The Solvency II Review

HM Treasury's (HMT) objectives for the review (as set out in the Call for Evidence):

- **to spur a vibrant, innovative, and internationally competitive insurance sector;**
- **to protect policyholders and ensure the safety and soundness of firms;**
- **to support insurance firms to provide long-term capital to underpin growth, including investment in infrastructure, venture capital and growth equity, and other long-term productive assets, as well as investment consistent with the Government's climate change objectives.**

The Prudential Regulation Authority (PRA) is working jointly with HMT to develop a package of reforms that meets these objectives.

Key milestones in the Review:

Matching Adjustment (MA): Key Questions

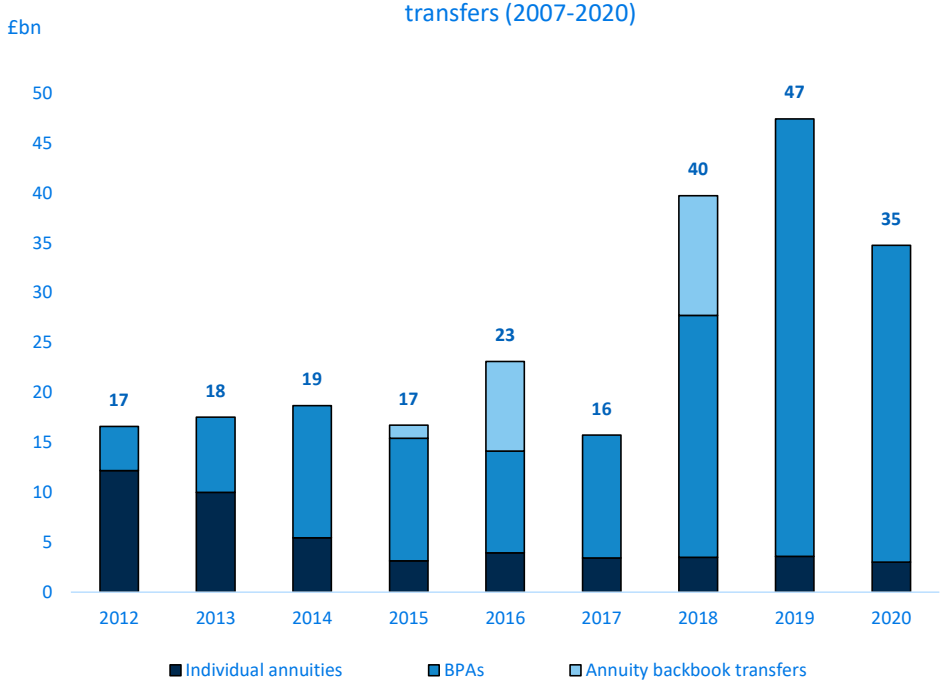
- Why is the PRA so focussed on the MA?
- Why are you looking at different possible calibration now?
- What are your concerns with the current MA design for corporates?
- What are your concerns with more illiquid assets?

MA is very material in £bn terms

The MA benefit at YE 20 was £81bn (covering both the base balance sheet and in the Solvency Capital Requirement (SCR)). All of this benefit can be taken immediately by firms. Any recalibration of the MA would – provided the assets are sound – simply delay firms obtaining some of this benefit.

