

# Macroeconomic Scenarios and Assignment of Probabilities for CMBS and RMBS

**2022 Summer National Meeting**

August 11, 2022  
Portland, Oregon



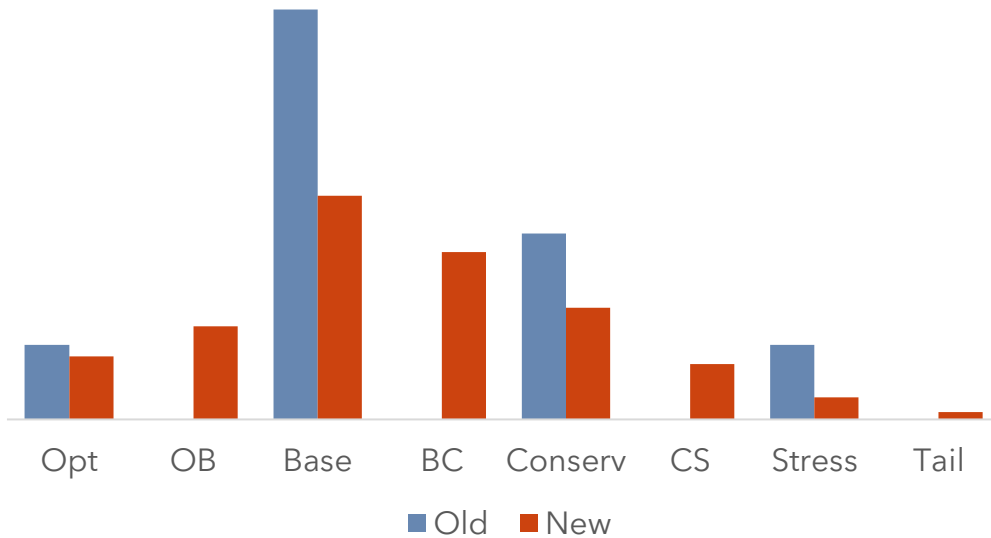
# Summary

- CMBS and RMBS scenarios were previously presented at the June 9<sup>th</sup> Valuation of Securities (E) Task Force meeting.
  - We are adding additional macroeconomic scenarios in order to better differentiate among 20 NAIC Designation Categories.
    - Moving from current 4 scenarios to 8 total scenarios for both CMBS and RMBS.
  - These scenarios are meant to be through-the-cycle.
- We have assigned probabilities to each of the CMBS and RMBS scenarios.
  - The probability weights continue to be bell-shaped over the range of the macroeconomic scenarios.
    - Reallocation of probability weights with lower probabilities at the tail and increased aggregate probabilities at the belly.
- We plan to make proforma modeling results available to insurers free of charge later this year, based on each insurer's year-end 2021 holdings.



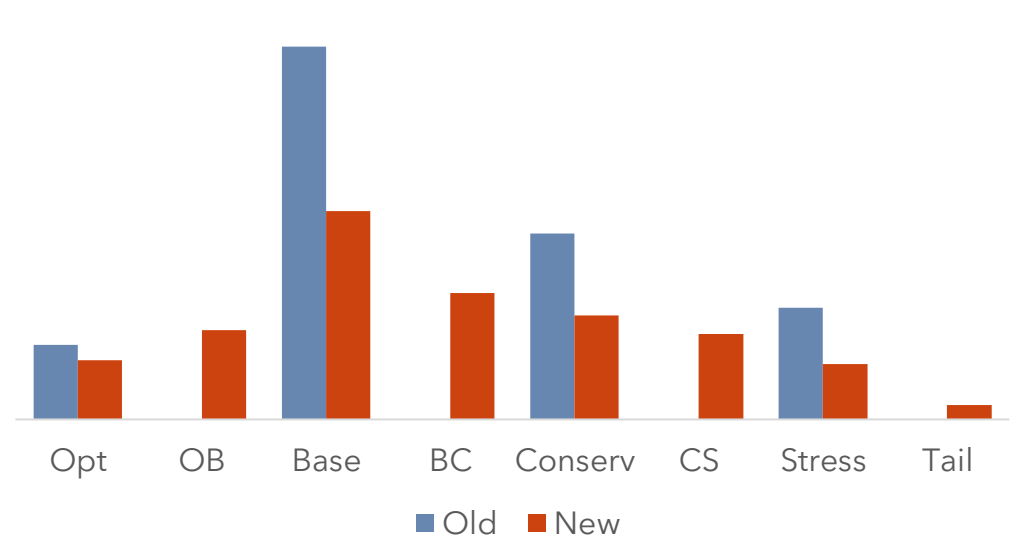
# Assignment of Probabilities

### CMBS Probabilities



	Opt	OB	Base	BC	Conserv.	CS	Stress	Tail
Old	10.0%	-	55.0%	-	25.0%	-	10.0%	-
New	8.5%	12.5%	30.0%	22.5%	15.0%	7.5%	3.0%	1.0%

