisition costs) are thus recognized twice as Revenue and Insurance service expenses**
- **Anything related to incurred claims and onerous business never affects Revenue, but is a (positive or negative) Insurance service expense**

# Comprehensive Income – Summary Example (Accounting)

## *PV of future premium(s) [Cash IN]*

-100,0 Single Premium (in this example)

## *Expected Cash OUT*

4,0 Acquisition Cost Yr 1 (beginning)

10,0 Expected Benefit Yr 1 (end)

23,0 Expected Benefit Yr 2 (end)

50,0 Expected Benefit Yr 3 (end)

**79,3 PV Cash OUT**

## *Risk Adjustment*

5,0 Risk Adjustment Yr 1

6,0 Risk Adjustment Yr 2

7,0 Risk Adjustment Yr 3

**16,6 Risk Adjustment**

## *Contractual Service Margin (if any)*

4,1 - min(PV Cash IN+OUT + RA; 0)

## *Summary of liability at initial recognition*

-20,7 PV of expected CFs (EPV)

16,6 Risk Adjustment (RA)

4,1 Contractual Service Margin (CSM)

**0,0 Total liability**

- We will now consider the actual bookings for a simple contract based on the previous example
  - Assuming the contract is profitable at inception
  - Contract has all “features” such as Investment Component and acquisition expenses
  
- By design of the CSM, for such profitable contract at inception the liability is NIL

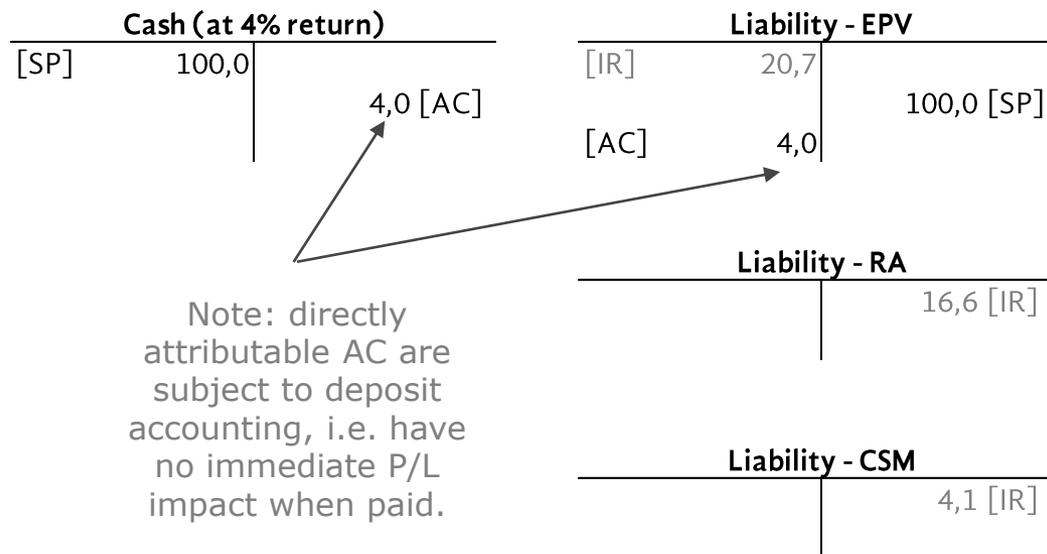
# Comprehensive Income – Summary Example

<b>Liability - EPV</b>	
[IR]	20,7
<hr/>	
<b>Liability - RA</b>	
	16,6 [IR]
<hr/>	
<b>Liability - CSM</b>	
	4,1 [IR]

- **What are the bookings related to the Initial Recognition (IR) of the contract?:**
  - (dr) Liability EPV
  - (cr) Liability RA
  - (cr) Liability CSM
  - See “T-Accounts” on the left
- **Presented here by component of liability**
  - Increases clarity
  - Not required for B/S presentation
  - But necessary perspective for disclosures (see 8<sup>th</sup> session), so strongly recommended
- **For onerous contracts separation of excess amounts (“negative CSM”) – see below**

# Comprehensive Income – Summary Example

- Immediately after initial recognition, two cash flows are paid:
  - [SP] Single Premium paid by PH
  - [AC] Insurer pays commission
  - For ease of reference, the insurer's assets are cash only and the cash earns the required rate



- Note that either payment is recognised in the B/S only (no P/L effect!)

