IFRS 17: THE ACTUARY AS A STORYTELLER

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1. New disclosure challenges for actuaries
2. Observations from recent public disclosures
   - Population for our study
   - Key messages
   - Policy choices
   - Impact on KPIs

Agenda

New disclosure challenges for actuaries

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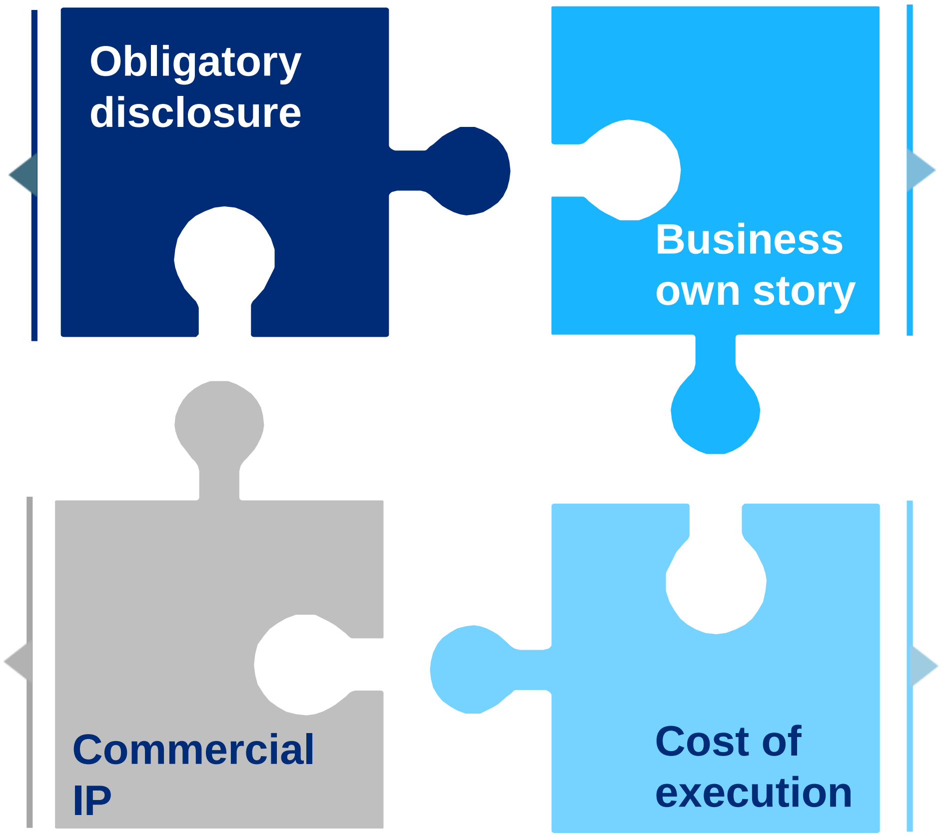
The actuary as a storyteller

New challenges under IFRS 17

- Numerous new and expanded disclosures (see next slide)
- Prescribed minimum content
- Stronger emphasis on judgements, estimates, inputs and process
- Holistic perspective (ALM view)

- A challenging balancing act:
  - Compliance
  - Credibility
  - Protection of commercially sensitive know-how



- Explain analysis of change
  - Growth / creation of value
  - Development of risk (AvE)
  - Assumptions or methodology changes
- Measure impact on CoR, RoE, Leverage, etc

- Recalculate KPIs on IFRS 17 basis and compare to IFRS 4
- Test impact of policy choices
- Use existing MI to translate ‘old’ into ‘new’
- Test stakeholder reaction
- Redesign

A snapshot of what is new in disclosures

Selected points of focus for valuation actuaries

New	
PAA	How the company has satisfied eligibility requirements
Discount rates	Yield curve (or range of yield curves) used to discount cash flows
Risk adjustment	Confidence level and technique (if other) - justification and corresponding conf. level
IFIE	Total amount & explanation of relationship of IFIE and investment return on assets
CSM	(Quantitative) when the company expects to recognise CSM in P&L (in time bands)
Regulatory	Effects of the regulatory framework in which the company operates

Expanded	
Liquidity (Maturity analysis)	• Net cash flows (PV or undiscounted) for each of the first 5 years post reporting date, cumulative thereafter • Amounts payable on demand (and relationship to carrying amounts of contract portfolios)
Sensitivities	For each type of market risk (e.g. FX , interest rates) – explain relationship between sensitivities from insurance contracts and those from financial assets

