

VM-22 Field Test: Summary of Participant Results— Addendum for ASPA analysis

March 12, 2025

Valuation Manual (VM)-22 (A) Subgroup

Academy and EY Collaboration: Aggregating the Field Test Results

- The VM-22 field test results have been independently aggregated, clarified, and aligned by the Academy and EY.
- EY contacted submitters, gaining valuable insight.
- Today's results, as presented by EY, reflect the collaborative effort and EY's leadership in the final stages of analysis.
- This presentation represents the publicly discussable results.
- Regulator-only briefings can be scheduled, should that be desired.

Disclaimers

- All participant data received is treated confidentially.
- Participating companies noted varying levels of simplification used to produce field test results within the submission timeframe. Examples include using placeholder assumptions/margins, simplified asset portfolios, only running the Stochastic Reserve and not the Standard Projection Amount and aggregating inconsistently with proposed VM-22 requirements. Best efforts have been made to analyze and aggregate data submitted by participants. The accuracy and reliability of the results are ultimately dependent on the quality of participant submissions.
- To maintain anonymity of participants per Academy standards, data and metrics for categories with fewer than five participants will not be shared publicly.

Overview and Status

Field Test Participant Results

The purpose of this presentation is to provide a preliminary summary of the VM-22 field test participant results.

This first presentation of results focuses on reserves, including overall impacts, sensitivities, and SERT results.

Where applicable, model office results are shown for comparison or to supplement the field test participant results.

VM-22 field test key objectives

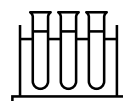


Measure the impact on actual business of the proposed reserve and capital frameworks relative to the current standards to ensure frameworks are working as intended.



Ensure pillars of framework are met

- Appropriate Reflection of Risk
- Comprehensive
- Consistency Across Products
- Practicality and Appropriateness



Test the impact of key open VM-22 design decisions

- Aggregation
- Reinvestment guardrail mix
- Stochastic Exclusion Ratio Test threshold
- Standard Projection Amount (SPA) assumptions

Field Test Results

VM-22 Participant Data Submitted

The tables below show the counts of companies which submitted results for different components of the field test. Note that cells shaded in gray represent data sections which failed to reach the 5-count threshold, resulting in limitations to the analysis presented in the following slides to uphold participant anonymity.

Product	Overall results	SPA results	Margin sensitivities	Reinvestment sensitivities
SPIA	8	5	2	3
PRT	6	4	1	2
SSC	5	4	1	2
FDA (no WB)	11	6	6	6
FDA (WB)	4	3	1	2
FIA (no WB)	12	7	6	6
FIA (WB)	12	6	5	5

Limitations in Participant Results

The accuracy and reliability of the field test results are ultimately dependent on the quality of participant submissions. There were a wide variety of limitations noted from participants which could result in materially different impacts of VM-22 once fully implemented. Below are some of the common limitations that were observed.

1. Assets

The Field Test is showing that assets are one of the key drivers of VM-22 results. Many participants used a simplified approach to allocate assets for the field test, which could have a significant impact on results in some cases. Before applying VM-22 in the future, we expect that companies will perform more analysis and refine their approach to determine the assets that will be used to back VM-22 business, potentially aligning both the asset types and duration matching to the prospective VM-22 business.

2. Standard Projection Amount

Some companies did not provide SPA results or provided SPA results on a different level of aggregation than the SR and therefore could not be analyzed on a product level. Because of this, the overall VM-22 impact from CARVM could be misestimated for those companies.

For the companies that did provide SPA results, there were some inconsistencies in the application of the prescribed assumptions. These were discussed throughout the field test Q&A process and have since been clarified in the requirements.

3. Assumptions and Margins

Many companies noted using placeholder assumptions and/or margins for the field test, and that they plan to do additional analysis to set PBR prudent estimate assumptions for VM-22.

4. PIMR

There was inconsistent treatment of PIMR across participant results. Some companies explicitly disclosed PIMR, some included it in the final reserve, some did not reflect PIMR at all. The summary of results is based on the final VM-22 reserve that participants provided.