# Comprehensive Income – Summary Example

What happens during the first year (if actual = expected)?

See next slide for  
actual bookings

- **[IA]: Interest accrues to all liability components**
  - Calculation and recognition for EPV: Straight-forward
  - Calculation and recognition for CSM: Straight-forward
  - Calculation for RA: Straight-forward
  - Recognition for RA: Option to use insurance finance expense chosen
  
- **[CL] A claim is paid to the PH – pure B/S Booking (“*Deposit Accounting*”)**
- **[RC] Part of which (after allowance for Investment Component) is Revenue and an expense**
  
- **[RR] Release of Risk Adjustment for period is Revenue**
- **[RM] Release of CSM for period is Revenue**
  
- **[AC] Recognition of portion of acquisition costs is Revenue (and an expense)**

# Comprehensive Income – Summary Example

- The resulting booking are as follows (actual = expected):

Cash (at 4% return)	
	10,0 [CL]

Liability - EPV	
[CL]	10,0
	3,0 [IA]

Revenue	
	2,0 [RC]
	5,0 [RR]
	1,4 [RM]
	1,4 [AC]

\*  
Technically, there is no need to split these items – in P/L, one Insurance Service Expense line item would suffice

Liability - RA	
[RR]	5,0
	0,7 [IA]

Liability - CSM	
[RM]	1,4
	0,2 [IA]

Claims	
[RC]	2,0

Amortisation AC	
[AC]	1,4

Insurance Interest Expense	
[IA]	3,8

- Note that Revenue guidance leads to a gross up of the P/L:
  - Claims covered twice – in addition to the B/S booking of paid amounts
  - Amortisation of acquisition costs, too (note that there is **no B/S item** such as “DAC” **involved** in the deferral of AC – this deferral is completely done in the background)

# SCI (From t to t+1) – Example so Far

Summary of what we have covered so far (fully coloured cells):

Expected CFs @ t	Effect of Discounting @ t	Risk Adjustment @ t	CSM @ t
Expected inflows and outflows		Release* into profit for future coverage	
Effect of Experience Adjustments		Release* into profit for past coverage	<i>Not covered by example</i>
Update for future coverage / service	Unwind of discount for period	Change for future coverage / service	Unlocking (disc. CFs and RA)
Update for past coverage / service	Change in interest rates	Change for past coverage / service	Accrual of interest
Ceded R/I only: Change credit risk		Accrual of interest?!	Release into profit
Expected CFs @ t+1	Effect of Discounting @ t+1	Risk Adjustment @ t+1	CSM @ t+1

# Summary Revenue

- **Revenue is**
  - The most complex element to understand
  - Possibly the most unusual element for an actuary
- **Revenue includes elements that do not come automatically from any “standard” reserve roll-forward, in particular**
  - Claims net of Investment Components
  - Amortisation of Acquisition Costs
- **All other items are fairly straight-forward (to the extent the CSM is considered straight-forward at all)**
  - Interest accrual
  - Deposit accounting of cash flows
- **All remaining items deal with changes:**
  - Interest rates (more accurate: market factors)
  - Cash flows (only those not dependent on market factors)

# Experience Adjustments

- In a more realistic scenario, actual amounts will differ from those expected
- IFRS 17 provides for a formal definition of an “Experience Adjustment” as a difference between:
  - (a) the most recent previous estimates of **premium receipts** and any **related cash flows**, such as insurance acquisition cash flows and insurance premium taxes, expected in the period and the actual premiums received and any related cash flows;
  - (b) the most recent previous estimates of **insurance service expenses** expected to be incurred in the period and the actual insurance service expenses incurred in the period; and
  - (c) the most recent previous estimates of **insurance claims and expenses** incurred in previous periods and the related cash flows in the period.
- Note that this definition eliminates the contribution from Investment Components (by referring to insurance claims)