…emphasis on the inputs, assumptions and estimation techniques used, and the processes for estimating the inputs to measurement methods

Population for our study

2

Population of public disclosures

Measurement

Global and International Composites

Munich RE, ZURICH, Allianz, AXA, GENERALI, AVIVA, talanx., MAPFRE, SCOR The Art & Science of Risk

- Significant Life business impacts Group metrics via CSM
- P&C measured mostly under the simplified PAA approach (some exceptions: SCOR)
- Assumed reinsurance and retro(cessions) measured under a mixture of GMM and PAA (small CSM)
- Non-life transition at retrospective or fair value approach (for assumed reinsurance and some run-off portfolios)
- L&H transition: varied mix of retrospective and fair value approach (see next slide)

International and Local Non-life

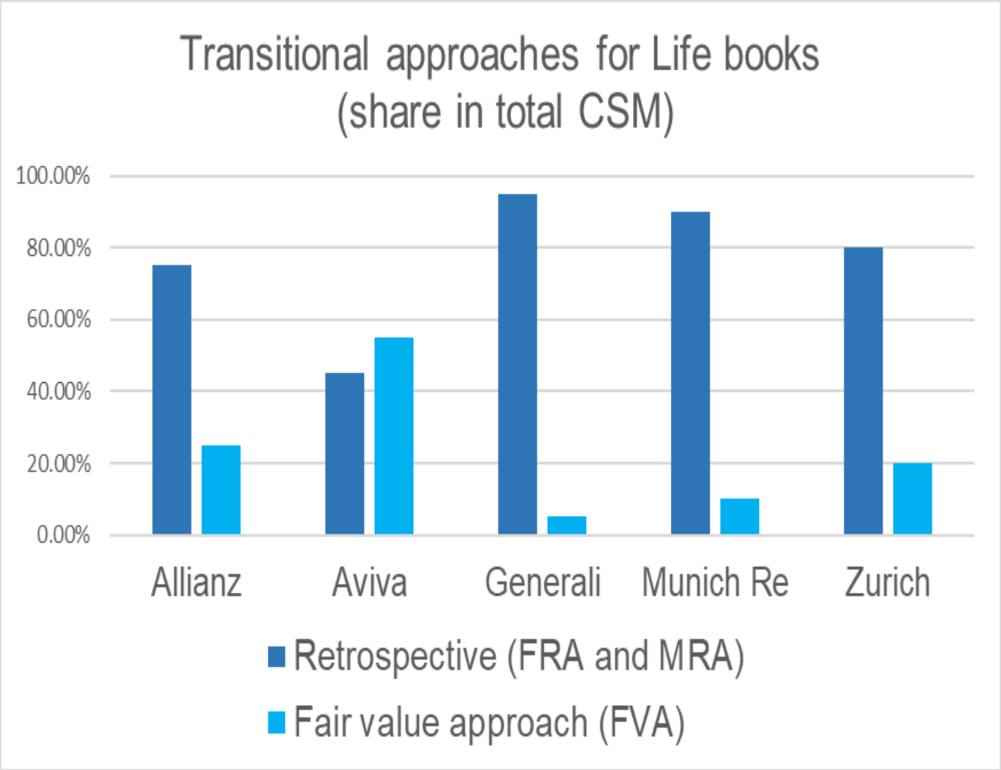
HISCOX, DirectLine Group, Admiral Group PLC