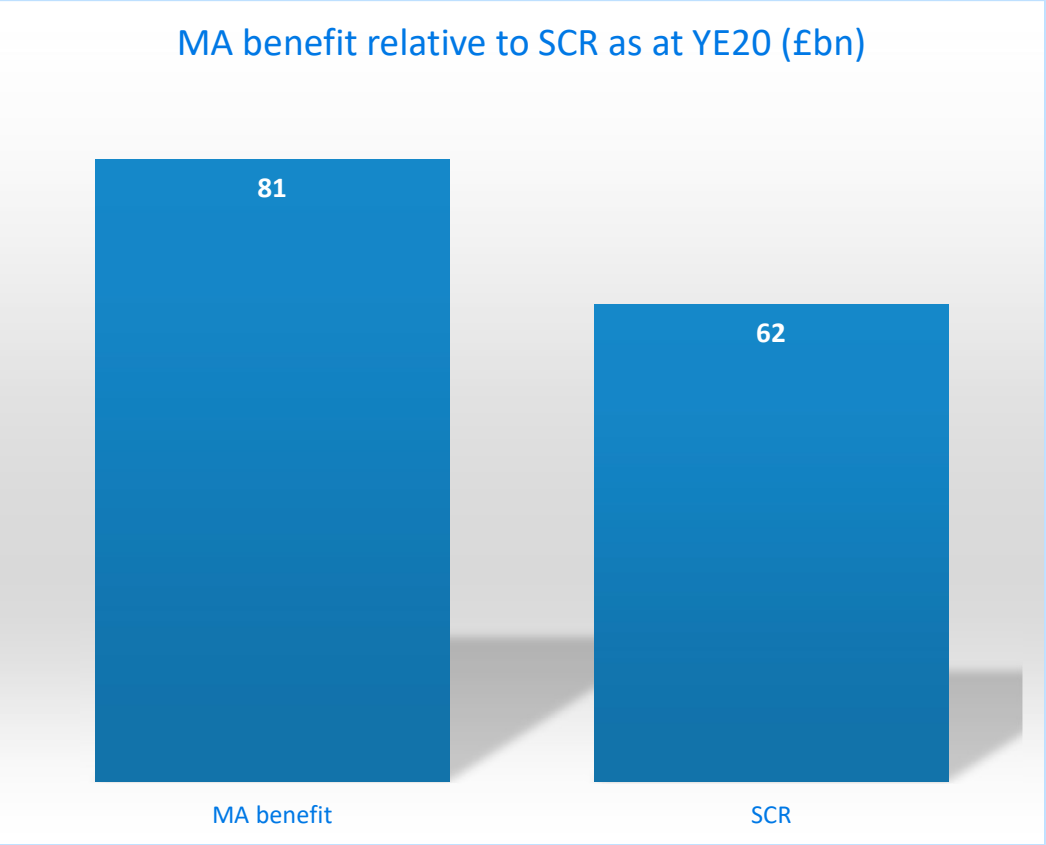
- Firms have written material amounts of annuity business since 2012.
- The vast majority of this business will benefit from an MA.
- The MA is one of the most important assumptions on an annuity writer's balance sheet (£81bn at YE20 compared to the total capital requirement for all UK insurers of £116bn). Its integrity is therefore critical.
- As MA is a benefit that is given upfront then firms are free to write new business and/or fund dividend payments assuming the MA will be earned in practice.
- If it is not earned in practice, firms would potentially have to sell down their assets to realise liquidity and meet policyholder claims. This pushes against their role as long-term investors in the economy, and could have systemic effects if done *en masse*. If firms were forced to fire-sell illiquid assets at a loss, they could start to run into solvency difficulties, ultimately threatening policyholder protection.
- Any change in the MA calibration does not mean that future investment profits will fail to crystallise. It simply requires firms to delay recognition of such profits.

UK annuity sales split between BPAs, individual annuities and backbook transfers (2007-2020)



Why is the PRA so focussed on the MA?

- MA benefit has risen from £59bn at YE16 to £81bn at YE20.
- £81bn was equivalent to c.130% of the total SCR for companies with MA approval
- The range of assets giving rise to the MA benefit also continues to expand into more bespoke, internally rated and valued assets.
- However, the MA – which effectively seeks to decompose the credit spread on an asset – is not observable:
  - It has to be modelled
  - Its use exposes the industry to a concentrated form of model risk/uncertainty



Why are you looking at different possible calibrations now?

David Rule

An annuity is a very serious business

April 2018

HMT

Review of SII

Call for evidence

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Goldilocks and the three pillars

February 2021

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Brave new world

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Charlotte Gerken

Speech at City of Westminster

April 2021

"[The MA] does represent the bringing forward – and potentially paying away in dividends – of unrealised returns. And its calibration is subject to uncertainty which, combined with its size and the quantity and importance of the services that it underpins – retirement income and long-term investments – mean that we have to maintain a very high confidence that its calibration is suitably prudent."