# Experience Adjustments

- **More generally, Experience Adjustments can have various effects:**
  - Purely causing a difference in current period (t) cash flows – no effect on liability @ t+1
  - Trigger for change in assumptions (e.g. higher expected mortality) – change in expected cash flows and thus liability
  - Change in in-force (e.g. because of lower or higher lapses) – change in expected cash flows and thus liability
- **The latter item (change in in-force) can affect both**
  - Liability for remaining coverage
  - Liability for incurred claims
- **Treatment differs by effect (as discussed in the 3<sup>rd</sup> session), thus analysis is required**
- **But let's look at the effect from the first item (pure difference in CF) first, assuming an experience adjustment [EA] increasing the claim by 1,5**

# Comprehensive Income – Summary Example

The resulting booking are as follows (pure CF difference in current period):

Cash (at 4% return)		Liability - EPV		Revenue	
	10,0 [CL]		3,0 [IA]		2,0 [RC]
	1,5 [EA]	[CL] 10,0			5,0 [RR]
					1,4 [RM]
					1,4 [AC]

Liability - RA		Claims	
	0,7 [IA]	[RC] 2,0	
[RR] 5,0		[EA] 1,5	

Liability - CSM		Amortisation AC	
	0,2 [IA]	[AC] 1,4	
[RM] 1,4			

Insurance Fincance Expense	
[IA] 3,8	

Assume actual claims payment was 1,5 higher than expected amount

- The additional claims amount (green shaded) increases the expense recognised (no adjustment to CSM, since this is now past coverage)
- Note that the additional claims amount is no Revenue

# SCI (From t to t+1) – Example so Far

Covered by latest step

Summary of what we have covered so far (fully coloured cells):

Expected CFs @ t	Effect of Discounting @ t	Risk Adjustment @ t	CSM @ t
Expected inflows and outflows		Release* into profit for future coverage	
Effect of Experience Adjustments		Release* into profit for past coverage	
Update for future coverage / service	Unwind of discount for period	Change for future coverage / service	Unlocking (disc. CFs and RA)
Update for past coverage / service	Change in interest rates	Change for past coverage / service	Accrual of interest
Ceded R/I only: Change credit risk		Accrual of interest?!	Release into profit
Expected CFs @ t+1	Effect of Discounting @ t+1	Risk Adjustment @ t+1	CSM @ t+1

*Not covered by example*

# Update of Assumptions

- **Typically, assumptions will be updated regularly and such update might change the**
  - Liability for Remaining Coverage → CSM\* Unlocking
  - Liability for Incurred Claims → P/L Recognition
- **\* Recall the limitations for unlocking the CSM (3<sup>rd</sup> session):**
  - CSM must not become negative
  - Once a loss (component) has been recognised, a favourable change in net CFs affects the CSM for the Group of contracts only to the extent it reverses previously recorded and not yet recovered losses
- **For simplicity, this example covers the LRC only**
- **Note that changes in the Risk Adjustment are treated similarly, but**
  - That the scope of changes that unlocks the CSM is wider than that for CFs; and
  - That an insurer can opt to recognise changes in the RA due to Market Variables in in the same way as for the expected PV of CFs

# Update of Assumptions

- Now, assume an increase in expected CFs for future coverage that exceeds the remaining balance of CSM (before release into profit)

## Remaining exp. Cash OUT - Most recent

23,0 Expected Benefit Yr 2 (end)

50,0 Expected Benefit Yr 3 (end)

---

**68,3 PV Cash OUT**

---

## Change in PV of CFs

**4,8** (All for future coverage)

4,3 Covered by CSM\* balance [UC]

---

0,5 Amount recognised in P/L directly [UE]

---

## Remaining exp. Cash OUT - After Update

**24,6** Expected Benefit Yr 2 (end)

**53,5** Expected Benefit Yr 3 (end)

---

**73,1 PV Cash OUT**

---

\* Remark: In practice, CSM would be unlocked before some of the balance is released into P/L. Thus booking [RM] is set back to zero in the example (see next page).

# Other Comprehensive Income

The resulting accumulated bookings are:

Cash (at 4% return)	
	10,0 [CL]
	1,5 [EA]

Liability - EPV	
	3,0 [IA]
[CL]	10,0
	4,3 [UC]
	0,5 [UE]

Revenue	
	2,0 [RC]
	5,0 [RR]
	0,0 [RM]
	1,4 [AC]

The example assumes a change in CFs only. Users may want to split the effect from loss components to simplify tracking.