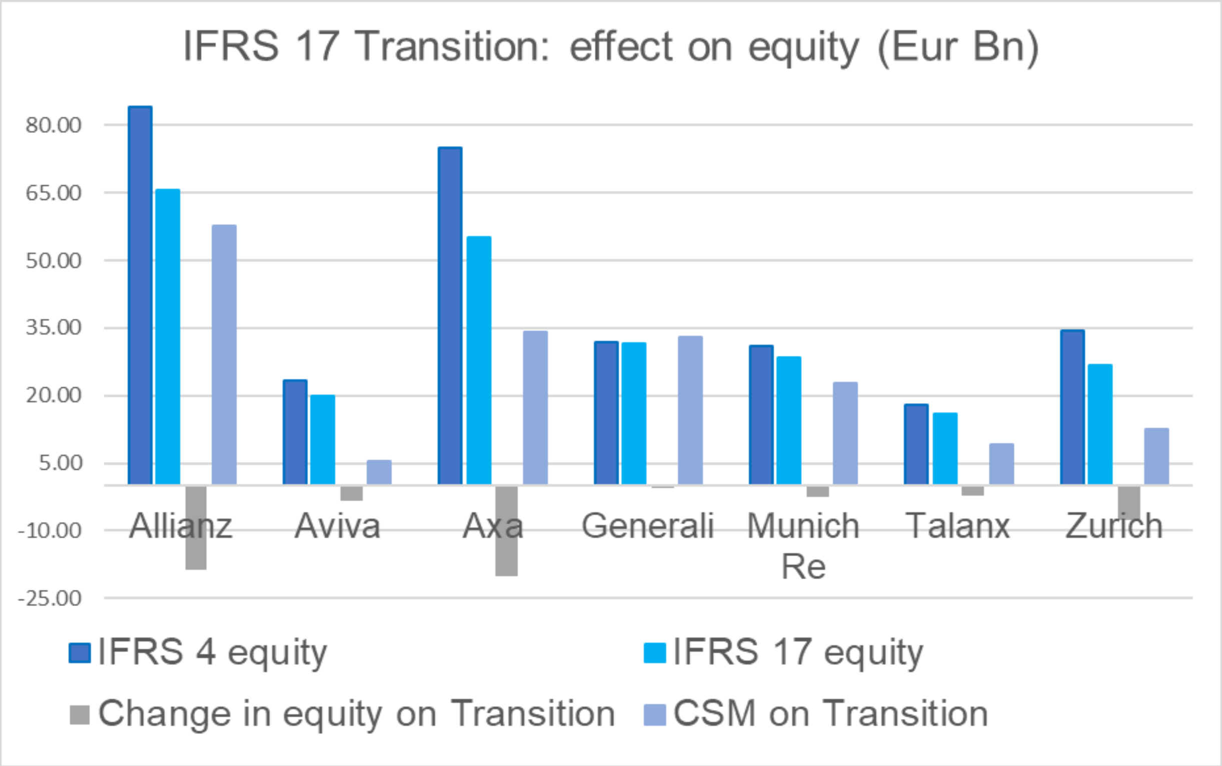
- Business measured under the simplified PAA approach
- Transition (where disclosed) at full retrospective approach

…disclosures per unaudited information in investor presentations held prior to 31 Dec 2022 and (where explicitly specified) audited 2022 annual reports

Impact on equity at IFRS 17 transition (1 Jan 2022)

Values in Euro bn equivalent as per audited 2022 annual reports





- FVA used for annuities and liabilities incurred prior to 2016 (sometimes also opting to use the option to set OCI at transition to zero – i.e. using the discount curve at Transition)

- Equity reduction at Transition ranges from 1% (Generali) to 22.5% (Zurich); explained mainly by changes in VFA accounting
- CSM at Transition ranges from 27% (Aviva) to 105% (Generali) compared to IFRS 17 equity

Source: 2022 Annual Reports

Key messages

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IFRS 17 Transition: key messages in preliminary public disclosures

Strategy

- Business strategy is unaffected
- No major change expected in underwriting & investment risk appetite

Solvency

- Better alignment with Solvency II and internal steering basis
- No impact on solvency ratio (SII or SST)

Cash & Dividends

- No change to cash generation / remittances, dividends guidance or share buy-backs (where announced)

Performance metrics (KPIs)

- Key financial targets reaffirmed
- Traditional P&C KPIs remain in use but are calculated on IFRS 17 basis (devil in the detail)
- New adjustments (varying practices) for ROE and Leverage calculations

Equity & P&L

- Relatively small equity effect on transition (when considered with CSM balance)
- Equity: more stable (less sensitive to interest rate changes)
- P&L: changed mix of underwriting and finance results; more P&C volatility

Policy choices

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IFRS 17 observed policy choices

Discount rates

Prevalent choices in the population

Bottom-up approach with illiquidity premium
Risk free rate aligned with SII
Illiquidity premium based on bonds spread

Change in discount rates goes to OCI

Nuanced application:

AXA	Illiquidity premium (IP) based on EIOPA replicating portfolios approach
GENERALI	Alignment with SII for P&C and GMM business; VFA IP based on own asset mix per company to reflect ALM
HISCOX	Risk free determined using swap curves for each settlement currency. IP by reference to corporate bond spreads
MAPFRE	No illiquidity premium for PAA, risk free rate only
ZURICH	Risk free based on swap rates or sovereign yields. No illiquidity premium on onerous contracts

