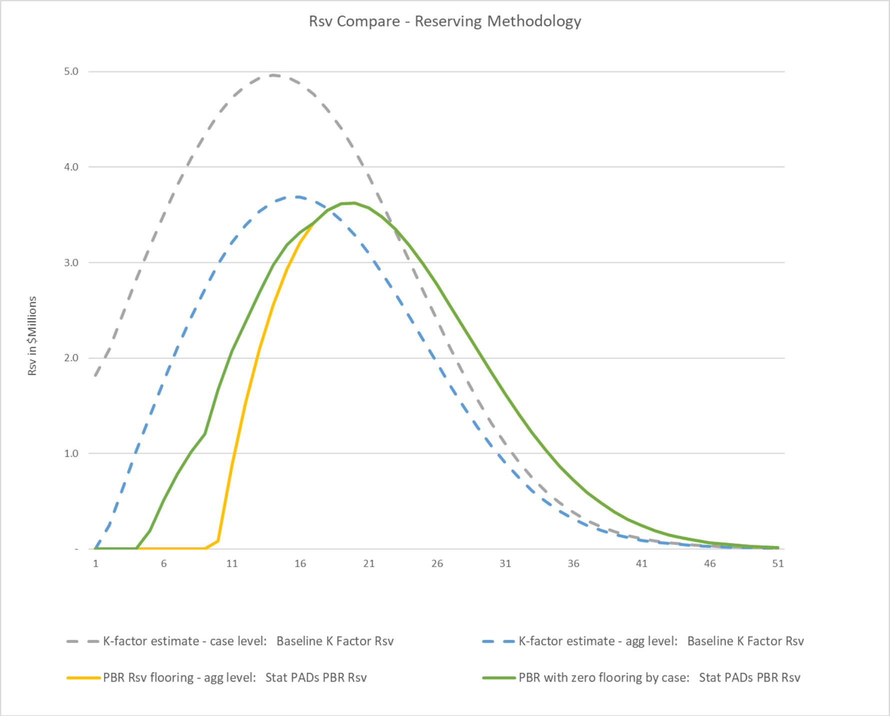
VM-22 Reserving

A New PBR Reserve Flooring Proposal

Why this approach is being proposed?

The PBR reserves for Longevity Reinsurance business are negative in the early years, which was considered undesirable. The LATF VM-22 working group analyzed multiple approaches to address this concern. These are discussed below:

1. Flooring the PBR reserves at zero (at contract or at aggregate book of business level).
   - The resulting PBR reserves incorporating the flooring at zero were still considered too low in the early durations staying at zero for too long per each contract– 10 years (depending on the business mix) or staying at zero or at a very low level when flooring in aggregate.
2. Using the K-factor methodology instead of PBR (with the K-factor calculated at case or at aggregate book of business level).
   - This can produce non-zero reserves in the early durations.
   - However, due to the artificial premium reshuffling (with the application of k-factor estimated at the issue), the K-factor based reserves will fall short of the gross premium PBR reserves in the later durations, which is not considered desirable.



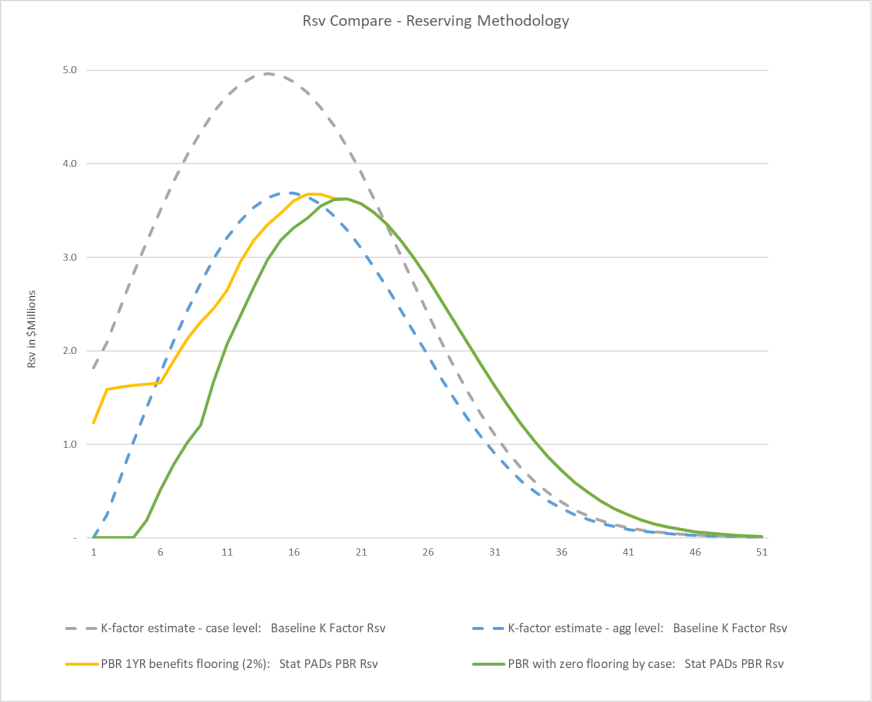
Business mix:
- 50% each for new business and 5-year inforce
- 50% each of 100% retirees with older blue-collar contract and younger white-collar contract