Liability - RA	
	0,7 [IA]
[RR]	5,0

Liability - CSM	
	0,2 [IA]
[RM]	0,0
[UC]	4,3

Claims	
[RC]	2,0
[EA]	1,5

Amortisation AC	
[AC]	1,4

Change in Loss Component (-> P/L)	
[UE]	0,5

Insurance Service Expense

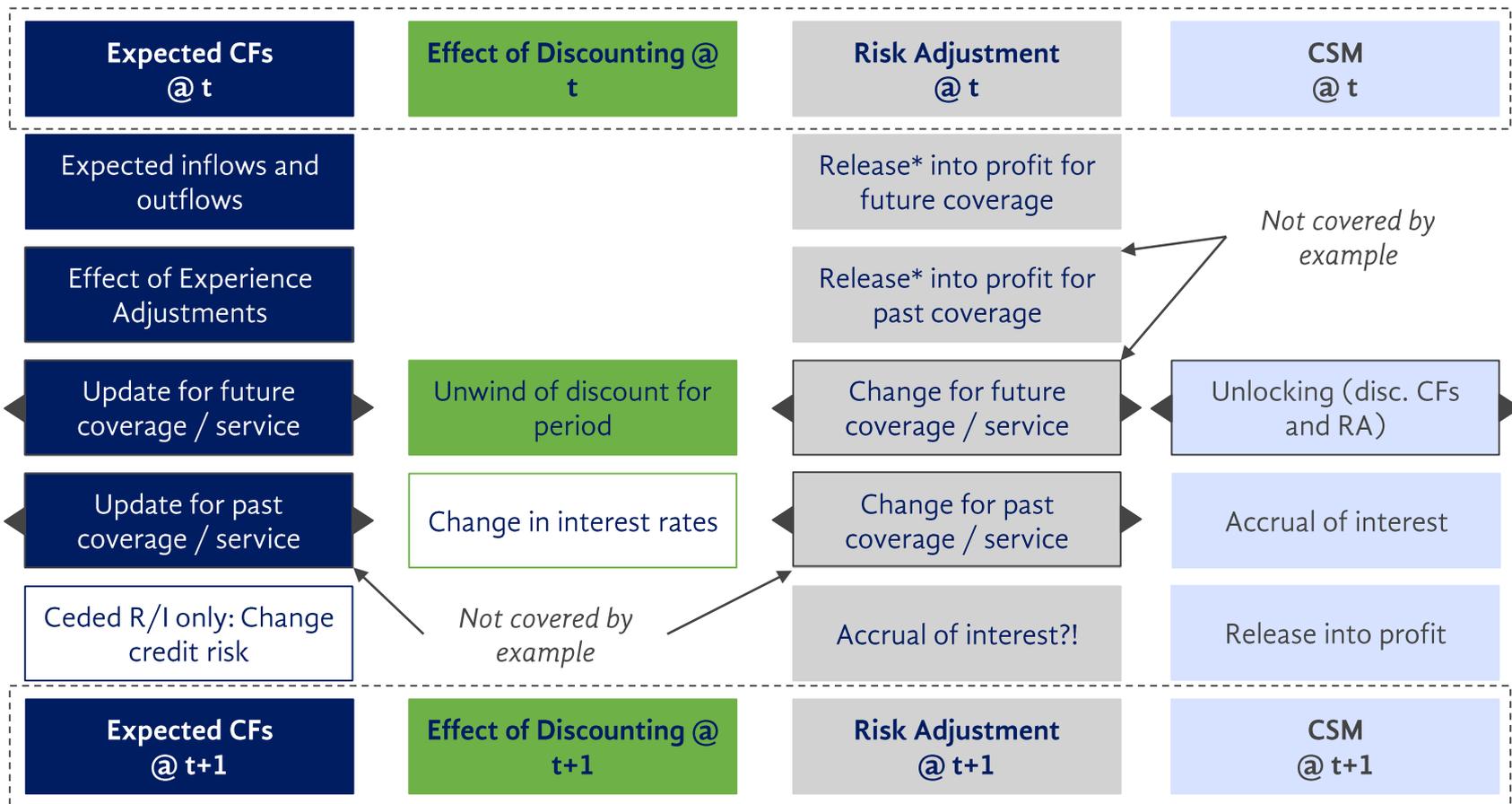
Insurance Finance Expense	
[IA]	3,8

- Note that [RM] was set to zero, since in the example the total CSM was used up by the unlocking
- A loss at inception would be recognised in the same way as [UE], i.e. the loss in excess of the CSM