Different approach or policy choice:

ageas	Top-down method (to capture non-fundamental spread in own asset portfolio); changes to OCI
AVIVA	Top-down method for annuity book. OCI option not taken (impact of changes to be reported in P&L)
HISCOX	Not explicitly disclosed (changes appear to go to P&L)
Direct Line Group	Change in the discount rate is recognised in IFIE in P&L

Source: 2022 Investor presentations and audited 2022 Annual Reports

IFRS 17 and IFRS 9 observed policy choices

Aligning accounting outcomes with ALM objectives

Prevalent choices in the population	
IFRS 9 classification overlay	Many companies have taken the approach for IFRS 9 and IFRS 17 transition. Choices vary regarding IFRS 9 impairment requirements to comparatives
VFA liabilities	Tailored approach to assets classification to match product specifics (and VFA liability valuation)
PAA and GMM portfolios:	
Fixed income assets	Measured at FVOCI (mark-to-market changes go to OCI) with recycling of realised gains / losses in P&L
Equities	Measured at FVOCI with no recycling of realised gains / losses in P&L
Funds investments	Measured at FVTPL (mark-to-market changes go to P&L)

Different policy choice for PAA or GMM books - measured at FVTPL:

AVIVA for assets matching insurance liabilities

Munich RE, ZURICH in recognition of underlying economics

Direct Line Group for debt securities

HISCOX

No explicit disclosure: Admiral Group PLC, SCOR The Art & Science of Risk, Swiss Re

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Source: 2022 Investor presentations and audited 2022 Annual Reports

IFRS 17 observed policy choices

Risk adjustment

Methodology and calibration

Confidence level

AXA	65th percentile (range 62.5th - 67.5th) diversification b/n non-life entities
Generali, ageas	75th percentile; no diversification b/n entities
MAPFRE	85th percentile for Life & funeral line 65th percentile for Non-life contracts
talanx.	75th percentile (65th HDI Specialty)
Zurich	74 -79th percentile for short duration 90 - 95th percentile for long duration contracts
Admiral Group PLC	Corridor around 90th percentile
Direct Line Group	c75th percentile
Hiscox	Calculation based on VaR, percentile not specified

Cost of capital (CoC)

Allianz	6% CoC and diversification between entities
Munich RE	6% CoC and group-wide diversification; (corresponds to a confidence level of approximately 90% over a one-year period
SCOR The Art & Science of Risk	CoC < CoC for SII (undisclosed) and more diversification than for SII

Partial or no disclosure

AVIVA	Reference to pricing and capital allocation framework (lifetime view); diversification between risks only
Swiss Re	No disclosure

Source: 2022 Investor presentations and audited 2022 Annual Reports

IFRS 17 observed policy choices

Aggregation. Calculation bases for coverage units.

EU carve-out on annual cohorts:

Not taken	Taken for qualifying VFA business
Allianz, Aviva, Munich RE, talanx, Zurich	AXA, Generali, Mapfre

Bases for coverage units:

Risk insurance only	• Premium sum • Sum assured • Annuity outgo • Benefit amount payable	Allianz, Aviva, Generali, Munich RE, talanx, Zurich
Saving products	• Assets under management • Sum assured including unit value (for unit –linked) • Cost of guarantees plus asset share (for with-profits products) • Combination weighting of assets under management and sum insured	
Reinsurance contracts held	• typically consistent with the underlying gross contracts, adjusted for differences in the services provided	Aviva

Source: Audited 2022 Annual Reports

Impact on KPIs

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IFRS 17 impact on group performance metrics

Return on equity

Direction of change	Calculation approach
Majority within the population expect: • Improved RoE under IFRS 17 (targets: low to mid-double digit) • Less volatility over time	• 'Standard' = using net shareholder income and equity values as reported in financial accounts, and/or • 'Non-standard' = Using non-GAAP income measures and adjusted equity values

No explicit disclosure:

ageas, AVIVA, GENERALI, MAPFRE, SCOR (The Art & Science of Risk), Swiss Re, Direct Line Group, HISCOX

Examples:

AXA	RoE = Underlying Earnings / Average Shareholders Equity (excl. OCI)
Munich RE	RoE = Consolidated result / Adjusted equity (for unrealised G/L, cash flow hedges and currency translation reserve)
talanx.	Adjusted RoE = Net income excluding earnings from SPPI-fail assets / Equity
ZURICH	RoE = Operating profit after tax / Average adjusted shareholders' equity (adjusted for net unrealized gains/losses on assets and liabilities and cash flow hedges)