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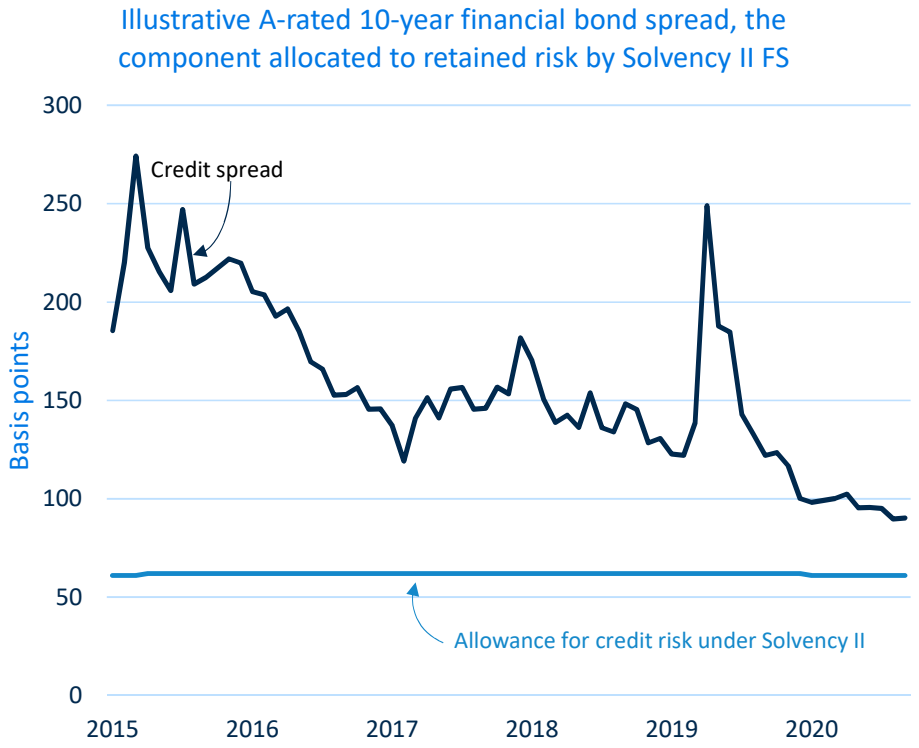
"The impact of the long-term average spread floor makes the FS a predominantly backwards looking measure, insensitive to current market signals… Under stress, firms will only see the FS increase under a ratings downgrade, thus completely setting aside any information contained in market spreads."

What are your concerns with the current MA design for bonds?

- The MA is intended to adjust annuity firms' balance sheets to better reflect their risk profile.
- It aims to remove incentives for firms to sell assets when there is material market volatility with no associated increase in retained credit risk.
- The MA is not intended to remove the retained credit risks that annuity firms remain exposed to.
- This credit risk can change over time depending on market and economic conditions.
- Widening credit spreads and ratings downgrades can both contain information in respect of credit risk and/or uncertainty.
- The current Fundamental Spread (FS) is completely risk insensitive to any change in credit spreads, including during the recent COVID-19 pandemic, as shown by the horizontal line in the chart.



MA appears to understate the level of retained credit risk (1)

The level of MA looks to be generous. In most market conditions it implies that the vast majority of the spread on a credit risky asset is compensation for risks other than credit. This is counter-intuitive.

- There is a substantial body of research looking at the split of the credit spread into:
  - Compensation for **credit risk**
  - Compensation for **liquidity risk**
- The Solvency II calibration of the MA measures credit risk using long-term credit risk data.
- This limits the risk responsiveness of the credit risk allowance and leads to the majority of the credit spread being attributed to liquidity risk, except when credit spreads are narrow (as at YE20).
- Overall, our comparison to the following academic studies shows the existing MA to be generous, potentially inappropriately so:

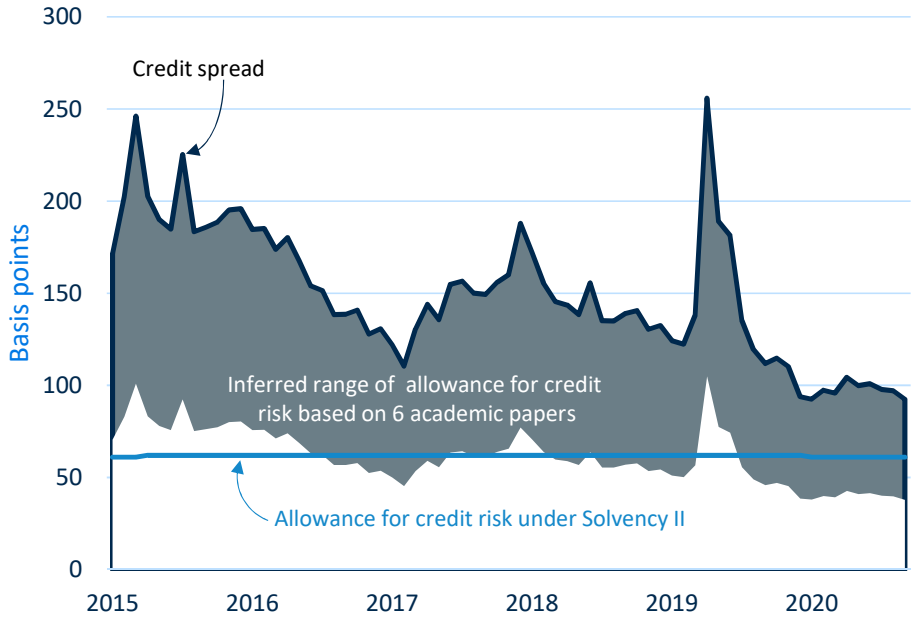
- Bu, D., Kelly, S., Liao, Y., & Zhou, Q., 2018, A hybrid information approach to predict corporate credit risk, The Journal of Futures Markets, vol. 38, no. 9, pp. 1062-1078. https://doi.org/10.1002/fut.21930
- Chen, H., Cui, R., He, Z., Milbradt, K., 2018, Quantifying Liquidity and Default Risks of Corporate Bonds over the Business Cycle, The Review of Financial Studies, Volume 31, Issue 3, Pages 852–897, https://doi.org/10.1093/rfs/hhx107
- Feldhütter, P., Schaefer, S., 2018, The Myth of the Credit Spread Puzzle, The Review of Financial Studies, Volume 31, Issue 8, Pages 2897–2942, https://doi.org/10.1093/rfs/hhy032
- Feldhütter, P., Schaefer, S., 2019, Debt Dynamics and Credit Risk, http://dx.doi.org/10.2139/ssrn.3410079
- Dick-Nielsen, J., Feldhütter, P., Lando, D., 2012, Corporate bond liquidity before and after the onset of the subprime crisis, Journal of Financial Economics, 103, issue 3, p. 471-492. https://doi.org/10.1016/j.jfineco.2011.10.009
- van Loon, P., 2017, Empirical Studies in Corporate Credit Modelling: Liquidity Premia, Factor Portfolios and Model Uncertainty, PhD thesis, Heriot-Watt University, https://www.actuaries.org.uk/documents/pvl-final-thesis
- Webber, L., 2007, Decomposing Corporate Bond Spreads. Bank of England Quarterly Bulletin, Decomposing corporate bond spreads | Bank of England

MA appears to understate the level of retained credit risk (2)

The level of MA looks to be generous. In most market conditions it implies that the vast majority of the spread on a credit risky asset is compensation for risks other than credit. This is counter-intuitive.

- Another way of looking at the comparison on the previous slide is to compare the FS over time with the allowance for credit risk which can be inferred from the same range of academic papers.
- There have been times (such as year-end 2020) when the allowance for credit risk under Solvency II is not obviously too low.
- However, this lack of responsiveness to risk signals means that at other points of the economic cycle (such as during 2016) it appears to materially understate the credit risk that firms are running, with reference to the academic range.

