

Life Products and Low Interest Rates

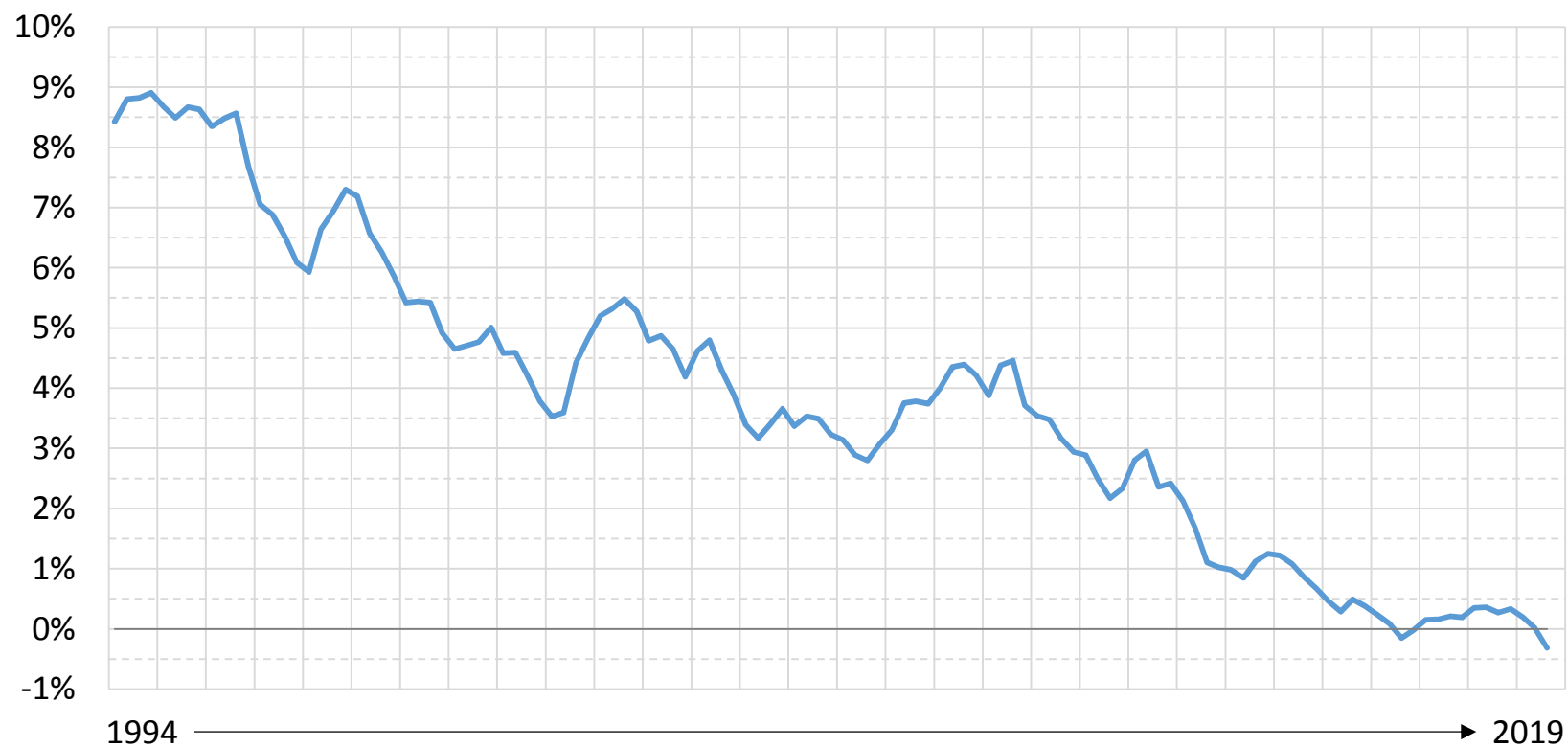
Actuarial perspective

Werner Matula
Vienna Insurance Group
Zagreb, 20.11.2019

Contents

- Impact of Low Interest Rates
- Regulation
 - Maximum Technical Interest Rate
 - Additional Interest Reserve
- Experience, Consequences, Actions
 - Products
 - Profit Sources
 - ALM

The Problem ...



Source: ÖNB (www.oenb.at)

Average Government Bond Yield weighted by Outstanding Amounts (Umlaufgewichtete Durchschnittsrendite für Bundesanleihen, UDRB)

Secondary Market Yields (Sekundärmarktrendite, SMR) until March 2015

Impact of Low Interests

- Reinvestment
- Investment Returns
- Cost of Guarantees
- Solvency Capital
- Attractive Products
- Profit Sharing
- Financial Statements (Regulation)