# SCI (From t to t+1) – Example so Far

Covered by latest step

Summary of what we have covered so far (fully coloured cells):



# Other Comprehensive Income

- The remaining element for the Income Statement for insurance contracts issued is the effect of changes in discount rates
- Here, for presentational reasons, the effect of interest rate changes is considered last – in practice, one might update assumptions on current rates
- Assume that
  - The insurer applies the OCI-Approach
  - The interest rate curve stays flat and moves 1% down
  - Cash flows are as just updated
- Update affects both Cash Flows [DC] and Risk Adjustment [DR]:

## Remaining exp. Cash OUT - After Update

24,6	Expected Benefit Yr 2 (end)
53,5	Expected Benefit Yr 3 (end)
<b>73,1</b>	<b>PV Cash OUT - locked in Rate</b>
<hr/>	
<b>74,3</b>	<b>PV Cash OUT - current Rate</b>
<hr/>	
<b>1,2</b>	<b>Effect Change Discount on CFs</b>

## Remaining Risk Adjustment Amounts

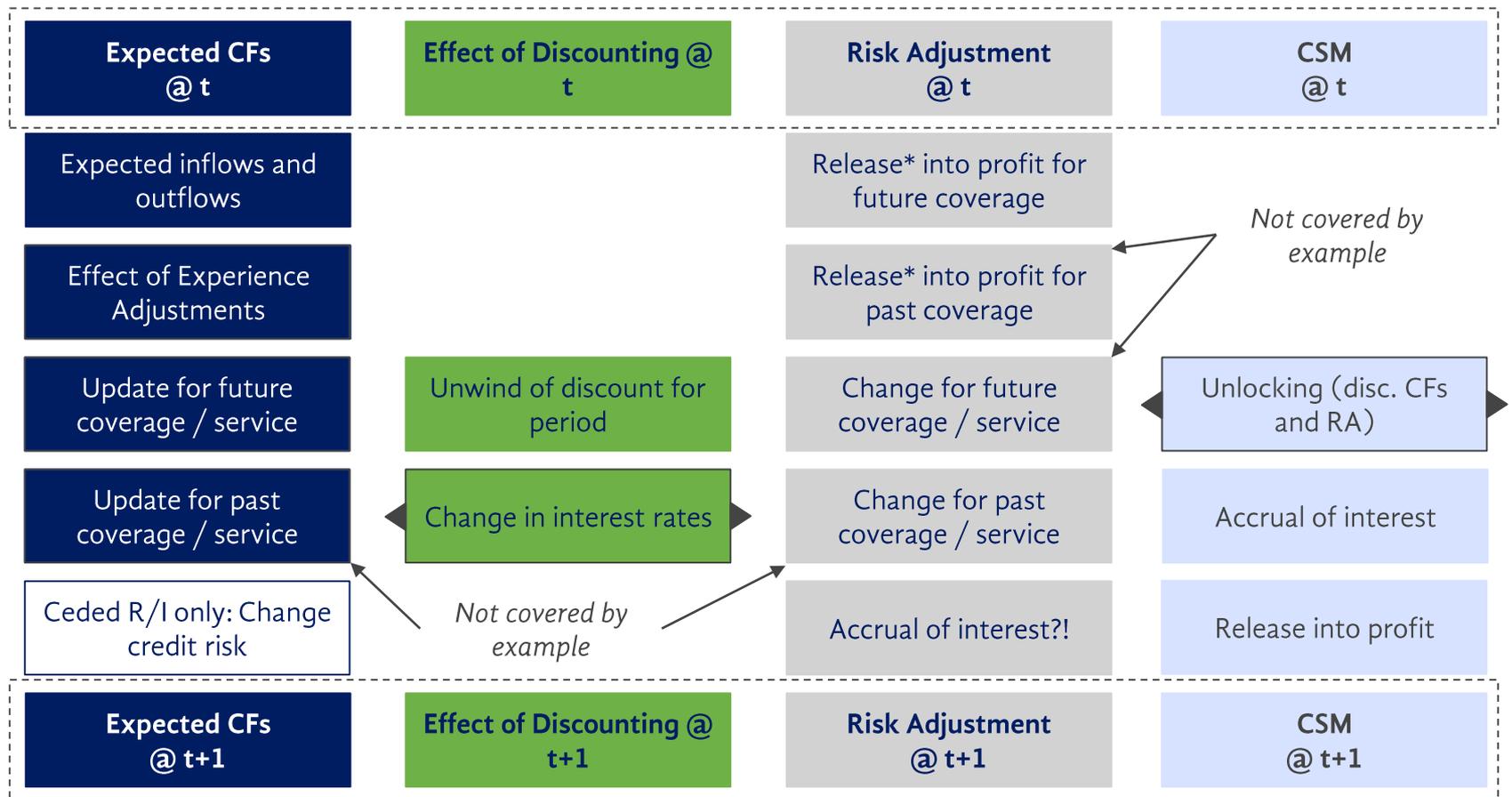
6	Risk Adjustment Yr 2
7	Risk Adjustment Yr 3
<b>12,2</b>	<b>PV RA - locked in Rate</b>
<hr/>	
<b>12,4</b>	<b>PV RA - current Rate</b>
<hr/>	
<b>0,2</b>	<b>Effect Change Discount on RA</b>