Source: 2022 Investor presentations

IFRS 17 impact on group performance metrics

Leverage

Direction of change	Calculation approach
Majority within the population expect: • Reduction in leverage ratio under IFRS 17 compared to IFRS 4 ratio (ranges from 1%pt to 11%pts), or no significant change	• Composites intend to include CSM in the denominator of the ratio (varying practices for tax and non-attributable expenses not in CSM) • Two composite groups intend to include risk adjustment in the denominator of the ratio as well

No explicit disclosure:

MAPFRE

SCOR The Art & Science of Risk

Swiss Re

DirectLine Group

Admiral Group PLC

Examples:

Allianz	To include CSM (net of reinsurance) adj. for tax and non-attributable expenses not in CSM; IFRS 17 ratio at 23% (IFRS 4 at 26%)
AVIVA	To continue measuring leverage based on SII, not IFRS (target < 30%)
AXA	IFRS 17 ratio at 19% - 23% (IFRS 4 at 25% - 28%)
GENERALI	IFRS 17 ratio at 16% (IFRS 4 at 26%)
Munich RE	IFRS 17 ratio at 10.7% (IFRS 4 at 14.7%)

talanx.	To include both CSM and risk adjustment; IFRS 17 ratio at 22% (IFRS 4 at 33%)
ZURICH	To include both CSM and risk adjustment
HISCOX	IFRS 17 leverage ratio to decrease by 1%pt (vs IFRS 4)
ageas	No material change in leverage expected (vs IFRS 4)

Source: 2022 Investor presentations

IFRS 17 impact on group performance metrics

Leverage

Direction of change	Calculation approach
Majority within the population expect: • Reduction in leverage ratio under IFRS 17 compared to IFRS 4 ratio (ranges from 1%pt to 11%pts), or no significant change	• Composites intend to include CSM in the denominator of the ratio (varying practices for tax and non-attributable expenses not in CSM) • Two composite groups intend to include risk adjustment in the denominator of the ratio as well

No explicit disclosure:

MAPFRE

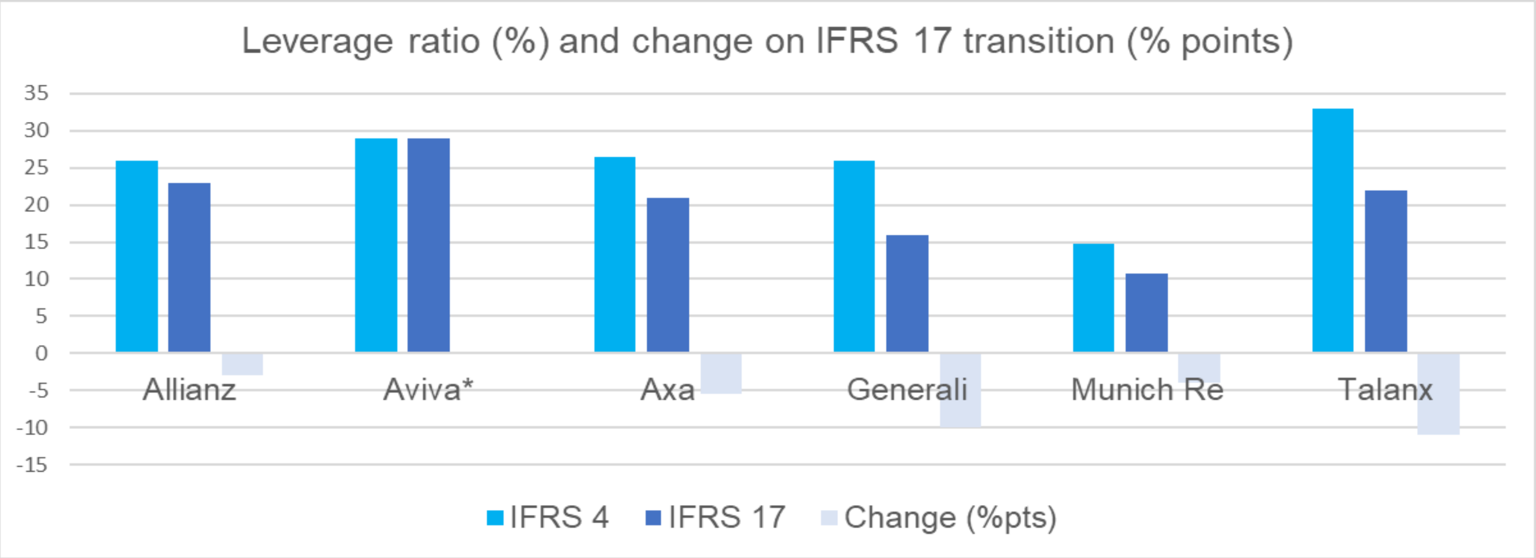
SCOR The Art & Science of Risk

Swiss Re

DirectLine Group

Admiral Group PLC

Examples:



* Measured on a SII basis

Source: 2022 Investor presentations

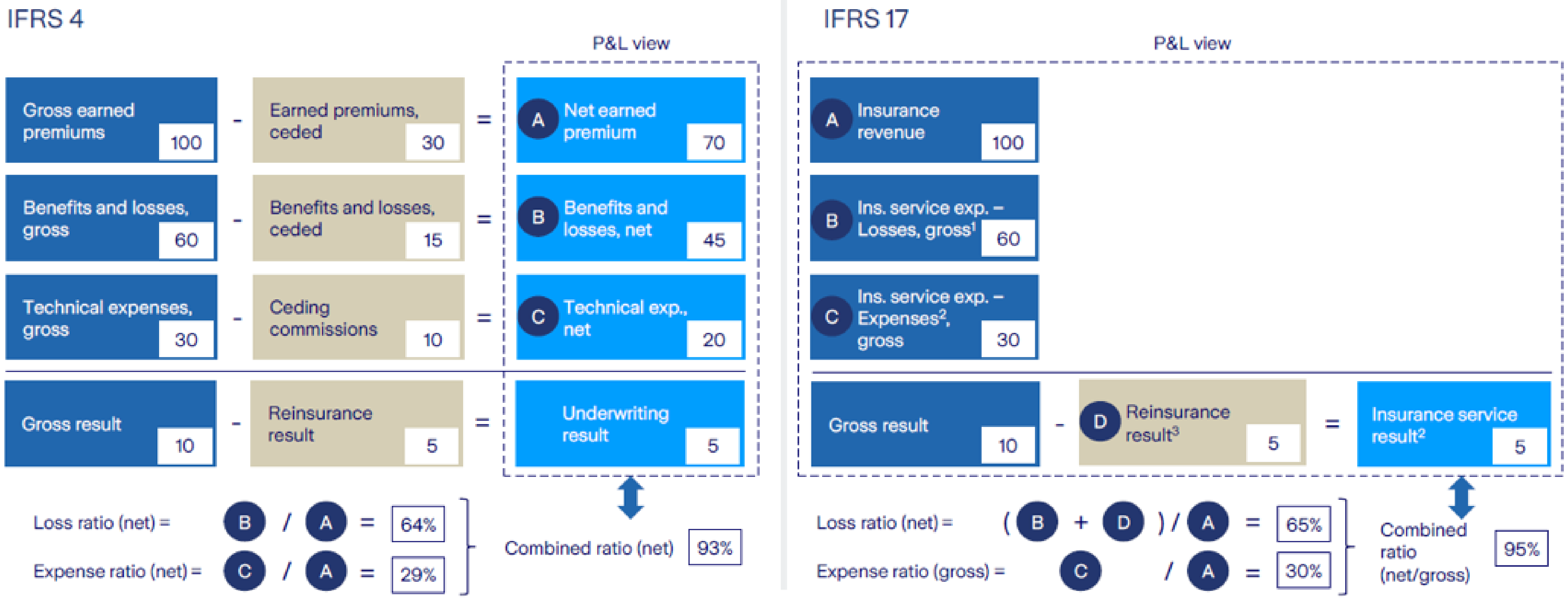
IFRS 17 impact on performance metrics

Combined ratio, Loss ratio, Prior period development ratio (PPD), Expense ratio

Prevalent choices in the population

- Choice of calculation basis (net or gross insurance revenue) appears to be driven by the business steering approach
- Practices vary for the treatment on non-attributable expenses (general admin expenses / overheads)
- No intention to continue reporting IFRS 4-basis ratios but plans to disclose GWP (as a non-IFRS KPI)

Illustration (extract):



ILLUSTRATIVE NUMBERS

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Source: Zurich Investor presentation, September 2022

