



# Coverage units for hybrid contracts

- Seminář z aktuárských věd
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## Questions for today

- Why does this topic exist?

- What does IFRS17 expect?

- Why is the default definition inappropriate?

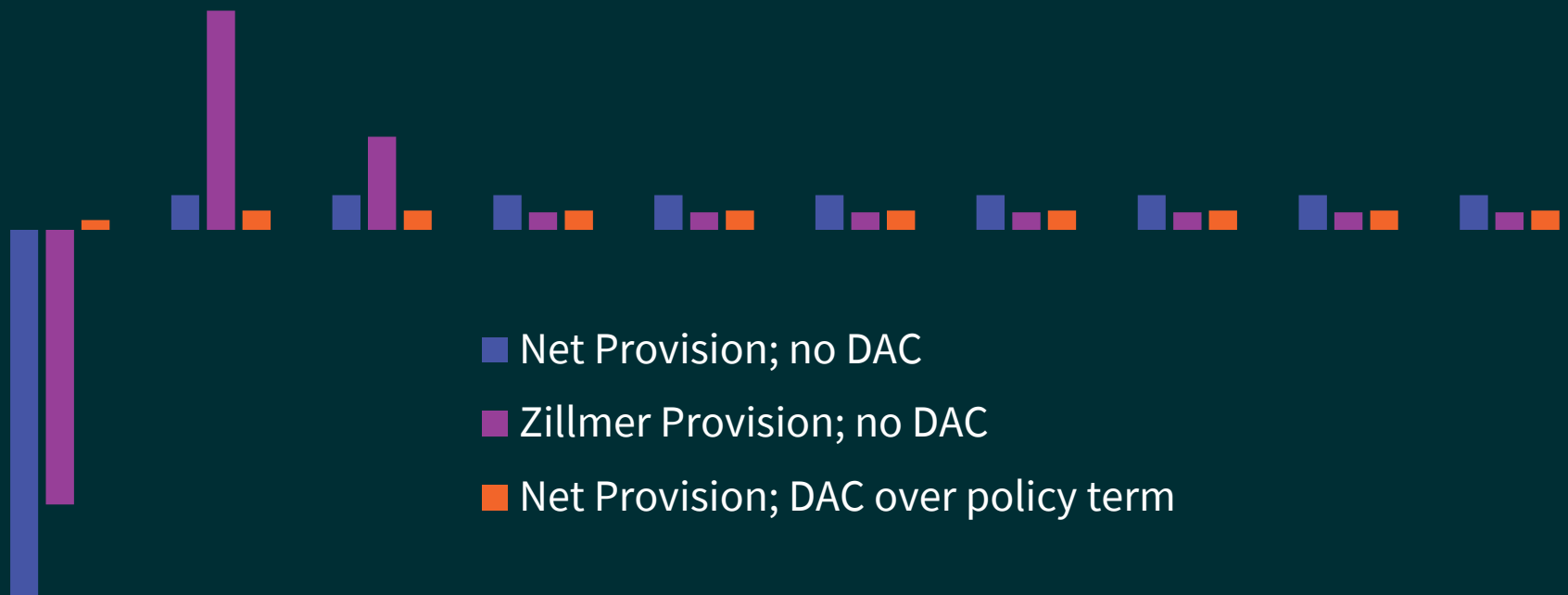
- What approach we suggest?

- What will we deliver?

**SAV**  
29/Nov/2019

# Why does this topic exist?

## Per Policy Profit in the initial years of insurance



## Why does this topic exist?

- Up to now, profit emergence in life driven by accounting policies regarding
  - method for statutory provisions and/or
  - deferral of acquisition costs.
- The identical contracts (in the sense of contractual cash-flows) might produce significantly different profit patterns
  - ... *apart from ignoring the real expectations & profitability\**

*\* while Embedded Value and Solvency II brought realistic measurement of Balance Sheet liability, the profit emergence was not dealt with.*

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## What does IFRS17 expect?

- All expected outstanding profits are
  - explicitly enumerated in Contractual Service Margin (**CSM**)
  - allocated to current year result accordingly to **the service provided**.
- **Coverage Unit (CU)** = unit of the service provided (for quantification)
  - similar to meter for length or watt for power
- Current year allocation to Profit and Loss =
  - $$\mathbf{CSM} \frac{\mathbf{CoverageUnits}_{CurrYear}}{\sum_{t=CurrYear}^{\infty} \mathbf{CoverageUnits}_t}$$
- Setting of coverage units is NOT an accounting policy choice
  - insurer is responsible for the correct estimate of the CU

## What does IFRS17 expect?

- Original requirements in the standard:
  - Coverage Unit for a period shall follow the Maximum possible claim benefit in the period  
*... even for deferred annuities !?*
  - Especially the Coverage Units shall not reflect
    - the probability of the claim;
    - the premium amounts or premium rates.