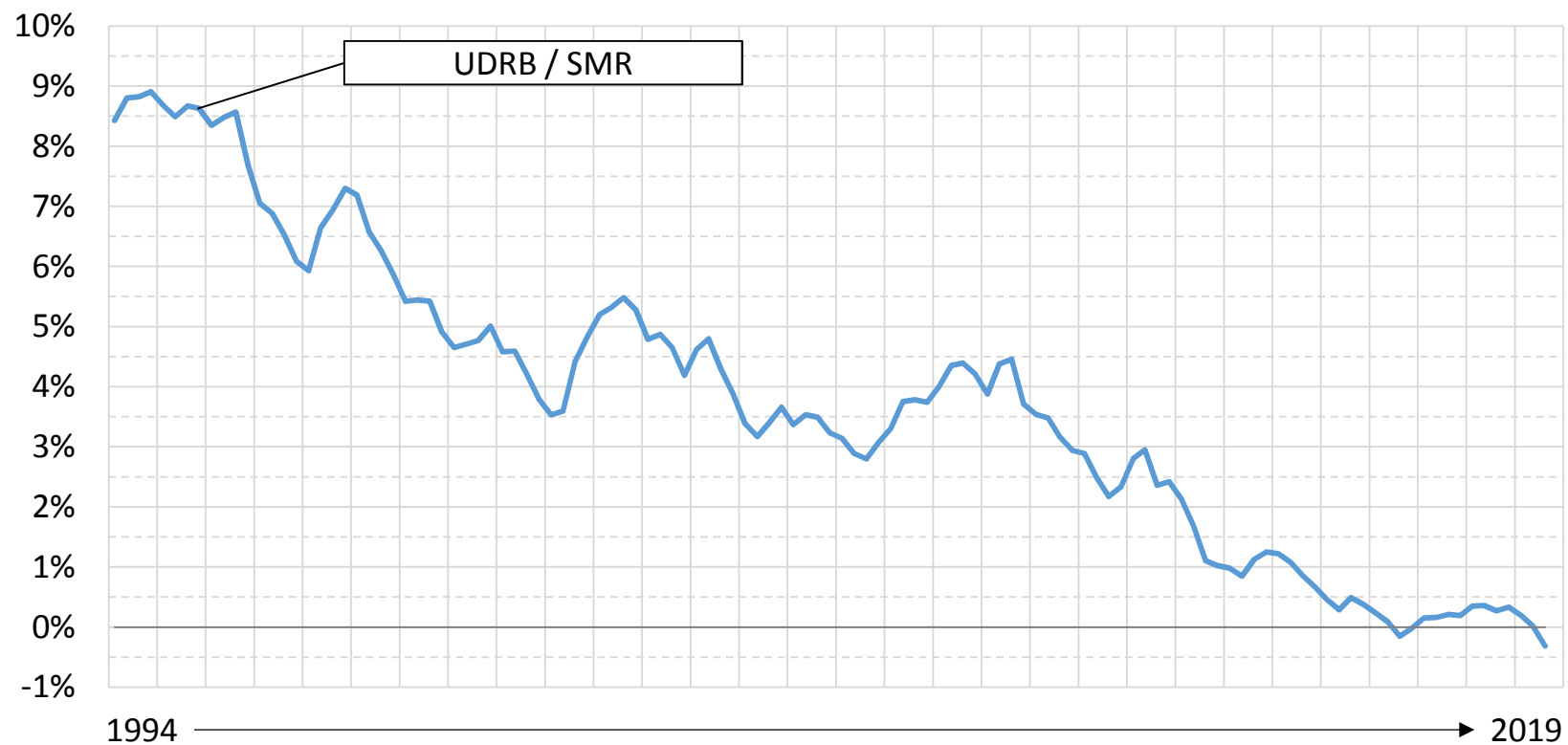
Regulation

- Maximum Technical Interest Rates
- Additional Interest Reserves
- Liability Adequacy Test (various NGAAPs, IFRS 4)
- Solvency II
- IFRS 17

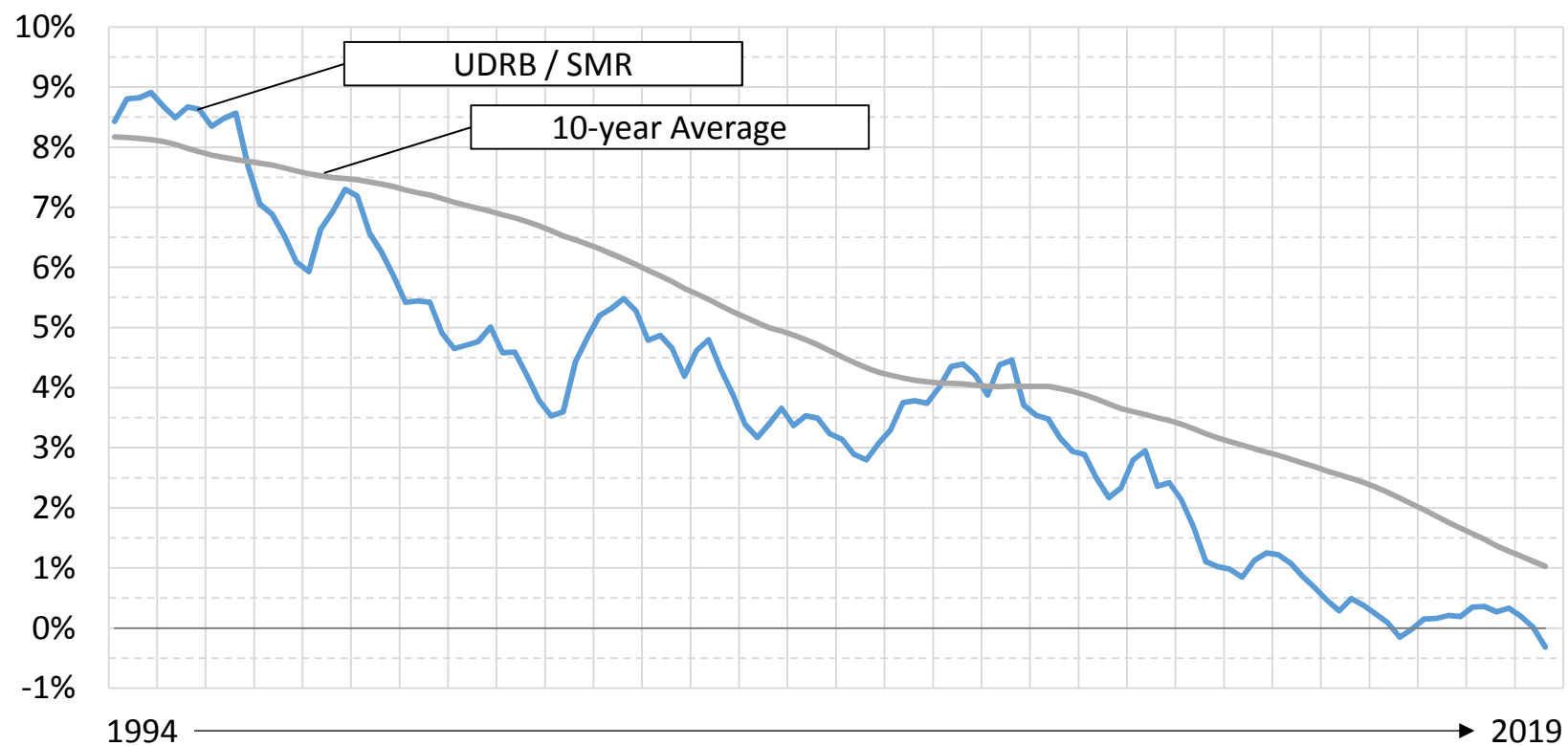
Maximum Technical Interest

- Calculation of Statutory Reserves
- Traditional Life Insurance (with guarantees)
- Deviation in Pricing: Profitability
- Prudent Person Principle, i.e.
 - Product features and risks
 - Product guarantees and options
 - Term of the obligation and any resulting reinvestment risks
 - Requirement for premiums to be sufficient
 - Capital market situation