### RMBS Probabilities



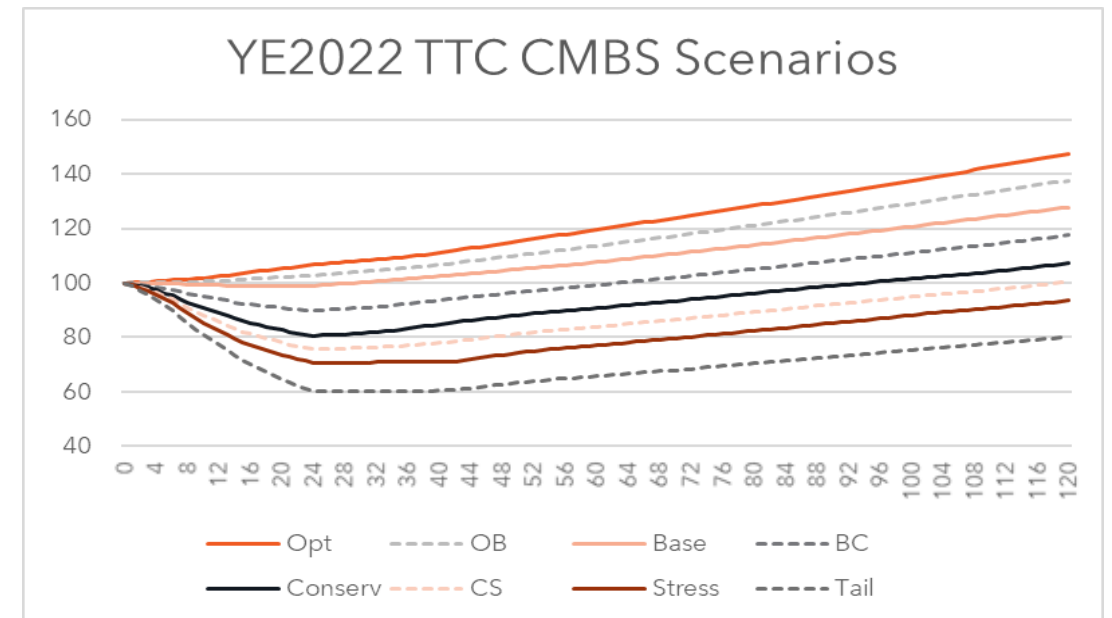
	Opt	OB	Base	BC	Conserv.	CS	Stress	Tail
Old	10.0%	-	50.0%	-	25.0%	-	15.0%	-
New	8.0%	12.0%	28.0%	17.0%	14.0%	11.5%	7.5%	2.0%



# CMBS Scenarios and Probability Weights

- Total of 8 through-the-cycle (TTC) macroeconomic scenarios including 3 additional scenarios between the current ones and a tail scenario.
- In the table below, the new scenarios (OB, BC, CS and Tail) are in bold.

	Prob.	Current to Trough	Trough Timing (months)	3 Year NPI Growth	5 Year NPI Growth	10 Year NPI Growth
Opt	8.5%	N/A	N/A	10%	20%	47%
<b>OB</b>	<b>12.5%</b>	<b>N/A</b>	<b>N/A</b>	<b>6%</b>	<b>14%</b>	<b>38%</b>
Base	30.0%	-1%	21	1%	8%	28%
<b>BC</b>	<b>22.5%</b>	<b>-10%</b>	<b>24</b>	<b>-8%</b>	<b>-1%</b>	<b>18%</b>
Conserv.	15.0%	-19%	24	-17%	-9%	7%
<b>CS</b>	<b>7.5%</b>	<b>-24%</b>	<b>24</b>	<b>-23%</b>	<b>-16%</b>	<b>0%</b>
Stress	3.0%	-29%	24	-29%	-23%	-7%
<b>Tail</b>	<b>1.0%</b>	<b>-40%</b>	<b>24</b>	<b>-40%</b>	<b>-34%</b>	<b>-20%</b>





# RMBS Scenarios and Probability Weights

- Total of 8 through-the-cycle (TTC) macroeconomic scenarios including 3 additional scenarios between the current ones and a tail scenario.
- In the table below, the new scenarios (OB, BC, CS and Tail) are in bold.

	Prob.	3 Year HPI Growth	5 Year HPI Growth	10 Year HPI Growth
Opt	8.0%	18%	28%	47%
<b>OB</b>	<b>12.0%</b>	<b>12%</b>	<b>18%</b>	<b>27%</b>
Base	28.0%	8%	10%	12%
<b>BC</b>	<b>17.0%</b>	<b>2%</b>	<b>1%</b>	<b>-2%</b>
Conserv.	14.0%	-4%	-7%	-16%
<b>CS</b>	<b>11.5%</b>	<b>-10%</b>	<b>-16%</b>	<b>-29%</b>
Stress	7.5%	-20%	-30%	-47%
<b>Tail</b>	<b>2.0%</b>	<b>-31%</b>	<b>-44%</b>	<b>-62%</b>