# SCI (From t to t+1) – End of Example

Covered by latest step

Summary of what we have covered so far (fully coloured cells):



## Some Further Comments

- As for B/S measurement, no insurance amounts must be offset with R/I ceded amounts, i.e. R/I ceded is reported separately in SoCI (§82)
- As we will discuss in the following sections, for some short duration business Revenue determination is more simple and very similar to current “earned premium” basis
- Any change in the “Loss Component” of the LRC is recognised in P/L
- One a more accounting technical note: (Re)insurance is a monetary item when determining the effect of changes in FX-rates
- Upon derecognition of a contract (e.g. because of lapse or a ‘major’ modification) all amounts need to be eliminated
  - CSM balances
  - Any accumulated OCI for the contract

## One more Remark on CSM Adjustments (1)

- According to B96(c), differences between (non-distinct) Investment Components expected to be paid out in the period and the actual payment adjust the CSM
- Here is why (based on a very simple example)
  - Insurer expects 2 payments of 100 each in the 2 upcoming years, Risk and Discounting is negligible, thus liability is 200 (here: all LRC)
  - Of the 100 expected payment, 70 relate to an Investment Component (non-distinct); all actual payments are subject to the same proportionate split
  - In the first year the actual payment is 60 (= 42 IC and 18 Revenue and Expense)
- Key is to note that the expected IC-related payment needs to be made in any case (by definition of an Investment Component) – so expected future benefits increase by 28 (= IC not (yet) paid)
- Assume the PH retains the non-IC benefit expected – so there is an increase in future benefits of 40, reducing the (sufficiently large) CSM

## One more Remark on CSM Adjustments (2)

- With the guidance in §B96(c):

Cash (at 4% return)	Liability - EPV	Revenue										
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%; text-align: right;">100,0 [CL]</td> </tr> <tr> <td style="text-align: left;">[EA] 40,0</td> <td></td> </tr> </table>		100,0 [CL]	[EA] 40,0		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: left;">[CL] 100,0</td> <td style="width: 50%;"></td> </tr> <tr> <td></td> <td style="text-align: right;">40,0 [UC]</td> </tr> </table>	[CL] 100,0			40,0 [UC]	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%; text-align: right;">20,0 [RC]</td> </tr> </table>		20,0 [RC]
	100,0 [CL]											
[EA] 40,0												
[CL] 100,0												
	40,0 [UC]											
	20,0 [RC]											
	Liability - CSM	Insurance Service Expense										
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: left;">[UC] 40,0</td> <td style="width: 50%;"></td> </tr> <tr> <td></td> <td style="text-align: right;">28,0 [EA]</td> </tr> </table>	[UC] 40,0			28,0 [EA]	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: left;">[RC] 20,0</td> <td style="width: 50%;"></td> </tr> <tr> <td></td> <td style="text-align: right;">12,0 [EA]</td> </tr> </table>	[RC] 20,0			12,0 [EA]		
[UC] 40,0												
	28,0 [EA]											
[RC] 20,0												
	12,0 [EA]											