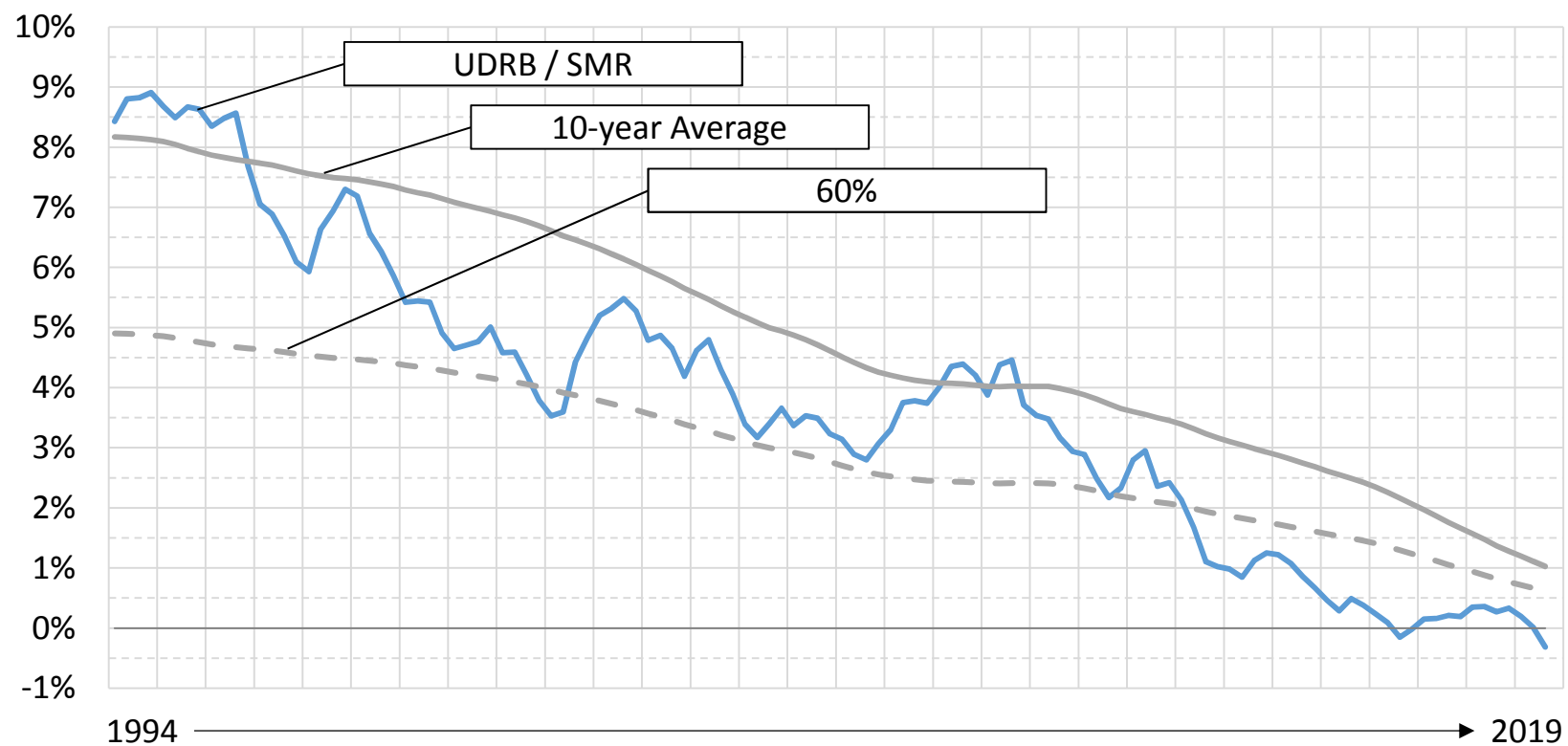
Maximum Technical Interest



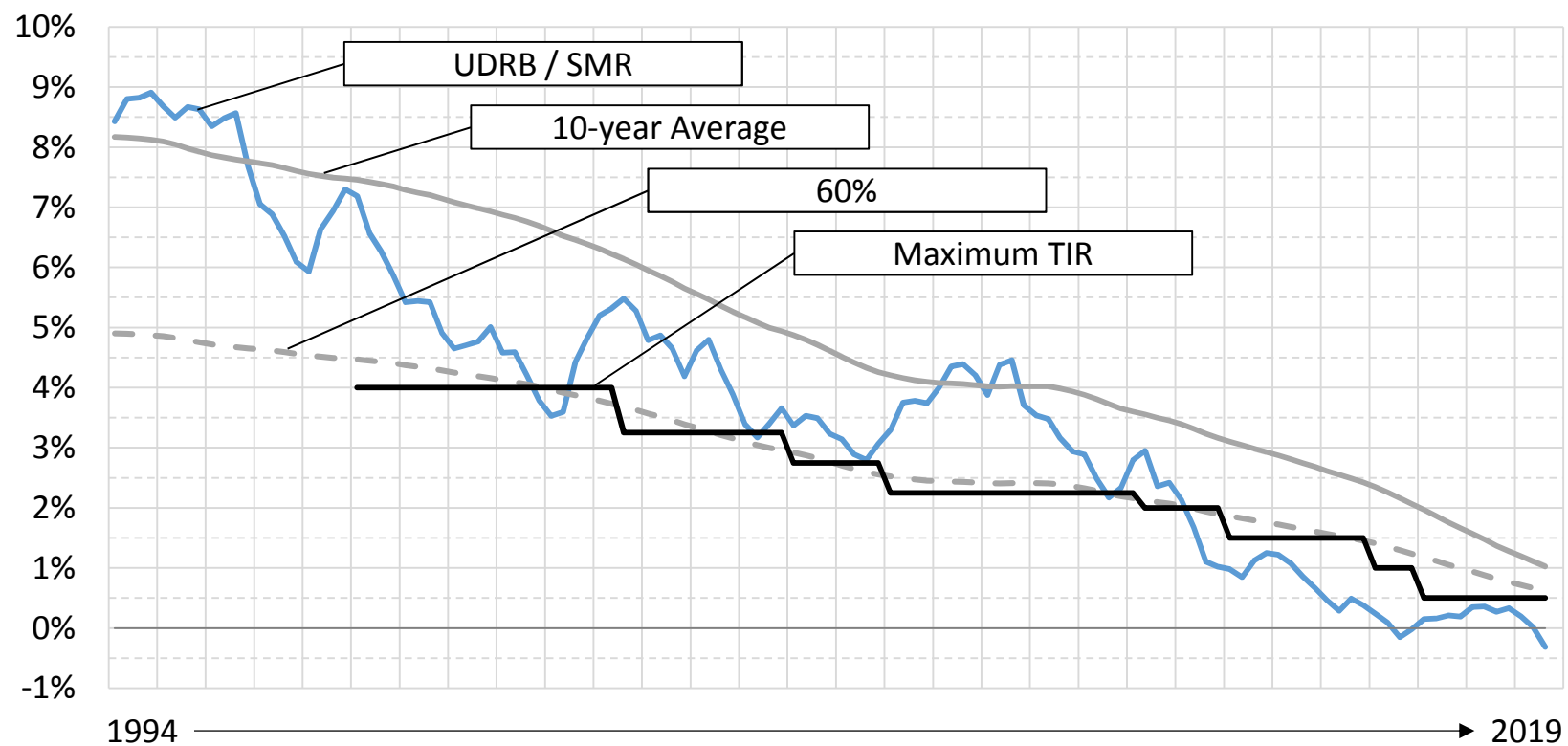
Maximum Technical Interest



Maximum Technical Interest



Maximum Technical Interest



Maximum Technical Interest

- Not applicable:
 - Unit-linked and index-linked contracts
(except reserves for mortality, expenses, or other risks)
 - Single-premium contracts with a maximum term of 8 years
 - Contracts without profit-sharing
- Maximum TIR in AT since January 2017: 0.5%
- Replaced by Solvency II in many jurisdictions!

Additional Interest Rate Reserve

- “Zinszusatzreserve” (ZZR)
- For interest obligations towards the insured to the extent that the current or expected income from financial management is not sufficient to cover these obligations

Additional Interest Rate Reserve

$$ZZR_t = \min\left(\frac{t - 2014}{7}; 1\right) \cdot DR_{t-1} \cdot \overline{RZ}_{t-1} \cdot \frac{\max(\overline{RZ}_{t-1} - RZS_{t-1}; 0)}{1.45\%}$$