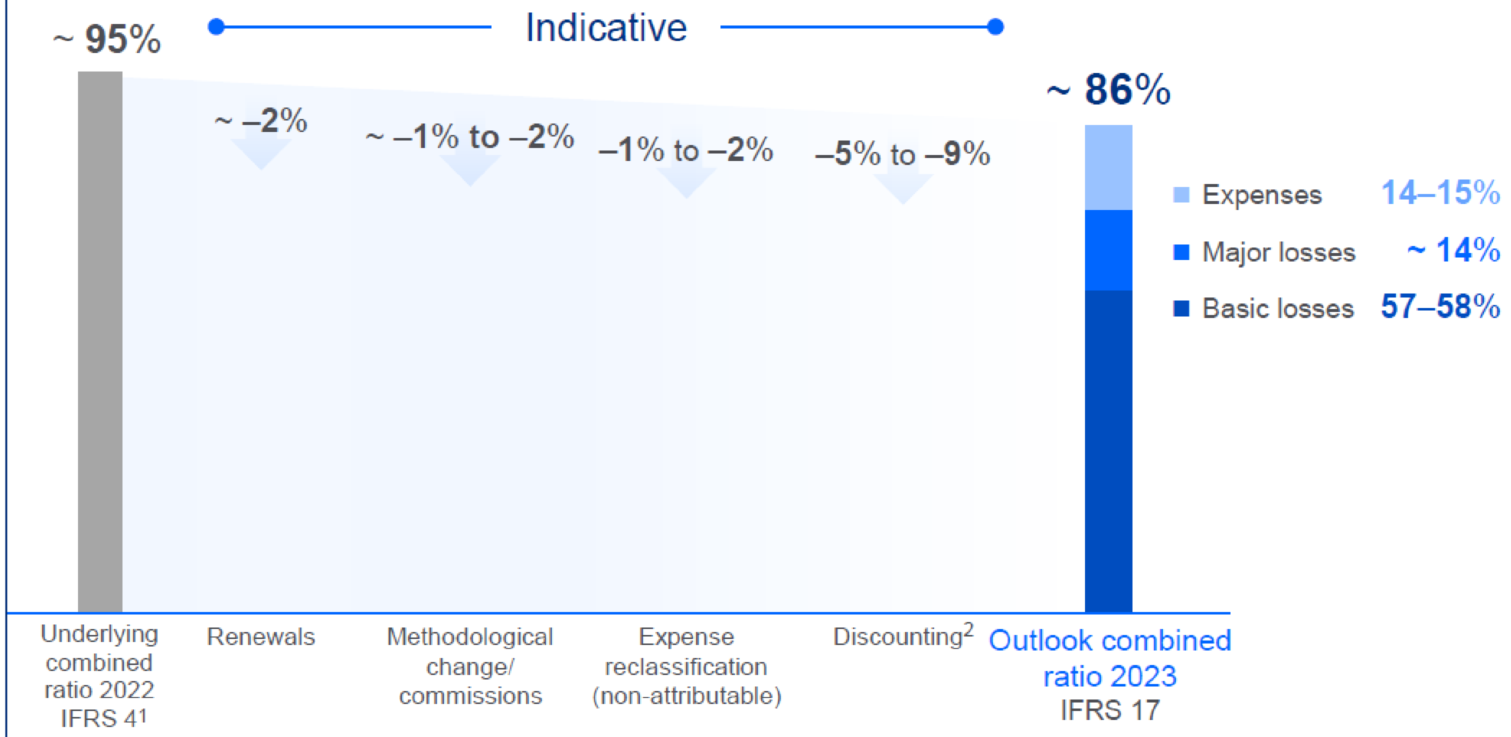
IFRS 17 impact on non-life performance metrics

Combined ratio: Munich Re example

Reconciliation combined ratio 2023 from IFRS 4 to IFRS 17

Munich RE

IFRS



Major loss expectation increases from ~ 13% to ~ 14%[3] due to growth in property XL

1 Adjusted for additional inflation impact related to business written in 2022. 2 Discounting impact reflects uncertainty around interest-rate developments.
3 Expected major losses of ~ 14% break down to nat cat ~ 10% and man-made ~ 4%.

Analysts' and Investors' Call 2023 23 February 2023 30

Source:

Handout slide 30 from Munich Re Analysts' and Investors' Call February 2023

IFRS 17 impact on non-life performance metrics

Combined ratio, Loss ratio, Prior period development ratio (PPD), Expense ratio

	Net / Gross ratios				Net / Net ratios				Hybrid
	Allianz	AXA	Generali	Zurich	Munich RE	Aviva	Direct Line Group	Hiscox	Admiral Group PLC
Loss ratio	▲ ◀▶	Not specified	▼	Not specified	▼	Not specified	Not specified	Not specified	◀▶
PPD ratio	Not specified	◀▶	▲	Not specified	◀▶	Not specified	Not specified	Not specified	Not specified
Expense ratio	▼ *	Not specified	▲ *	▼ *	▼ #	*	Not specified #	Not specified #	◀▶ #
Combined ratio	▼	▼	▲	▼▲	▼	◀▶	Not specified	▲	Not specified

