Deep dive into equity release mortgages
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By the end of this session, you will:
• Understand the dynamics of the current equity release market and why insurers have been focused on them.
• Why equity release has and continues to be a challenging investment class for insurers
The equity release mortgage market
What are equity release mortgages

Equity release mortgages historically consisted of:

- **Reversion mortgages**: Fixed percentage of sale value of house is promised to lender on death or entry into long term care of the home owner in exchange for an upfront cash payment to home owner.

- **Lifetime mortgages**: Home owner borrowers against house, amount borrowed accumulates at a fixed rate and is repaid on death or entry into long term care with repayment capped at the sale value of the house.*

The market is currently dominated by lifetime mortgages ("LTMs") and the remainder of this presentation will focus on these.

*Many variations on this example of a simple product exist.*
Developments in the equity release mortgage market

Lifetime mortgage rates compared to swap rates

Source: Swap rates sourced from Bank of England, LTM rates post 2011 sourced from Equity Release Council Spring Reports and LTM rates pre 2008 derived as the average rates on a historic book of mortgages originated during this period.

- Market exceeded £3bn in 2017 representing an annual growth of c.40%.
- High levels of competition, new products launched and increased flexibility to borrowers.
- Innovation and market growth expected to increase with new funders and growing consumer need.
Equity release mortgages continue to represent an attractive investment opportunity.

c. £3bn written in the UK in 2017 by annuity providers

c. £1bn Residential Real Estate was funded in the UK in 2017 by annuity providers

c. £1bn funded in the UK in 2017 by annuity providers

c. £2bn funded in the UK in 2017 by annuity providers

c. £3bn funded in the UK in 2017 by annuity providers

0% 1% 2% 3% 4% 5% 0 5 10 15 20 25 30 35

Returns p.a.

Indicative Modified Duration

04 May 2018
Significant regulatory focus

Paul Fisher letter - October 2014
PRA expects firms will need to restructure ERM to achieve MA eligibility.

Paul Fisher letter - February 2015
Securitisation is likely to be an acceptable way to restructure ERM for MA.

DP1/16 - March 2016
PRA gather market views on Solvency II treatment of ERM.

SS3/17 – July 2017
PRA require alignment to ECAI ratings, introduce effective value test and NNEG principles.

CP21/17 - October 2017
PRA suggest high LTV ERM are not suitable for MA.

David Rule Speech – April 2018
ERM attract highest MA and risk profile of insurer’s ERM books is increasing.
Solvency II matching adjustment and equity release
Structuring equity release for the matching adjustment

- LTMs do not meet the matching adjustment asset eligibility criteria given cash flow timing is uncertain.
- Insurers extract fixed matching adjustment eligible cash flows by structuring LTMs using internal securitisations.

- The senior notes are constrained by the desire to achieve (internal) investment grade ratings and in some cases by the matching adjustment liabilities.
Internal rating requirements

• Insurers typically use internal ratings rather than public ratings to assign ratings to the senior notes of their LTM securitisations for the purpose of assigning fundamental spreads in the matching adjustment.

• PRA Supervisory Statement SS3/17* requires internal ratings on senior notes used in the matching adjustment to be broadly equivalent to public ratings.

• Public rating agencies assign ratings to LTM securitisations notes by assessing whether they default under prescribed stress scenarios.

• The rating process can indicatively be simplified to testing whether the securitisation senior notes pay out under the following two scenarios calibrated to different confidence levels depending on the rating targeted:
  
  • Late cash flows: low mortality, entry into long term care and voluntary early repayments.

  • Early cash flows: high mortality, entry into long term care and voluntary early repayments.

This rating process is illustrated on the following slide.

Sculpting senior note cash flows

Best estimate cash flows for a notional portfolio of LTMs.
Sculpting senior note cash flows

Senior note payments still need to be made where:
- Cash flows are deferred due to decreased mortality, entry into long term care and voluntary early repayments.
- Return is diminished due to increased likelihood of NNEG biting.
Sculpting senior note cash flows

Senior note payments also need to be made where:
• Cash flows are accelerated due to increased mortality, entry into long term care and voluntary early repayments.
Sculpting senior note cash flows

Aligns to minimum cash flows in early years.
Sculpting senior note cash flows

Aligns to minimum cash flows in early years.

Funded directly from LTM cash flows under late cash flow scenario or from accumulated reserve under other scenarios.
Sculpting senior note cash flows

Aligns to minimum cash flows in early years.

Funded directly from LTM cash flows under late cash flow scenario or from accumulated reserve under other scenarios.

Senior note cash flows constrained by limited reserve account cash early scenarios and revert to these.
Sculpting senior note cash flows

And then:
• Senior note cash flows can be accelerated using a liquidity facility.

Best estimate cash flows  Stress 1: Late cash flows  Stress 2: Early cash flows  Senior note cash flows
Sculpting senior note cash flows

And then:
- Senior note cash flows can be accelerated using a liquidity facility.
- Increased by optimising investment returns on reserve account.
Additional optimisation and future developments

Multiple senior notes can be created to reduce fundamental spreads and manage downgrade risk.

How can the securitisations cater for future drawdowns and new business?
Multiple senior notes can be created to reduce fundamental spreads and manage downgrade risk.

How can the securitisations cater for future drawdowns and new business?

Structures exist with:
- Senior notes accounting for anywhere between 75% and 99% of the total value of the notes issued.
- Anywhere between 1 and 4 senior notes.
- Highest rated senior note anywhere between BBB and AAA.

Source: EY Benchmarking
The no-negative-equity-guarantee
When does the NNEG bite?

NNEG illustration (70 year old, 35% LTV, 5% rate)

- Loan balance
- House price (0% HPI)
- House price (2% HPI)
- House price (4% HPI)
How does the NNEG interact with the matching adjustment?

NNEG impacts the matching adjustment through the internal rating process as outlined in the previous section, but also through the PRA “effective value” test set out in SS3/17:

Increasing the NNEG allowance lowers the effective value cap and potential reduces the matching adjustment benefit.
Methodology for deriving the NNEG allowance

Stochastic models (or closed form solutions of stochastic runs) are used to capture the downside property scenarios.

A key considerations is whether these stochastic models should based on a real world or risk neutral calibration…

Real world vs. risk neutral calibration?

For assessing whether a suitable allowance has been made in the matching adjustment (i.e. effective value test),

For deriving the fair value of lifetime mortgages.

Real world as we are interested in the expected cost of the NNEG not the cost of hedging the NNEG.

Arguments exist for either.
Conclusions
Conclusions

Funding lifetime mortgages is not easy with significant operational challenges and uncertain impacts on the Solvency II balance sheet.

Despite this, the market continues to grow, but how long will this go on for if rates continue to fall and regulation tightens?
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