ZZR_t ... Additional Interest Reserve

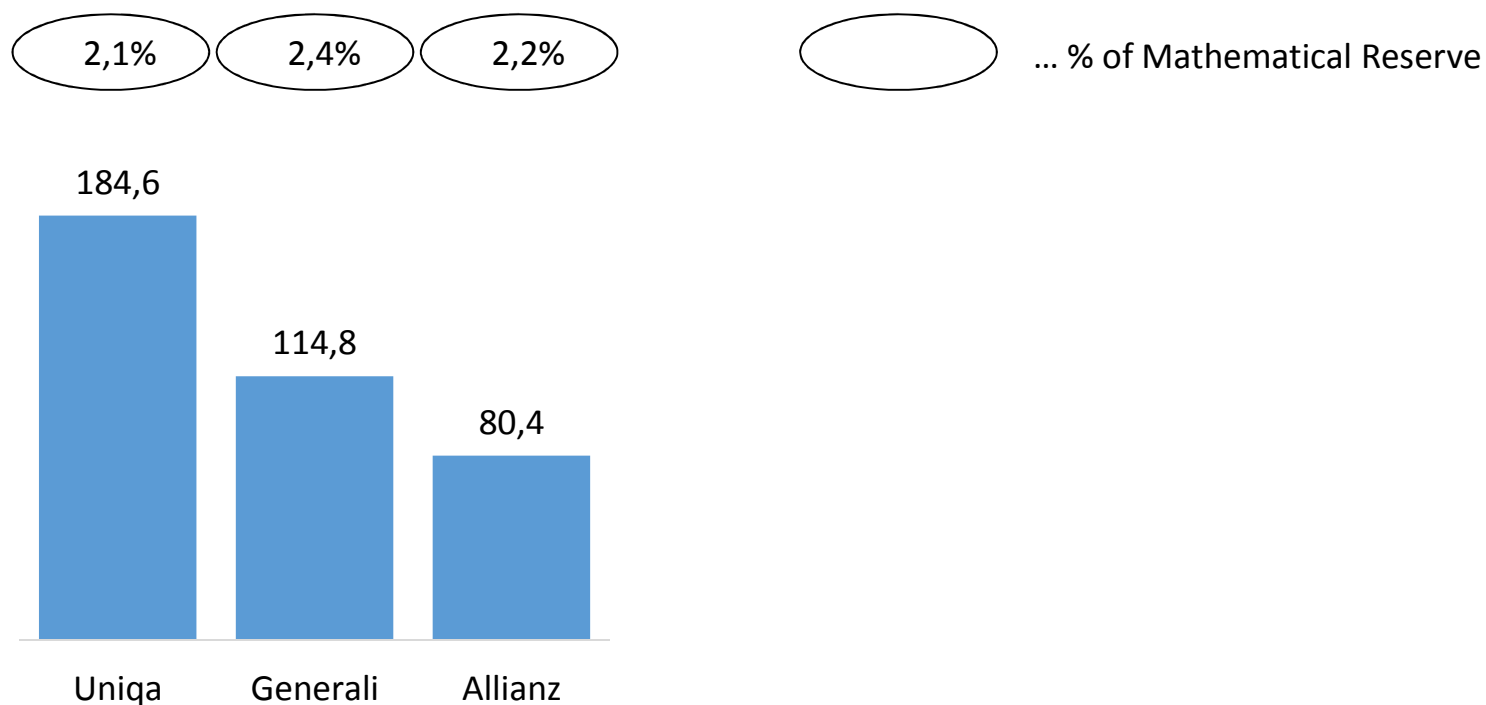
DR_t ... Mathematical Reserve

\overline{RZ}_t ... Average Technical Interest Rate

RZS_t ... Reference Interest Rate (UDRB / SMR)

Additional Interest Rate Reserve

ZZR of Austrian Life Insurers as at 31.12.2018:



“New” Traditional Products

- Dilution with low guarantees
- Zero-Guarantees (still a guarantee)
- Maturity Guarantees (no guaranteed Surrender Values)
- Guarantees on limited duration (e.g. 10 years)
- Modification of Profit Sharing, where allowed (e.g. only maturity bonuses)
- Hybrid Solutions

Actions

- Conversions
- Unit- or Index-Linked products with guarantees
- Reconsideration of Single Premium products
- Strong focus on biometric coverages
- Allowance for subsidizing with actuarial and expense profits
- Transformation to run-off carriers

Run-off

- In-house or run-off platforms (e.g. Viridium)
- Lean administration (cost surpluses)
- No sales expenses
- Efficient ALM (mitigate risks of low interest environment)
- Economies of scale
- Consumers' view (profit sharing, not promoting attractive payouts)

Life Insurance remains important!

- High demand by clients
- Alternative to banking sector
- Unique selling proposition due to attractive protection components



Still profitable for insurers

VIG's MCEV Sensitivities 2018

In-force portfolio:

Life and Health Embedded Value		Austria/Germany	% change	CEE	% change	Total	% change
in EUR '000							
Base value		2,061,114		2,043,573		4,104,686	
Change in yield curve	+1%	280,636	13.62%	-55,057	-2.69%	225,579	5.50%
Change in yield curve	-1%	-438,094	-21.26%	47,902	2.34%	-390,192	-9.51%

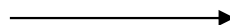
Value of new business:

Value of New Business		Austria/Germany	% change	CEE	% change	Total	% change
in EUR '000							
Base value		48,838		93,326		142,164	
Change in yield curve	+1%	-174	-0.36%	-1,865	-2.00%	-2,038	-1.43%
Change in yield curve	-1%	-3,829	-7.84%	-240	-0.26%	-4,069	-2.86%

Profit Sources

- Decomposition of any P&L into sources of profit
- Increasing importance due to vanishing investment income

Premium	100
Investment Income	30
Claims	-7
Costs	-5
Increase of Reserves	-110
<u>Profit</u>	<u>8</u>



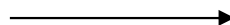
How was a profit of
8 achieved?

From which source?

Profit Sources

- Decomposition of any P&L into sources of profit
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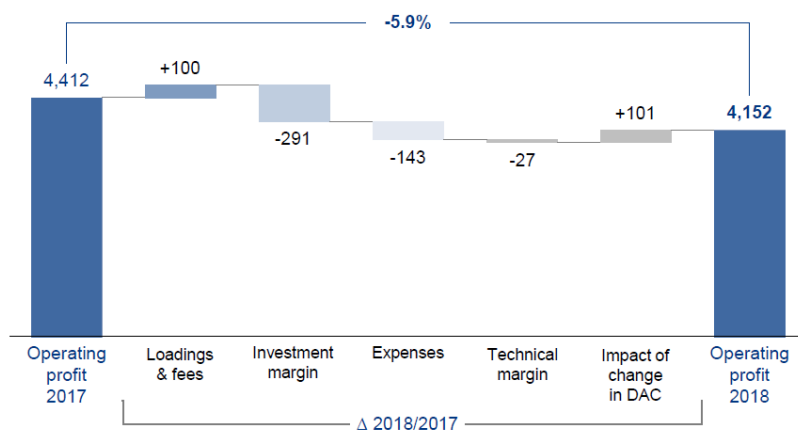


Interest Surplus	10
Actuarial Surplus	2
Cost Surplus	-4
<u>Profit</u>	<u>8</u>

Profit Sources

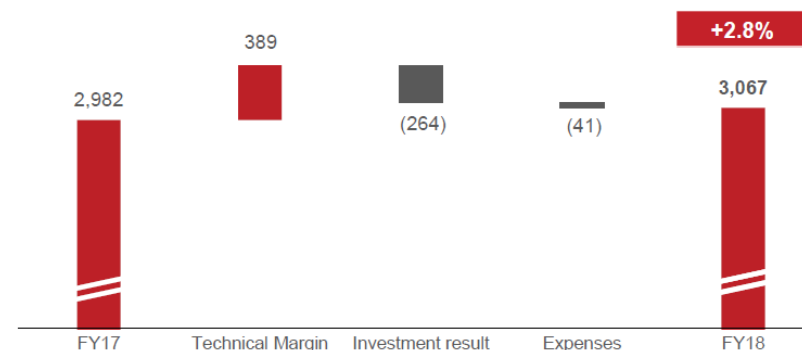
Public disclosure, but no market standard