Illustrative A-rated 10-year financial bond spread, the component allocated to retained risk by Solvency II FS and alternative academic views

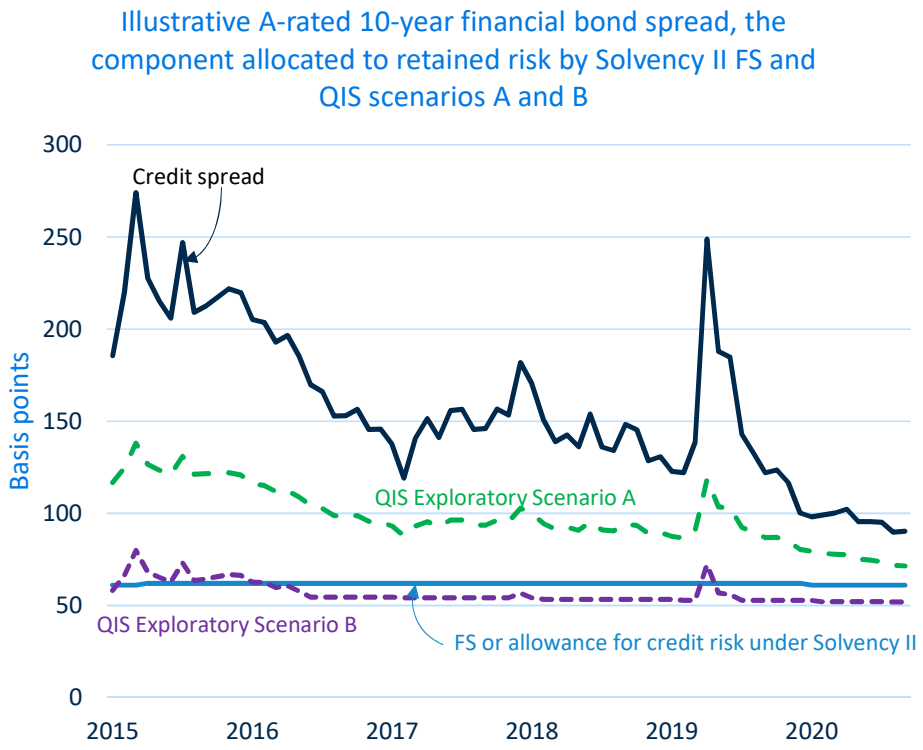


What are your concerns with the current MA design for bonds?

- The Solvency II review is then a good time to ask if we have the right balance between a low and risk-insensitive calibration for retained risks which provides perceived balance sheet strength and stability for insurers and a calibration which provides appropriate signals for effective risk management

- QIS scenarios A and B aim to explore different MA designs.

- They are <u>not</u> intended to be policy proposals.



Range of assets in MA portfolios has expanded

The MA is calibrated based on corporate bonds but is being used, without adjustment, for a very wide range of assets that are arguably even more uncertain in terms of their risk profile.

- When the MA was being negotiated in 2014, firms had quite different portfolios backing annuity business.
- Around 85% of assets were corporate or government debt compared to around 55% at YE20.
- Some assets – like those backed by property – are held by a number of firms.
- We understand a key driver of the movement in firms' asset holdings to be a search for yield to support annuity pricing.

At least one firm has MA approval for each of the following assets:

- Agricultural Mortgages
- Corporate Bonds
- Covered Bonds
- Education Loans
- Equity Release Mortgages (ERM)
- Ground Rent
- Income Producing Real Estate (IPRE)
- Infrastructure Assets
- Object Finance
- Other Assets
- Other Commercial Real Estate Lending (CREL)
- Other Securitisations (e.g. RMBS / CMBS / ABS)
- Quasi Government Exposures / Supranationals
- Sale and Leaseback Loans on Commercial Properties
- Secured Financing
- Social Housing
- Sovereigns – Other than UK
- Sovereigns – UK
- Student Accommodation

Current MA – PRA focus and commitment

- MA is a significant benefit and a focus for PRA in reform proposals
- MA is unobserved and uncertain and there is a risk that some retained risk is mis-classified as MA
- Current MA design ignores market signals from changes in spreads – need to balance risk responsiveness (and hence balance sheet volatility) with appropriate capture of retained risk for effective risk management
- Current FS was calibrated to risks in relatively liquid corporate bonds but is now applied to a wide and increasing range of assets, many of which are internally rated and valued
- PRA is open to and will take account of industry feedback in arriving at proposals