The proposed alternative builds on the zero flooring at contract level adjustment proposal, by raising the floor above zero for PBR reserves.

The new flooring basis for PBR reserves

The goal of this new proposal is to raise the floor for PBR reserves above zero in the early durations, without creating reserve deficiencies in the later durations.

- The proposal is to express the floor for PBR reserves as a percentage of Longevity Reinsurance benefits payable within the next 12 months from the date of valuation.
  - Currently proposing flooring at 2% of the Longevity Reinsurance benefits payable within the next 12 months from the valuation date
- The proposed 2% floor could be described as the amount required to pre-fund approximately one week worth of the upcoming Longevity Reinsurance benefits payable (1/52 is 1.92% that is rounded up to 2%).
- The benefit amount is proposed as the basis for the floor rather than a more traditional premium basis due to the nature of the Longevity Reinsurance business.



Business mix:
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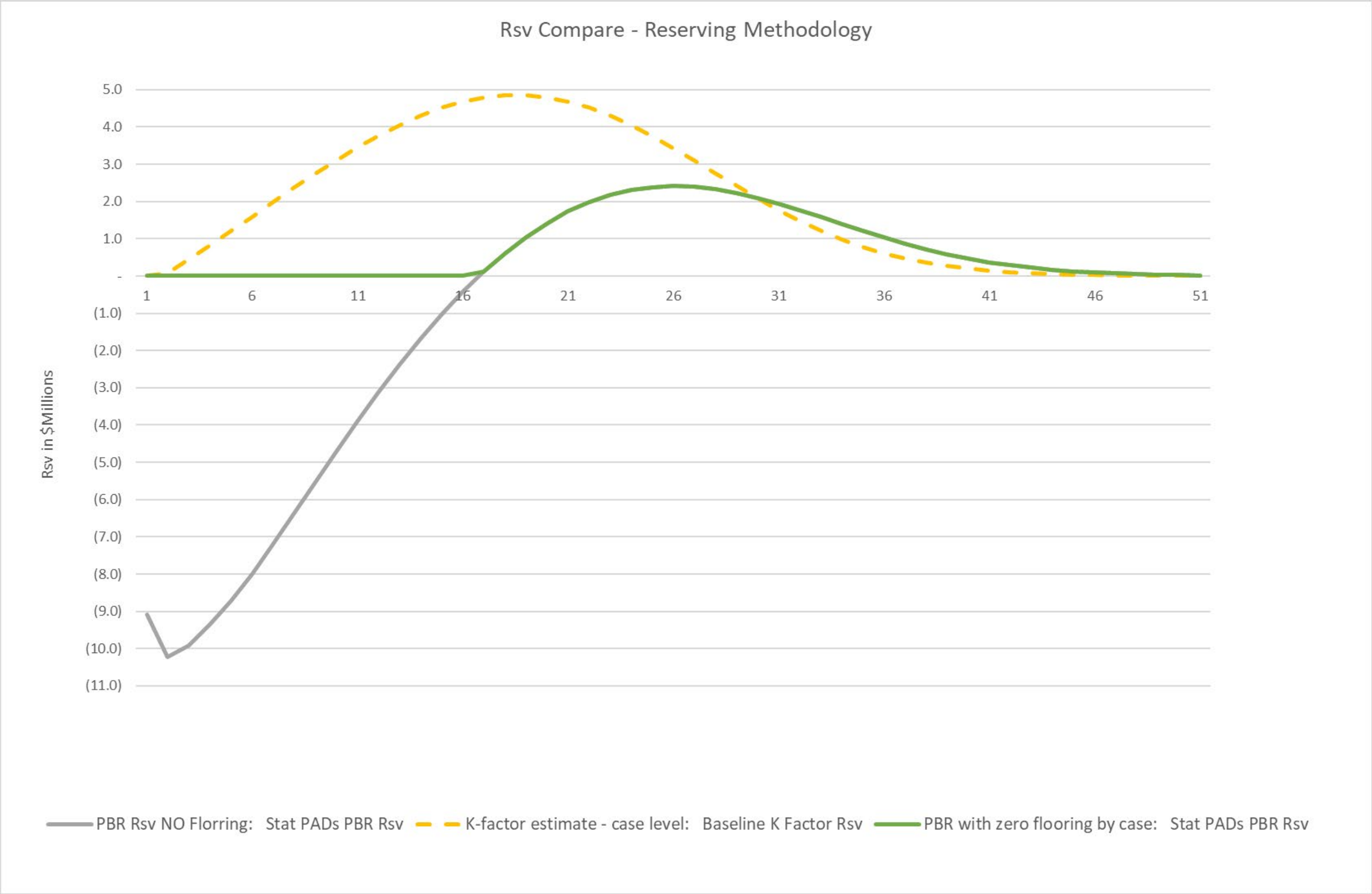
The proposed new floor solves the issue of the PBR reserves being too low for too long in the early durations, without creating reserve deficiencies in the later durations.