Operating profit by source



2018	6,090	3,821	-7,003	1,211	33
2017	5,989	4,112	-6,860	1,238	-68

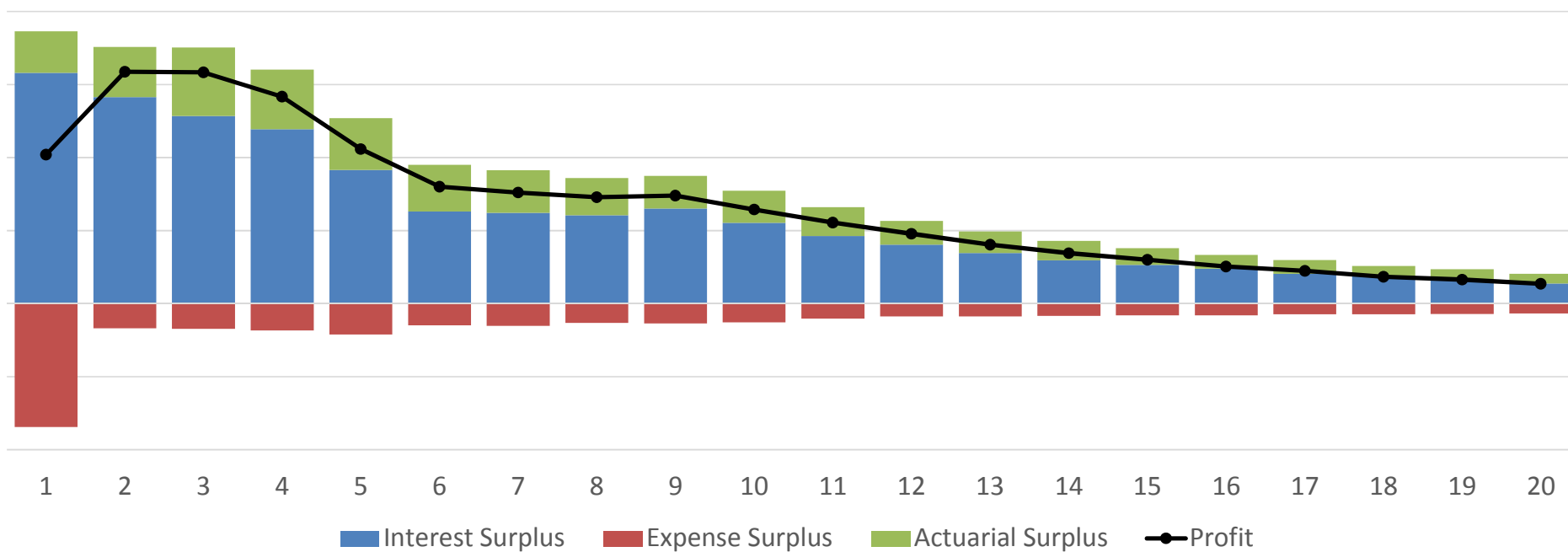
(€ m)



FY 18	5,819	1,835	(4,587)
FY 17	5,430	2,098	(4,546)
Δ %	+7.2%	-12.6%	+0.9%

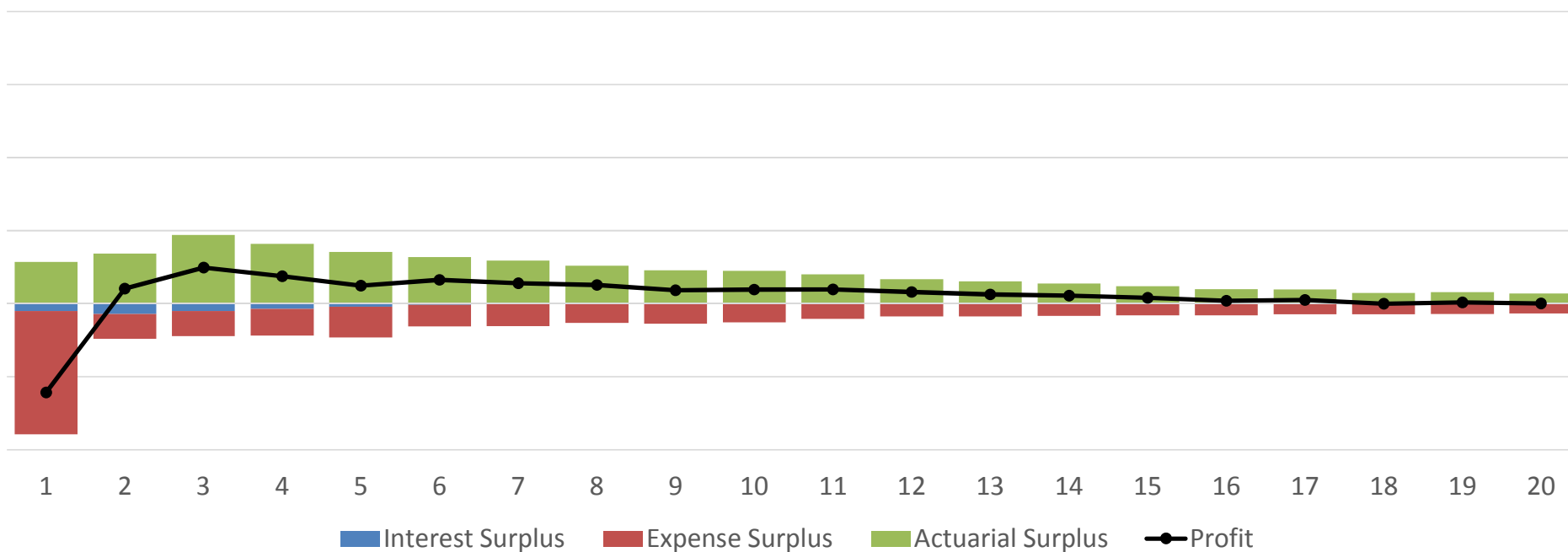
Profit Sources

We were used to ...



Profit Sources

We are getting used to ...