- The CSM – and thus future Revenue – is reduced by 12: This is exactly the amount by which current period Revenue was “overestimated” (assuming the PH keeps the right to receive 12 benefits; note that otherwise only the numbers would change, but not the economic outcome)
  - The Experience Adjustment [EA] booking affects Cash as well as the Insurance Service Expense (P/L part) and the CSM (Investment Component part)
- The guidance in §B96(a) regarding Experience Adjustments on Premiums can be motivated in a broadly similar way (e.g. more premiums received in the period increase future benefits, which adjust the CSM)

# Summary

- **Balance Sheet presentation is most likely straight-forward**
- **Preparation of the Statement of Comprehensive Income will introduce some complexity**
- **Especially the Revenue model poses some challenges**
  - Interaction between premiums, expected claims and Revenue
  - Elimination of Investment Components
  - “Background” deferral of Acquisition expenses
  - Out-scoping of amounts that make a contract onerous
  - Auditability – how can an insurer prove that Revenue equals premiums on a PV basis (after elimination of Investment Components)?
- **Other components of P/L and OCI should come directly from the measurement models**
- **Insurers are advised to**
  - **Understand** interaction of the components
  - Get a feeling for **when changes in the model hit the P/L**

# Thank You!



Wort & Zahl

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# Appendix – Topics & Abbreviations and Terminology Used

# Introduction Stephan Otzen

- **Mathematician (University of Hannover) and Full member of German and Swiss Actuarial Association (DAV / SAV)**
  - Member of the SAV's Accounting Working Group
  - Member of the DAV's IFRS for Health Insurance Working Group

~8 yrs "Big Four" Audit Firm
<ul style="list-style-type: none"><li>➤ Audit of IFRS financial statements</li><li>➤ Implementation of IFRS 4, Phase 1</li><li>➤ "Translator" between Actuaries and Accountants</li></ul>

2.5 yrs ILS Funds
<ul style="list-style-type: none"><li>➤ Structuring of Risk Transfer</li><li>➤ Development of Risk Measures</li><li>➤ Investment Management</li></ul>

5+ yrs Independent Actuary
<ul style="list-style-type: none"><li>➤ IFRS 4.2 case study</li><li>➤ Workshops at all levels</li><li>➤ Follow up on IASB discussions</li><li>➤ Various tasks in "actuarial accounting"</li></ul>

- **Frequent lecturer on IFRS related topics**
- **Hands-on experience in accounting, booking and Financial Statement development and analysis**

# Overview of Workshop – Day 1

- This is a possible schedule for a 1,5 day seminar – but the material can be easily adopted to facilitate the individual company profile

Time	Topic
09.15 – 10.00	IFRS 17: Introduction and Context
10.00 – 10.45	Insurance Contracts (“Scope”)
10.45 – 11.00	Coffee Break
11.00 – 12.30	The General Measurement Model
12.30 – 13.30	Lunch
13.30 – 15.00	The General Measurement Model – cont’d
15.00 – 15.15	Coffee Break
15.15 – 17.00	Statement of Comprehensive Income

## Overview of Workshop – Day 2

Time	Topic
09.00 – 10.00	Premium Allocation Approach and Reinsurance
10.00 – 11.00	Direct Participation Business: The Variable Fee Approach
11.00 – 11.15	Coffee Break
11.15 – 12.30	Direct Participation Business: Presentation
12.30 – 13.30	Lunch
13.30 – 14.15	Disclosures
14.15 – 15.10	Transition, Preparation and Outlook
15.10 – 15.15	Concluding remarks, closing of seminar

- The mix of presentation and workshop elements can also be agreed upon individually