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# Why is the default definition inappropriate?

Example for protection contract

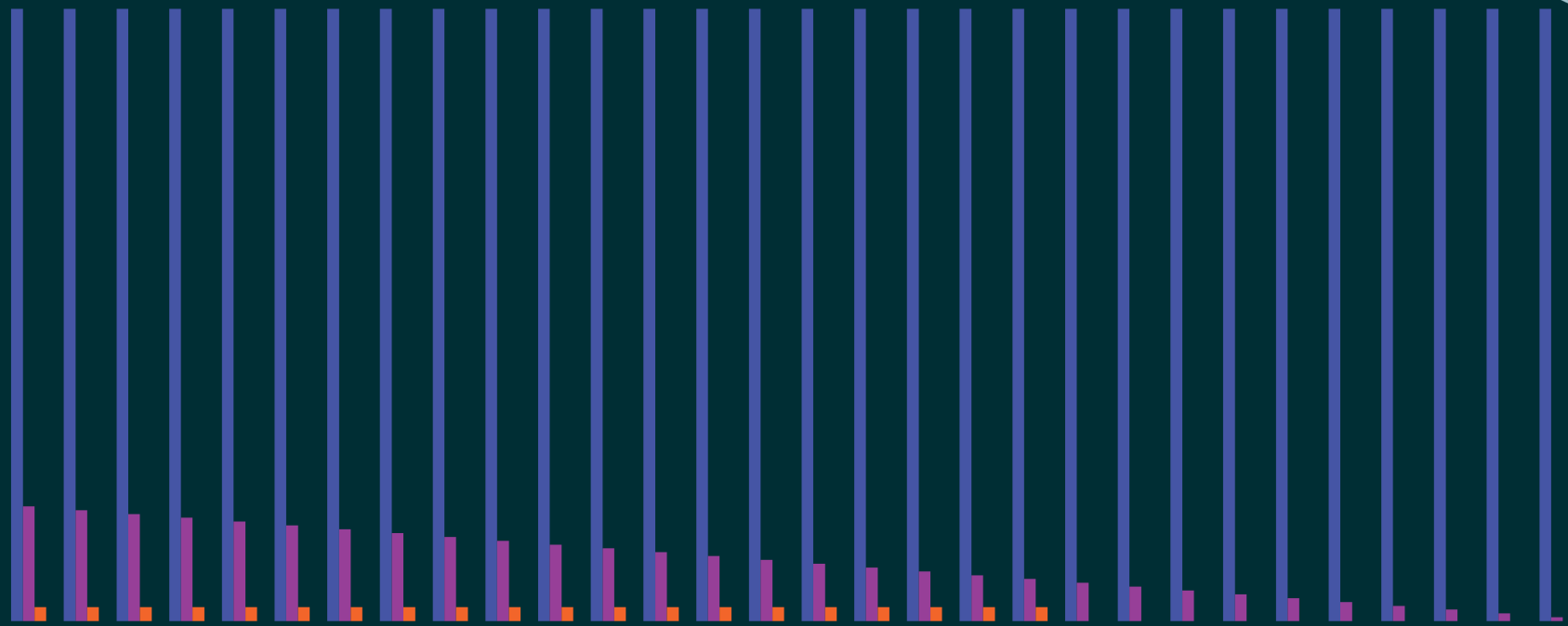
Risk	Monthly Premium	Contractual Sum	Maximum Payout
Accidental Disability with 8x progression (for 30 yrs)	100 CZK	2 000 000 CZK	16 000 000 CZK
Decreasing Term (for 30 yrs)	700 CZK	3 000 000 CZK	300 000 CZK last year
Sickness Daily Allowance (for 20 years)	500 CZK	1 000 CZK (den)	365 000 CZK



# Why is the default definition inappropriate? Example for protection contract

## Maximum possible payout per risk

- Trvalé následky úrazu
- Kles. Smrt
- Denní odškodné



Why is the default definition inappropriate?  
Example for protection contract

## Maximum possible payout

■ Denní odškodné

■ Trvalé následky úrazu



Death and permanent disability are mutually exclusive ...

AC+UARIA



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## What approach we suggest?

- To define coverage units as the **weighted sum** of
  - expositions to different types of risks insured and
  - to client's balance for the measurement of saving and investment service.
- The same weights shall be applied on all contracts, regardless of the product, seniority of the contract, age of the client, likelihood of the event, type of premium paid or any similar contract-specific information
- **The weights shall be stable** - the quantitative amounts of the weights shall be changed only in case of substantial change in the conditions on the market.