Sample Reserve Comparisons



Business mix:
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- 100% younger white-collar contract

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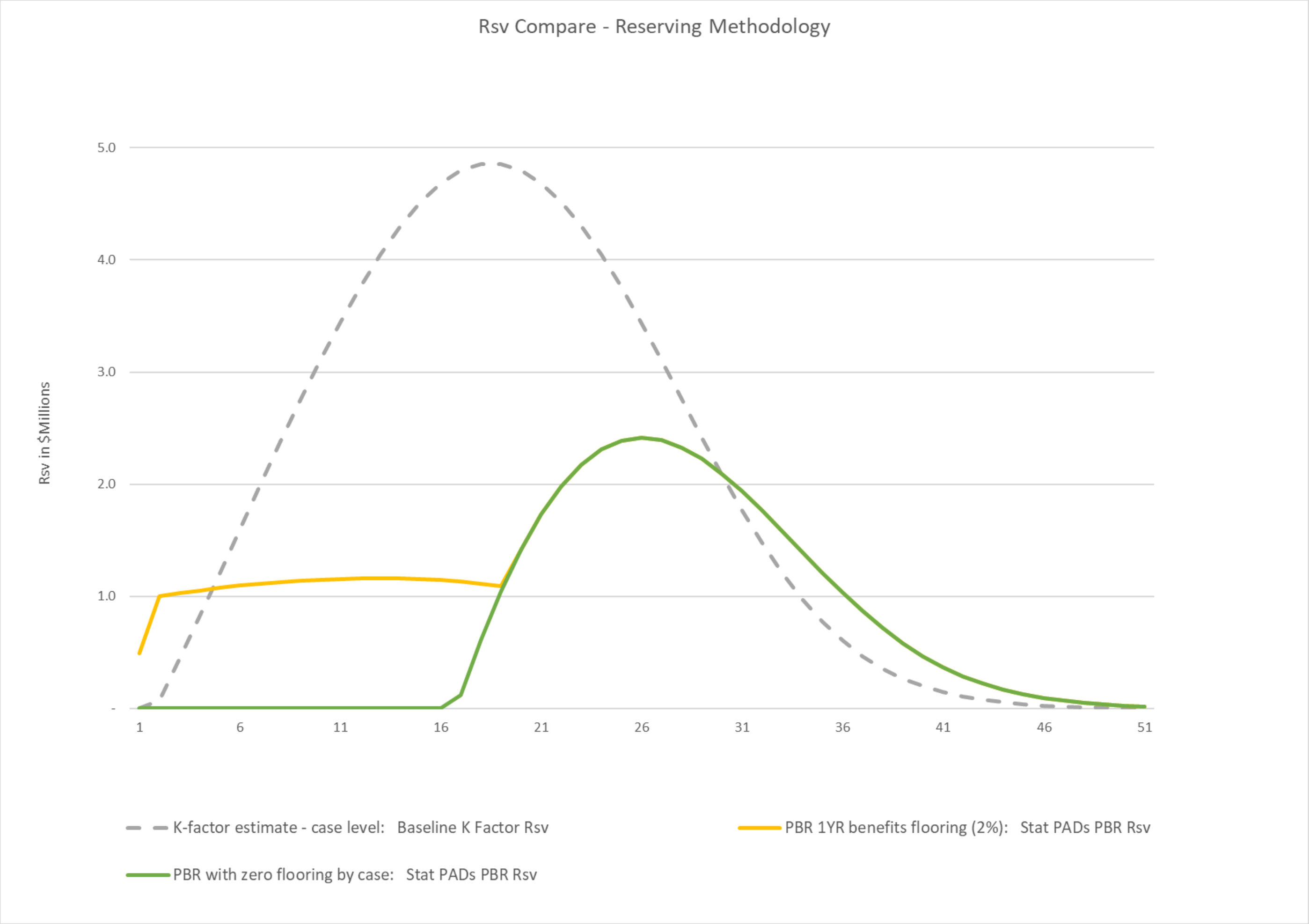