## Abbreviations Used (1)

<b>IFRS 4 or IFRS 4.1</b>	The current standard for insurance contracts
<b>IFRS 4.2</b>	The upcoming standard
<b>ED1</b>	July 2010 Exposure Draft ED/2010/8
<b>ED2</b>	June 2013 Exposure Draft ED/2013/7
<b>IASB</b>	International Accounting Standards Board
<b>IFRIC</b>	International Financial Reporting Interpretations Committee
<b>AP</b>	Agenda Paper
<b>FASB</b>	Financial Accounting Standards Board
<b>IAA</b>	International Actuarial Association
<b>B/S</b>	Balance Sheet
<b>SCI</b>	Statement of Comprehensive Income
<b>P/L</b>	Profit and Loss
<b>OCI</b>	Other Comprehensive Income
<b>AOCI</b>	Accumulated OCI
<b>FS</b>	Financial Statements
<b>DPF</b>	Discretionary Participation Feature

## Abbreviations Used (2)

<b>CFs / EPV</b>	Cash Flows / expected present value
<b>RA</b>	Risk Adjustment
<b>CSM</b>	Contractual Service Margin
<b>IC</b>	Investment Component
<b>E.D.</b>	Embedded Derivative
<b>S2</b>	Solvency 2
<b>BBA</b>	Building Block Approach
<b>PAA</b>	Premium Allocation Approach
<b>VFA</b>	Variable Fee Approach
<b>par.</b>	Participating
<b>R/I</b>	Reinsurance
<b>PH</b>	Policyholder
<b>O&amp;G</b>	Options & Guarantees
<b>LRC</b>	Liability for Remaining Coverage
<b>LIC</b>	Liability for Incurred Claims
<b>(dr)</b>	debit
<b>(cr)</b>	credit
<b>CU</b>	Currency Unit

# Definition of Mismatches

- The following concepts are key when developing financial accounting standards, and strongly influenced the development of IFRS 17

An **economic mismatch** arises if the values of, or cash flows from, assets and liabilities respond differently to changes in economic conditions.

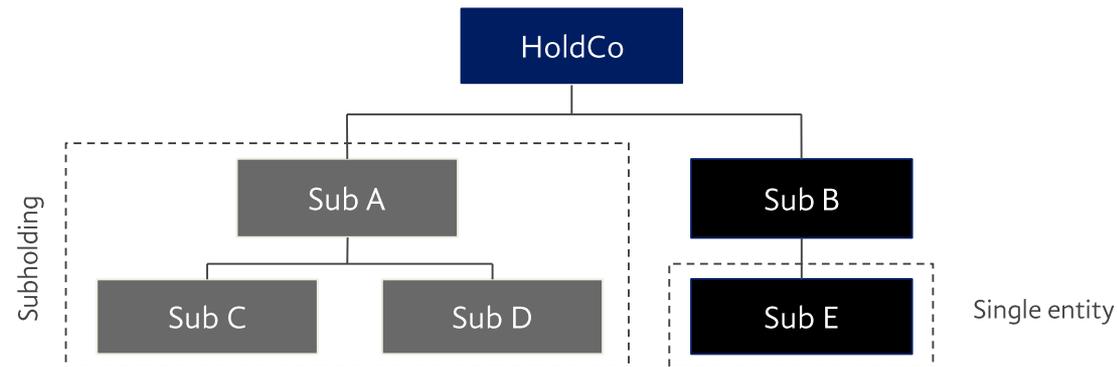
- Ideally, the measurement and presentation guidance of an accounting standard does reflect the effect of economic mismatches (which are a fact)

An **accounting mismatch** arises if changes in economic conditions affect assets and liabilities to the same extent, but the carrying amounts of those assets and liabilities do not respond equally to those economic changes because they are measured on different bases.

- Ideally, an accounting standard does not introduce any accounting mismatches – they would obscure the true economic substance

# Preparers and Users of IFRS Financial Statements

- A **“Preparer” of IFRS Financial Statements is any entity that issues IFRS Financial Reporting**
  - This is usually the ultimate holding company of a group (as the entity whose stocks / bonds are available in the market)
  - But it could also be a sub-holding, e.g. because of local regulation
  - And of course any entity could prepare its Financial Statements in accordance with IFRS (if e.g. daughter company is up for sale)



- A **“User” of IFRS Financial Statements is any interested party, such as**
  - Actual or potential investor
  - Analyst