## What approach we suggest?

- The basis for setting the weights shall be as general as possible
- The working group has suggested following possibilities (ordered from the least specific – i.e. from the most preferable)
  - the information for the general population (e.g. general population mortality, sickness and accidental rates etc.);  
**this approach was found impracticable**
  - **the information for the whole insurance market;**
  - the information for typical policyholder (typical for the whole market);
  - the information for the whole portfolio of the company or
  - the information for typical policyholder (typical for the particular company at the moment of the assessment).

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## What will we deliver?

- Document with
  - methodology for setting the coverage units;
  - quantitative amounts of the weights.
- Already published as product of IFRS17 Working Group
- Now, the document is open for discussion by broader audience.
- Target is the formal adoption by the ČSpA
  - probably recommendation, similar to recommendation for LAT



## What will we deliver?

- The input data from market survey (organised by ČAP)
  - total premiums and sums at risk per each risk category
- Weights have been set to the to represent the ratio between
  - the premium rate of a particular risk and
  - the premium rate of a standard life cover (risk of death for any reason), i.e

$$\frac{\text{Annual\_Premium}_{risk}}{\text{Sum\_at\_Risk}_{risk}} = W_{risk} \frac{\text{Annual\_Premium}_{death}}{\text{Sum\_at\_Risk}_{death}}$$

- For the measurement of **saving service on the traditional contracts** weight has been set **equivalent to the risk of death**.
  - based on expectation that the constant amount of coverage units shall be generated by a classical Endowment product with constant Sum Assured, *regardless of the ratio between actual Sum at Risk and the Statutory Provision in any given year.*

What will we deliver?

- For the investment service in case of UL funds, the weights have been based on annual fees charged, i.e.

$$\frac{\text{Annual\_Fees}_{investment}}{\text{Assets\_under\_Managemet}_{investment}} = W_{investment} \frac{\text{Premium}_{death}}{\text{Sum\_at\_Risk}_{death}}$$

## What will we deliver?

- Quantitative amounts of the weights

<b>Risk</b>	<b>Weight <i>per unit of exposure</i></b>	<b>Exposure</b>
<b>Death</b>	<b>1,000</b>	Sum at Risk
<b>Death due to Accident</b>	<b>0,119</b>	Sum at Risk
<b>Permanent Disability due to Accident</b>	<b>0,116</b>	Sum at Risk
<b>Daily Allowance Insurance</b>	<b>1001,931</b>	Daily amount
<b>Dread Disease</b>	<b>0,661</b>	Sum at Risk
<b>Hospitalisation</b>	<b>206,669</b>	Amount per day of hospitalisation
<b>Disability for any reason</b>	<b>0,292</b>	Expected Benefit
<i>of which lump-sum benefit</i>	<b>0,274</b>	Sum at Risk
<i>of which annuity benefit</i>	<b>2,764</b>	Annual amount
<b>Type of financial service</b>	<b>Weight</b>	<b>Basis</b>
<b>Traditional Saving with Guarantee</b>	<b>1,000</b>	Statutory Provisions
<b>Investments where the risk is borne by the policholder</b>	<b>1,553</b>	Assets under Management / Unit-Linked Provisions

## What will we deliver?

- Alternative approach with general weight:

<b>Alternative approach</b> <i>only in case that the standard calculation is not possible/reasonable</i>	<b>Weight</b> <i>per unit of premium</i>	<b>Basis</b>
<b>Any risk</b>	<b>204,000</b>	Annual Premium for the particular risk

- Practical application, for example:
  - the future development exposition is not available for given risk,
  - the weights lead to unreasonable outcomes due to specifics of insurance product)
- it is necessary to secure that the premium meets IFRS 17 requirements:
  - the timing of premium corresponds to timing of the coverage
  - the premium does not change with the increasing probability of claim events

# Implementation PROS / CONS

## *PROS*

- *Elimination of arbitrariness*
- *Elimination of judgement-based estimates*
- *All services are considered*
- *Works for heterogeneous Units of Account*
- *Unified approach for all Units of Account*

## *CONS*

- *Complexity*
- *Availability of historical data for transition*

## Issues to tackle

### Main open questions

- the format of adoption by ČSpA;
- review / update of the quantitative amounts
  - regular ? ad-hoc ? Never
- involvement of ČAP (in both points above);

**THANK YOU FOR ATTENTION**

### Omission

- life annuities are not considered in the document

## Summary

- Due to high complexity of insurance products in the Czech Republic the IFRS17 definition of coverage units does not provide reasonable approach for these products.
- As consequence we define a general approach for coverage units measurement over the lifetime of groups of insurance contracts which:
  - provides reasonable outputs in terms of local specifics of insurance products and
  - allows the entities to measure coverage units on a consistent basis on the whole market.
- Proposed approach includes general weights based on market data.
- Each entity has to decide if this market benchmark is sufficient for its own portfolio or there is a need to adjust it for specifics of the entity's portfolio