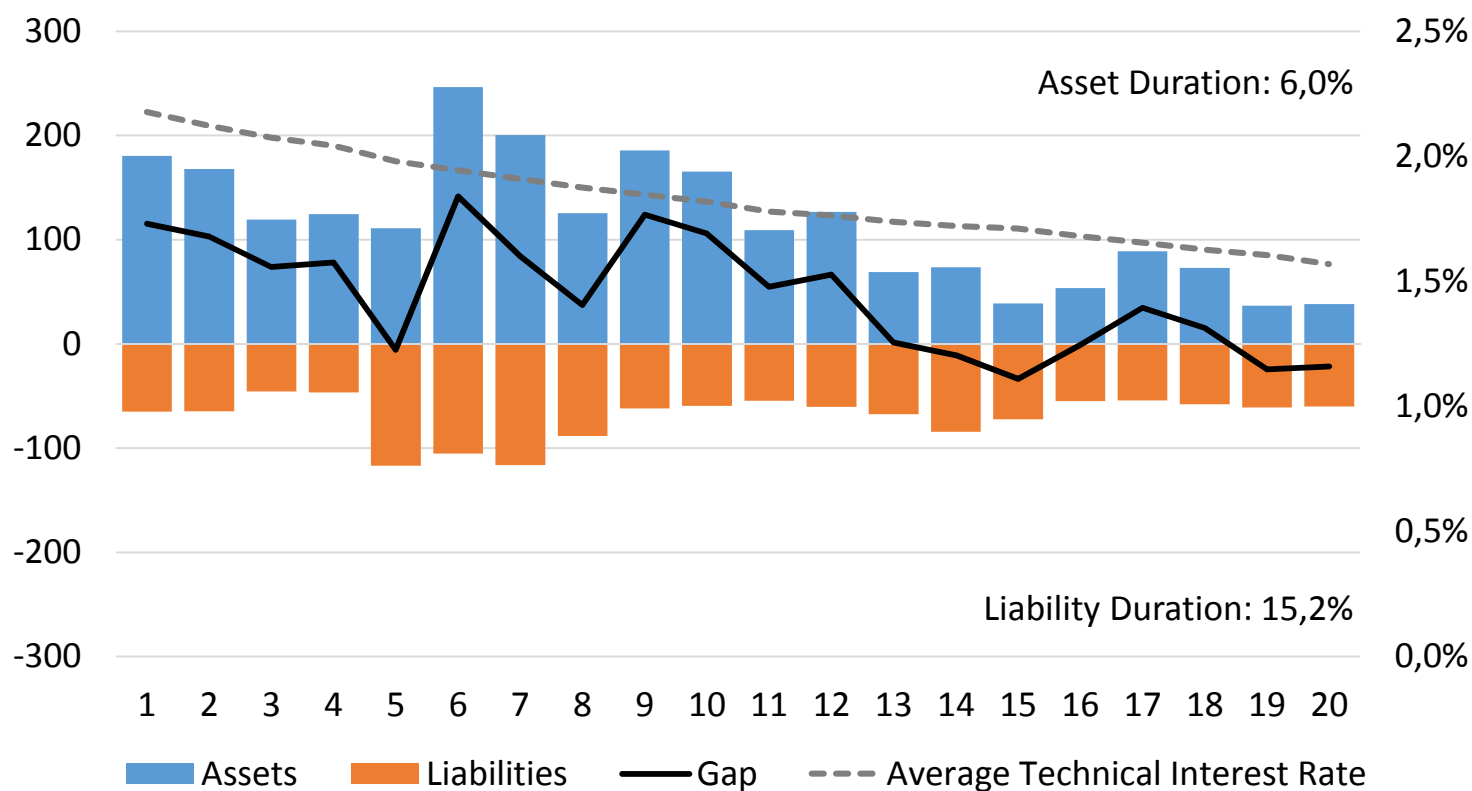


Asset Liability Management

- Various scenarios, depending on purpose:
 - Support for reinvestment
 - Cash flow and duration matching for risk management
- Importance of assumptions
 - Regular premiums vs. existing asset portfolio
 - Reinvestment (EIOPA curves not appropriate)
 - Future new business

