November 10, 2023

Rachel Hemphill, PhD, FSA, FCAS, MAAA
Chair, NAIC Life Actuarial Task Force

Re: GOES Stylized Facts and Acceptance Criteria Comment Letter

Nationwide®

Dear Rachel:

Nationwide appreciates the opportunity to comment on GOES Stylized Facts and Acceptance Criteria. We are in favor of the approach of defining Stylized Facts and Acceptance Criteria followed by robust testing in both model office and industry models. While a robust set of acceptance criteria are a vital ingredient in choosing candidate models, a model that meets all acceptance criteria may not be fit for use for all applications. Similarly, a model that does not meet all acceptance criteria is not necessarily unfit for use (though it does suggest potential limitations for awareness).

We offer the following specific comments on the exposure:

Stylized Facts: The stylized facts are well defined in establishing the qualitative behaviors that should be captured in the generator, and we applaud the NAIC and Academy in establishing these definitions. Expert judgment will be necessary in determining if a given model satisfies these stylized facts.

Lower Bound on Negative Interest Rates: *Rates should generally be above -1.5%*
While this is a reasonable criterion, if this is accomplished via a flooring mechanism rather than more complete calibration of the model it may introduce unrealistic behavior. For instance, an outsized portion of the distribution may be concentrated near the floor level where it is more realistic for there to be very little weight around this lower bound.

Low For Long Criteria (12/31/20 initial conditions):
a) At least 10% of scenarios need a 10-year geometric average of the 20-year UST below 1.45%
b) At least 5% of scenarios need a 30-year geometric average of the 20-year UST below 1.95%

Both the criteria for the 10-year and 30-year geometric averages are more extreme than any path observed in history, where the lowest are 2.00% and 2.68% respectively[1]. While it is desirable to include paths more extreme than history, it is too restrictive to target (at least) 10% of scenarios to be materially more extreme than history. While we recognize the modification to this criteria proposed by LATF, we believe that this criteria is still too restrictive. Additionally, we feel that this will result in the same issues uncovered in the first field test relating to interest rates being implausibly low in many scenarios.

Equity Criteria
We would like to reiterate that no material deficiencies have been identified with the current Academy equity model. As such, maintaining consistency with the current equity model would be beneficial in

[1] Based on historical long interest rates (10-year treasury as proxy) 1871-Present:
Shiller, R., U.S.Stock Price Data, Annual, with consumption, both short and long rates, and present value calculations. An Update of Data shown in Chapter 26 of Market Volatility, R. Shiller, MIT Press, 1989, and Irrational Exuberance, Princeton 2015. http://www.econ.yale.edu/~shiller/data.htm

understanding impacts to reserve and capital and avoiding unjustified movements. We are in favor of more complete equity acceptance criteria being defined with consistency to the current equity model along with satisfying the stylized facts defined.

We appreciate your consideration of our comments.

Sincerely,

Alex Hookway, FSA, MAAA
Sr. AVP, NF Quantitative Risk Management
Nationwide Financial

Philip Wunderlich, FSA, MAAA
Associate Vice President, Appointed Actuary
Nationwide Financial

cc Scott O'Neal, NAIC
Pete Weber, Ohio Department of Insurance