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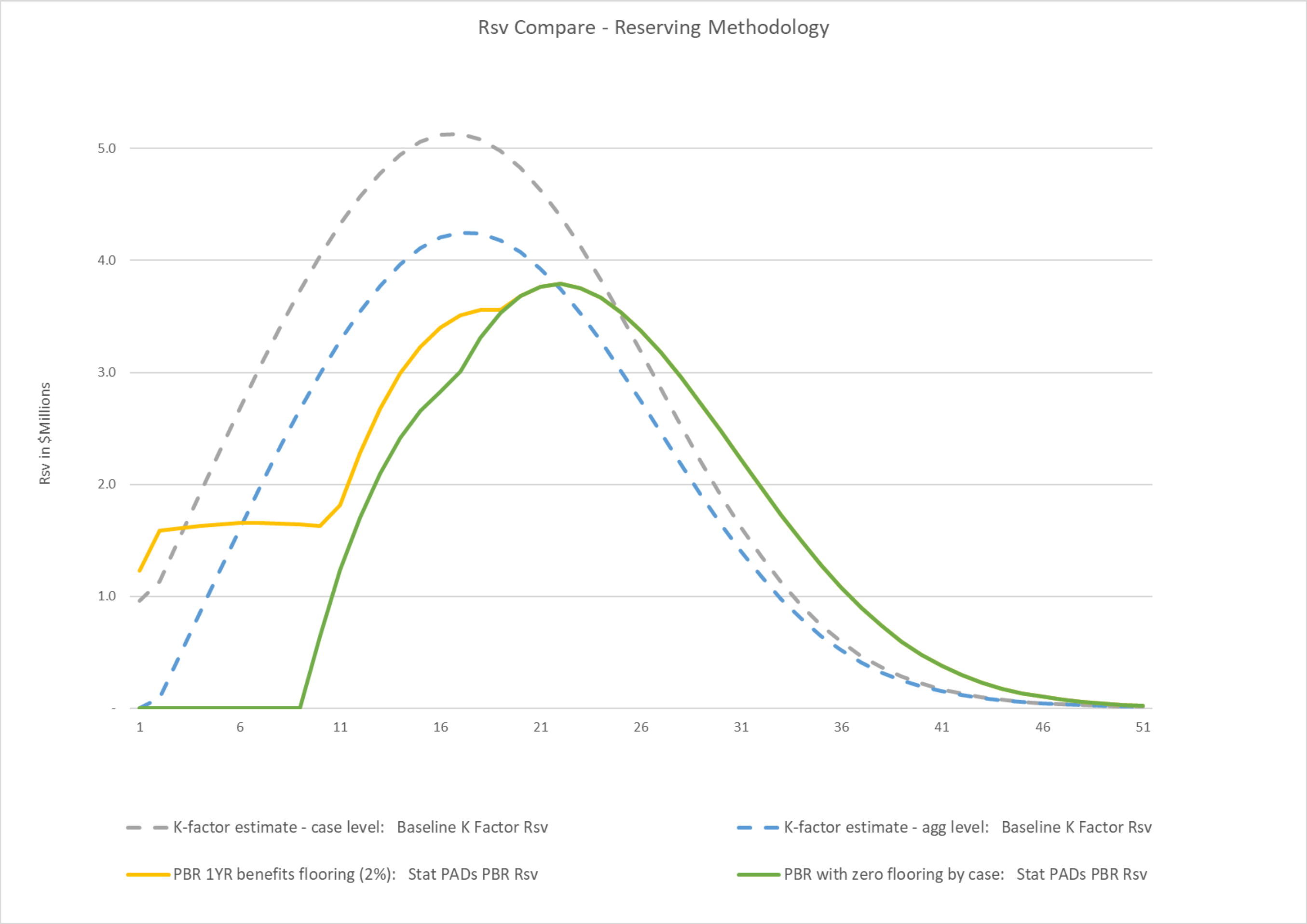

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