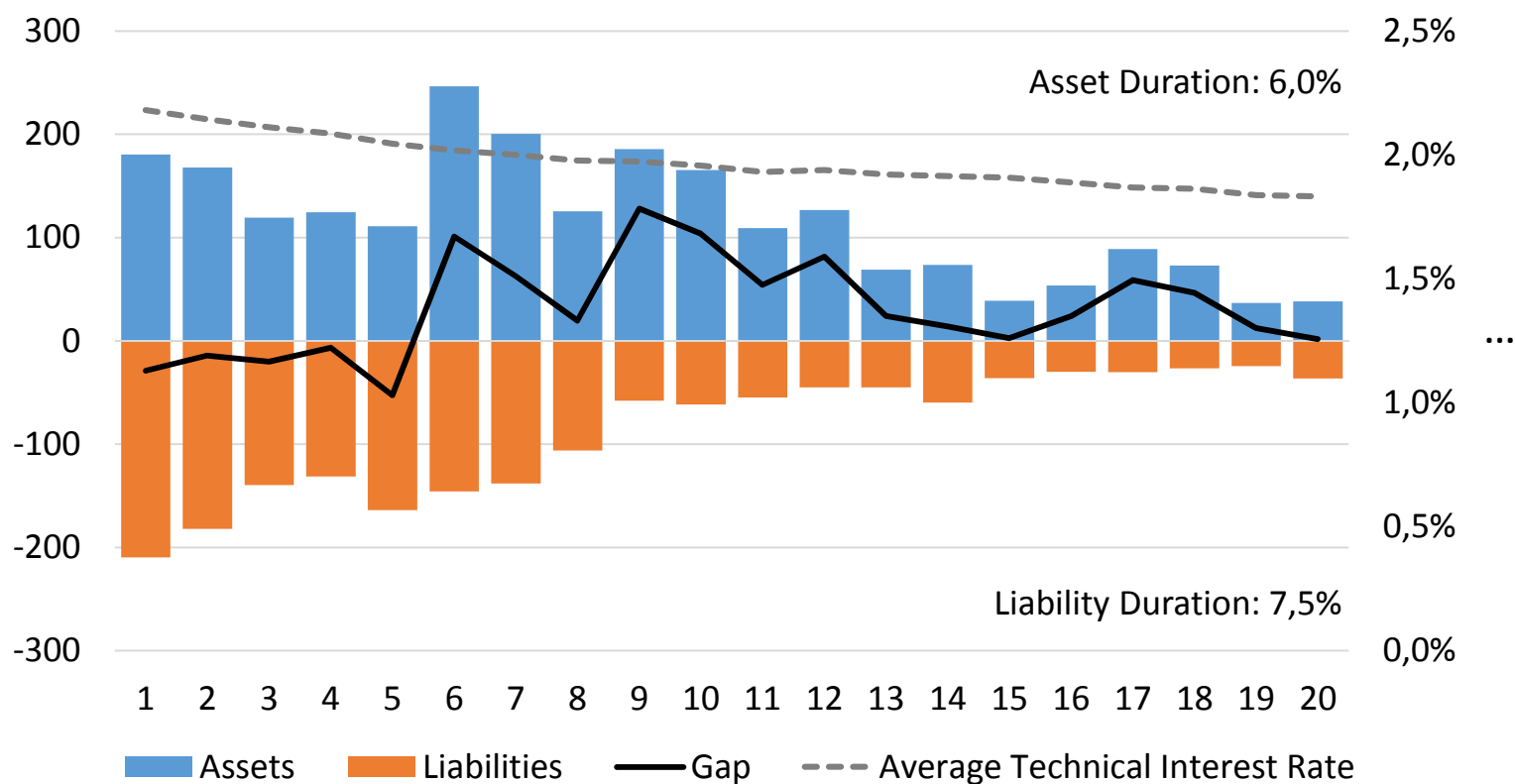
Asset Liability Management

Run-off Scenario WITH future premiums:



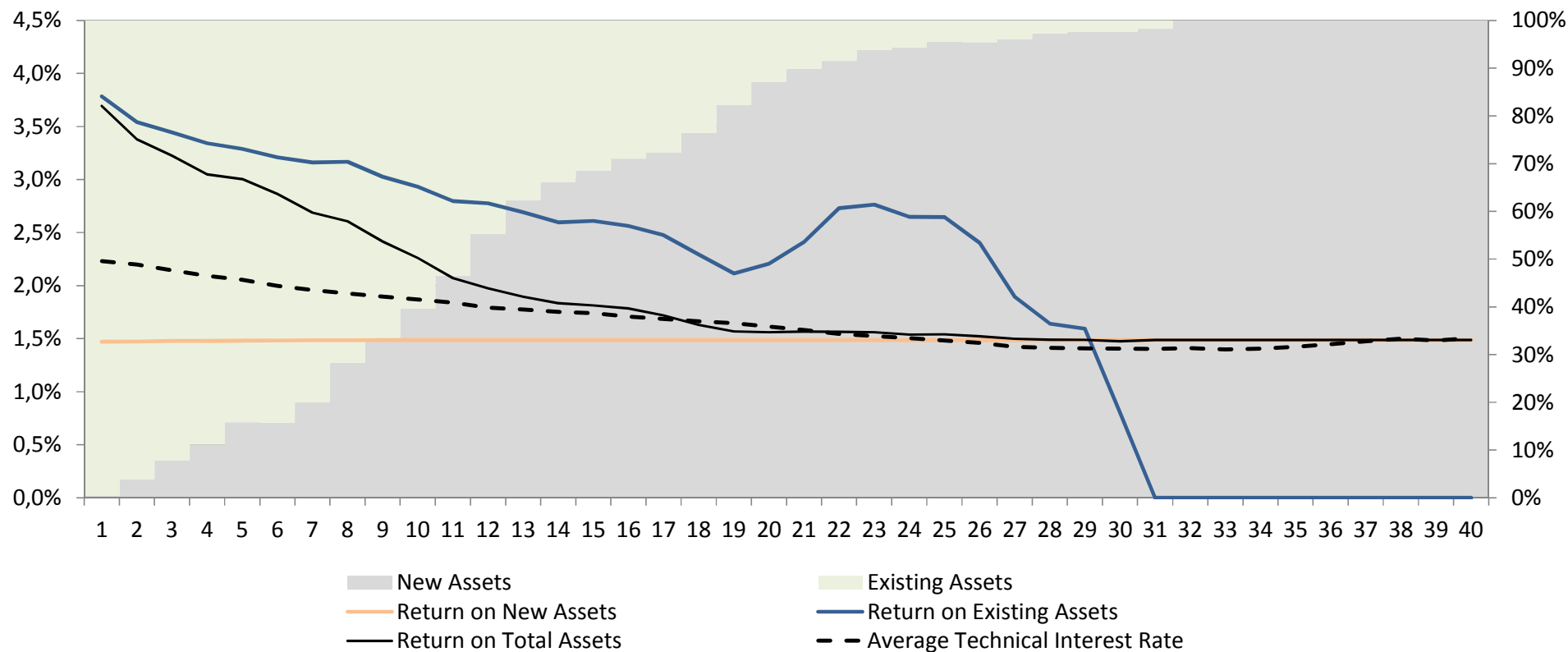
Asset Liability Management

Run-off Scenario WITHOUT future premiums:



Asset Liability Management

Consideration of reinvestment!



Many thanks for your attention



WERNER MATULA
HEAD OF ACTUARIAL SERVICES

Schottenring 30
1010 Vienna, Austria



Tel.: +43 (0)50 390-21999
Mobile: +43 (0)50 390 90-21999
Fax: +43 (0)50 390 99-21999
E-mail: werner.matula@vig.com
www.vig.com