Legend

▲ increase
▼ decrease
◀▶ no material change

* Ratio includes attributable & non-attributable expenses
# Ratio includes attributable expenses only

Hybrid ratios are on a basis net of XoL reinsurance and gross of QS reinsurance

Source: 2022 Investor presentations

IFRS 17: new non-life performance metrics

Net Insurance Margin: Direct Line Group example

IFRS 17 KPIs: Net insurance margin to become key ratio

IFRS 17 & IFRS 9 (management view)	
Insurance contract revenue	
Expenses from reinsurance contracts held	
Net insurance contract revenues	
Insurance claims	
Insurance claims recoverable from reinsurers	
Net insurance contract claims	A
Acquisition costs	B
Operating expenses	C
Insurance service result	
Investment income	
Other operating income	
Other operating expenses	
Operating profit[1]	
Net finance expenses and FV and impairments	
Restructuring and one-off costs	
Finance costs	
Profit before tax	

Net insurance contract revenues becomes the denominator replacing net earned premiums

$$\text{Net insurance margin} = \frac{\text{Insurance service result}}{\text{Net insurance contract revenues}}$$

A **Net insurance claims ratio**[1]
Net insurance contract claims / Net insurance contract revenue

B **Acquisition ratio**
Acquisition costs / Net insurance contract revenue

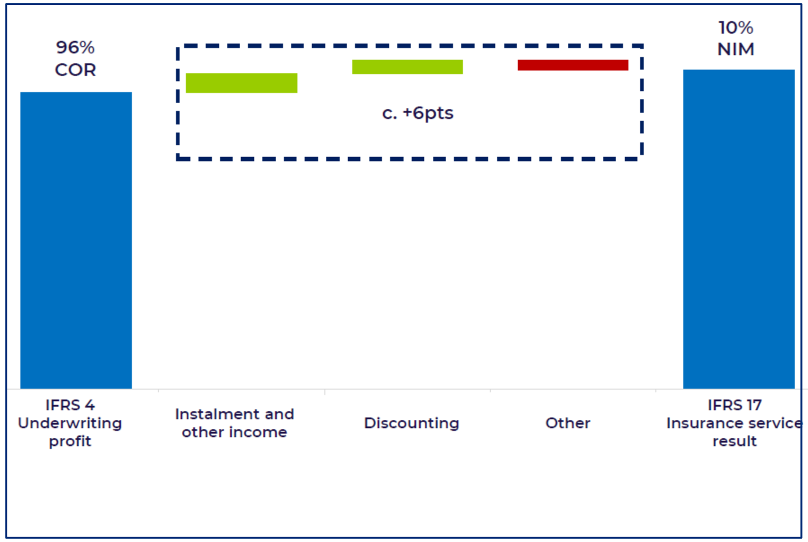
C **Expense ratio**
Operating expenses / Net insurance contract revenue

DirectLine Group

1. Current year loss ratio, weather and prior year loss ratio will continue to be reported
See notes on slide 26 and glossary of terms on slides 50 to 53

Source:

Slides 20 and 28 from DLG presentation '2022 Preliminary Results' 13 March 2023



IFRS 17 Life & Savings performance metrics

As per audited 2022 annual reports

Prevalent choices in the population

- To continue reporting New Business Value (NBV) (derived using IFRS 17 and IFRS 9 balances; definitions vary)
- Operating result: driven by CSM and risk adjustment release, and net financial result (adjusted for non-recycled realised gains / losses, fair value changes reported in P&L and other non-recurring income and expenses)

Examples of NBV definitions:

Allianz	• NBV = CSM at inception, adjusted by non-attributable costs, reinsurance and contracts in the Life/Health segment accounted under PAA or IFRS 9. • Higher than under SII due to a slightly higher diversification benefit and different valuation curves
GENERALI	• NBV= new business CSM adjusted for PAA life business, inv. contracts under IFRS 9 and look through for funds managed by the group with tax and minorities deducted
talanx.	• NBV= CSM for new business less loss components of new business

Other KPIs:

MAPFRE	• CSM (closing balance) • CSM release pattern • Importance of new business (%) = (CSM of new insurance contracts issued) / (Total CSM)
talanx.	• Growth of insurance revenue (adjusted for currency effects)

Q&A

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