Own Assets with Guardrails (OAG) Version 2.0

2018 ICS Field Testing

January 13, 2018

Nashville ICS Stakeholder meeting

Background and aims of today's discussion

Background	▪ The 2018 ICS Field Testing exercise and results are essential for the continued development of a meaningful and globally applicable reference MAV valuation approach ▪ OAG v2.0 proposed for inclusion in the 2018 ICS Field Test builds on the information obtained from testing OAG v1.0 in the 2017 ICS Field Test: – Addresses operational complexities identified in OAG v1.0 – Addresses OAG v1.0 'placeholders' e.g. 10bps long term spread (over risk free) and the treatment of equity assets backing long term business ▪ Open letter cosigned by 20 companies to the IAIS submitted in December 2017 advocating for the separate testing of the simplified OAG v2.0 MAV valuation approach from the Blended Option in the 2018 ICS Field Test
Aim of today's meeting	▪ High level overview of OAG v2.0 ▪ Open discussion and Q&A with stakeholder participants regarding inclusion of OAG v2.0 in 2018 ICS Field Test

OAG v2.0 for inclusion in ICS 2018 Field Test

OAG v2.0 simplifies the OAG v1.0 calculations, and addresses OAG v1.0 placeholders included in the 2017 Field Test

#	Technical Specification	OAG v1.0 (2017 ICS Field Test)	Proposed OAG v2.0 (2018 ICS Field Test)
1	Asset cashflow data	OAG v1.0 required the use of annual own-asset cashflows to calculate duration specific asset/liability ratios. For some Volunteers, the annual cashflows were not readily available, and even when they were, resulted in a volatile discount rate curve construction when asset and liability cashflows were not exactly matched.	OAG v2.0 eliminates the annual asset cashflow requirement and instead calculates asset/liability ratios using a single lifetime duration-based ratio calculation which also has a secondary benefit of producing smooth spread curves. The option of using readily available public data for the yield and duration of own fixed income assets is also made available to reduce internal data requirements.
2	Reinvestment curve grading assumption	OAG v1.0 assumed a simplified spread on reinvestment assets based on grading from the spread on own assets at year 10, and then linearly grading to a 10bps long-term spread over risk-free rate at year 60	OAG v2.0 uses the Smith-Wilson grading approach starting at the average own asset duration and grading to a long-term spread over risk-free assumption at Segment 3 (60-year convergence point in the 2017 ICS Field Test)
3	Long-term forward rate (LTFR) assumption	OAG v1.0 (and other MAV approaches) included a 10bps long-term spread over risk-free assumption (placeholder for the 2017 ICS Field Test). Furthermore, the 10bps was applied as a spot rate rather than a forward spread which resulted in understating the true OAG curve.	OAG v2.0 proposes a long-term forward spread rate over risk-free based on observed average historical long-term spreads by geography to more accurately reflect the features of individual underlying investment markets (consistent with assumptions expected to be provided by the IAIS for the 2018 ICS Field Test)
4	Recognition of equity sale cashflows	OAG v1.0 excluded cashflows in respect of the sale of equity assets (placeholder for the 2017 ICS Field Test)	OAG v2.0 recognizes cashflows in respect of the sale of equity assets subject to appropriate guardrails regarding the timing and amount of these cashflows
5	Use of internal ratings	OAG v1.0 restricted the use of internal ratings in respect of mortgages and unrated securities	OAG v2.0 allows the use of internal ratings subject to appropriate guardrails

Open discussion and Q&A

- Open letter to the IAIS submitted in December 2017 advocating for the continued testing of the simplified OAG 2.0 MAV valuation approach separate from the Blended Option in the 2018 ICS Field Test
  - Cosigned by 20 companies which represents a significant proportion of the ‘predominantly life’ ICS Volunteers
  - Last opportunity to collect meaningful data to further develop and calibrate the MAV valuation methodology for ICS 2.0
  - Two MAV valuation approaches for the 2018 Field Testing demonstrate a clear path for convergence to a single MAV approach for the launch of ICS 2.0 scheduled for 2019

- Suggestions on how to further improve the OAG approach? Are you interested in joining the OAG working group and/or receiving OAG information?