5. Aggregation

There were some inconsistencies in the way companies aggregated results, for example including GLWB payout streams in the payout category rather than the accumulation category.

6. Business Included

The field test specification asked for at least 10 years of inforce. Some companies provided less than 10 years (e.g. if the product hasn't been sold for that long), and some companies provided significantly more than 10 years of inforce.

SPA vs. SR by Product

Table 1: Participant results – Unbuffered SPA vs. SR for VM-22

Product	Total # of companies	# SPA =< SR	# SPA > SR	Mean	Median	Standard deviation	Range
SPIA	5	5	0	-2.0%	-1.9%	1.1%	3.1%
FDA (no WB)	5	4	1	-0.6%	-0.2%	1.7%	5.0%
FIA (no WB)	6	4	2	-1.6%	-1.8%	5.1%	16.6%
FIA (WB)	5	2	3	1.7%	0.5%	4.2%	12.6%

Table 2: Participant results – Buffered SPA vs. SR for VM-22

Product	Total # of companies	# SPA =< SR	# SPA > SR	Mean	Median	Standard deviation	Range
SPIA	5	5	0	-2.5%	-2.8%	1.1%	3.0%
FDA (no WB)	5	4	1	-0.7%	-0.3%	1.7%	4.9%
FIA (no WB)	6	4	2	-2.1%	-2.1%	4.9%	16.0%
FIA (WB)	5	3	2	0.9%	-0.3%	4.1%	12.2%

Observations

- The tables here show summary statistics comparing the ratio of standard projection amount with and without buffer to the stochastic reserve.
- A positive % indicates that the SPA is greater than the SR, while a negative % indicates that the SPA is less than the SR.
- The SR is driving the final reserve more often than the SPA for most products, including those that could not be aggregated.
- Applying the buffer impacted the dominant reserve for one company.

Overall VM-22 Results: All Products

The tables below shows summary statistics on the change from CARVM to the final VM-22 reserve* for field test participants, as compared to the model office results shared previously. Participant results have been normalized so there is equal weighting across companies.

Product Overview

Product	Model office impact
SPIA	-3.4%
PRT	-3.5%
SSC	-5.7%
FDA (no WB)	0.3%
FIA (no WB)	4.6%
FIA (WB)	-16.7%

Participant results – CARVM vs. VM-22

Total # of companies	Mean	Median	Standard deviation	Range
8	-3.3%	-0.9%	13.8%	44.8%
6	-0.4%	-1.0%	4.7%	13.2%
5	20.9%	9.7%	30.1%	83.1%
11	2.6%	1.6%	4.6%	17.7%
12	6.3%	3.9%	7.9%	27.9%
12	-4.5%	-5.0%	8.4%	26.5%

*Final VM-22 reserve = Stochastic Reserve + ASPA – PIMR (when provided). Some companies did not reflect PIMR in the results provided with the field test.

High-level Observations Summary



Range of results: There was a wider range of results than was expected across all products. Every product had at least one company with an increase and one company with a decrease in reserves.



Selection of assets: The assets used in VM-22 modeling are a key driver of results for all products. Given the simplified approaches that many companies took for assets, results could change materially when asset portfolios are refined. Some participants noted that the reinvestment guardrail had a significant impact on results vs. modeling their company reinvestment strategy.



Dominant reserve: Where SPA results were provided, the SR is winning more often than the SPA for payouts and non-WB accumulation products. The SPA is winning more often on WB products. This is likely due to the SPA lapse assumption for WB products. 8 of the total 19 entities that participated in the field test did not provide SPA results.



Notable differences from model office results:

SSC—The model office included SSC as a subset of the PRT block but did not consider SSC as a standalone product so it's not directly comparable to participant results. SSC results also vary depending on the mix of business and inforce duration of the block, which for some participants was much longer than 10 years.

FIA—The model office results included a topside adjustment for the cost of FIA hedges due to a limitation in GGY Axis.

Questions or Comments:

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