# Life PBR around the corner

Industry overview and key updates to the Valuation Manual

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### Agenda

- Industry overview
- 2. Key updates to VM-20 since last year
- 3. Key updates to VM-31 since last year

Since January 1, 2017 – the PBR effective date for life products – many changes have occurred in how companies need to calculate and report reserves. This presentation highlights key statistics to provide an overview of industry progress, and expands on the recently released 2020 Valuation Manual.





## Industry overview



### 2018 Life PBR overview

Companies per product



25\*

US life writers reported at least one product under PBR

Policies per product



3.3m

PBR policies sold in 2018 by these companies

Gross PBR per product



US\$4.3b

Total gross reserves held under PBR by the 25 companies

2017

23

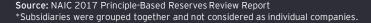
US life writers reported at least one product under PBR

0.3m

PBR policies sold

US\$0.3b

Total gross reserves held under PBR

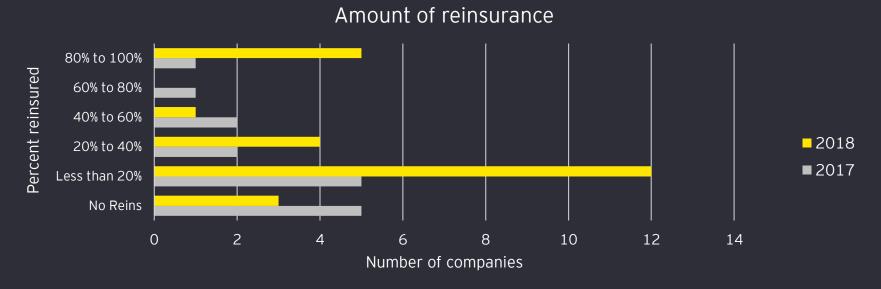




### 2018 Life PBR overview

#### Our view on PBR in the market:

- PBR in 2018 vs. PBR in 2017:
  - ► Significant increases were seen in VM-20 reserves and in the number of PBR policies in 2018
  - Most companies continued to reinsure less than 20% of their PBR business
  - With some companies adopting early in 2017, fewer companies adopted in 2018
- Moving to PBR is not without its challenges. In working with several early adopters, the key challenges that remain are:
  - ► Industry practice is still not well-developed and the Valuation Manual is a living document
  - Future treatment of YRT reinsurance is one of the most important areas in which the industry has yet to reach an agreement





## Key updates to VM-20



### Valuation Manual updates

More than 60 amendment proposal forms (APF) were approved and included in the 2020 version of the Valuation Manual. Of those:



were related to VM-20 or VM-31



directly impacted PBR calculation methodology



addressed reporting requirements



Term reserving category

#### APF 2018-48

▶ Shock lapse deemed to have occurred in any year the prescribed lapse rate is ≥ 25%

#### **Impact**



NPR - mortality assumptions

#### APFs 2018-52 and 2018-57

- ▶ Policies with substandard basis
- ▶ Policies where anticipated experience mortality materially exceeds prescribed CSO mortality rates



High Impact

Medium Impact 🛑







### DR/SR

Deterministic reserve

APF 2019-01

Deterministic Exclusion Test (DET) certification method **Impact** 

Stochastic reserve

APF 2019-13

 Specification around numerator to use for the stochastic exclusion ratio test



High Impact — Low Impact — Low Impact —



### Assumptions

Mortality: company experience

## number of policies APF 2018-45

rates

APFs 2018-17 and 2018-42

 Determination of applicable industry basic tables

Determination of company experience mortality

Increased level of demonstration required to

enough to aggregate the data

show that the underwriting processes are similar

Company experience mortality rates are based on amount of insurance, uncapped, and not on

Use of applicable industry basic tables when credibility of the data is less than 20%

Mortality: grading

Mortality: industry

tables

#### APF 2019-16

- Use of smaller ranges of credibility %
- Applicable for 1/1/2020, but can also be used for 1/1/2019
- Detailed mortality grading explanation with a numerical example

High Impact 🛑

Medium Impact

Low Impact

### Impact









### Assumptions

Post-level term period

#### APF2019-11

▶ Perform a seriatim comparison of the PV of postlevel term cash inflows and outflows

### **Impact**

Margins for prudent estimate policyholder behavior

#### APF 2019-11

► Explicit requirement to test whether the modeled reserve is materially impacted by the margins



High Impact

Medium Impact 🛑





### Other changes

Reinsurance

#### APF 2019-39

Interim approach application

#### **Impact**

Cash flow models

#### APF 2018-44

- Equity returns for indexed accounts
  - ▶ Use X% of the amount spent on options, where:
    - X = 100% in projection years 1-20
    - X = 108% in projection years 21+
    - Accumulated at the 1-year U.S. Treasury rate from scenario 12



Criteria for material impact

#### APF 2019-52

Requirement for a standard containing the criteria for determining whether an assumption, risk factor or other element of the principle-based valuation has a material impact on the size of the reserve



High Impact



Medium Impact







## Key updates to VM-31



### Revision of VM-31

Multiple templates to complete

#### APF 2019-23

- Excel format list of material risks, anticipated and prudent experience assumptions, and margins used in the model
- Company experience studies

**Impact** 



Additional information to provide in executive summary

#### APFs 2019-28 and 2019-44

- Summary of the base policies within each reserving category
- ▶ High-level results, including current and prior year results for each business valued under VM-20
- ▶ Template of the result table provided
- Summary of unresolved issues



High Impact









### Revision of VM-31

More details to be provided on ...

#### APF 2019-28

- Modeling systems
- ► Model validation procedures
- ► Credibility calculation
- ▶ Riders and supplemental benefits

### **Impact**



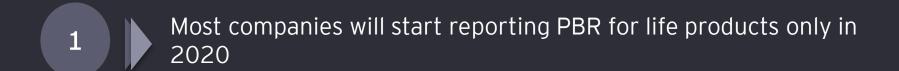








### Key takeaways



Companies need to closely monitor the evolution of VM-20, as it is a living document

Companies will be required to provide more information in their PBR report and follow specific templates



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