Appendix

- Key issues of the OAG and findings from the 2017 Field Test
- OAG v2.0 potential improvements to the OAG yield curve construction

Key issues of the OAG and findings from the 2017 Field Test

Findings based on discussions among OAG working group members

Ease of Use / Scope

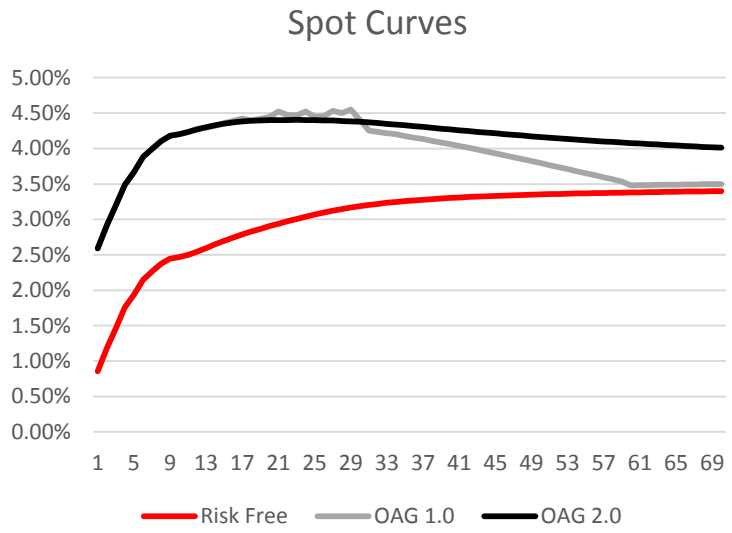
- Firms applied OAG in a proportionate manner – i.e. tending to apply it to longer term business whilst applying the alternative method for short term business
- Effect of OAG was more limited for some Par / Adjustable segments where OAG yield curve refinements were partially offset by rebasing
- Required data generally available for matched segments and/or where there is already detailed segmentation of asset and liability cash flows but there were some data challenges when this was not the case. Data requirements are expected to become less onerous as OAG becomes more established and/or as a result of technical refinements applied to simplify calculations.
- OAG templates met objective of standardizing calculations and promoting comparability – further refinements required to improve ease of use

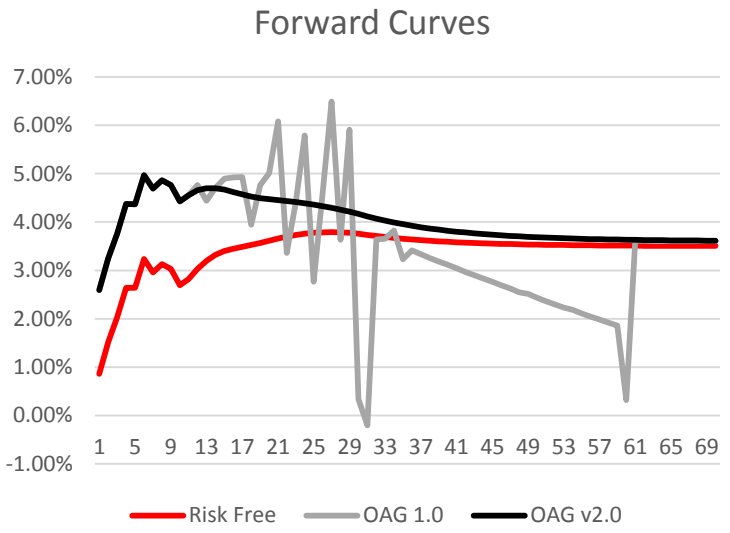
Appropriateness of Results

- Relative to other methods, OAG provided a more consistent measurement of the impact of market movements on assets and liabilities – better at avoiding artificial volatility in stress scenarios
- Guardrails provide constraints on range of practice, but in places were too constraining e.g. lack of recognition of equity asset sales cash flows

OAG v2.0 potential improvements to the OAG yield curve construction

Illustrative example of the application of a single lifetime duration-based ratio calculation





OAG Spread Construction Parameter	OAG v2.0	Example
Current own asset spread	Average spread of own assets (asset yields and duration based on internal or public data)	173 bps
Last liquid point (cut-off for extrapolation)	Average own asset duration	11 years
Reinvestment curve grading assumption	Smith-Wilson approach	N/A
Long-term forward rate (LTFR)	TBD (observed average historical long-term spreads by geography)	10 bps (2017 ICS placeholder)