BANK OF ENGLAND

Speech

Changing risks and the search for yield on Solvency II capital

Speech given by

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Regulatory change has dominated our insurance supervision agenda for the past few years. Today I want to talk mainly about risks. Our supervisory work is similarly shifting gear. As Solvency II becomes business as usual, we will spend more of our time understanding the risks that insurers are taking and, where necessary, responding to them.

I do though want to make a couple of initial points about Solvency II. First, we are making good progress, working with the ABI, in identifying improvements to our implementation of it. This follows up the commitment made by Sam Woods to the Treasury Select Committee in February. Amongst the areas we are working on are our processes around model changes and the matching adjustment; and regulatory reporting. We are working within the bounds of the EU legislation and I do not anticipate any headline-grabbing initiatives. But I am confident that we will identify a number of practical changes that will make a difference to insurers and supervisors on the ground.

Second, we will continue to update our approach in the light of new information. For example, it does appear that the rate of improvement in life expectancy of older people has slowed in the United Kingdom[1]. Annuity writers should be cautious in changing their longevity assumptions. For example, the annual data can be volatile because of factors such as the failure of flu vaccines. Moreover, the slowdown in the rate of improvement in life expectancy appears less marked amongst wealthier people, who are represented disproportionately in annuity portfolios. Nonetheless, we have concluded that we should make some changes to our quantitative indicators in the light of recent longevity experience. These indicators are used by supervisors as one input into our review of whether insurers' models meet Solvency II tests and standards.

Third, we will soon complete the first full cycle of Solvency II reporting. Later this year, I plan to hold roundtables with insurers, investors and analysts to discuss Solvency and Financial Condition Reports (SFCRs). We are also reviewing whether an ongoing requirement for audit of every year's SFCR is proportionate for the smallest insurers. It would be unhelpful for the PRA to be too prescriptive about the depth of content of SFCRs. But it strikes me that some areas could be made more consistent. For example, changes in Solvency Capital Requirement coverage could be broken down to show what is attributable to changes in capital, to changes in modelling and to changes in risk assumptions. Insurers need to explain fully to policyholders, investors and others what lies behind their Solvency II ratios. This is particularly true in more complex areas like internal models and the matching adjustment. Otherwise we run the risk of a loss of confidence in those numbers in a crisis.

Now I will turn my attention to risks in the life and general insurance sectors. I will also describe the supervisory work we are doing in response. In different ways, both life and general insurers are adapting to

[1] Source: ONS statistical bulletin: National life tables, UK: 2013-2015
https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/bulletins/nationallifetablesunitedkingdom/20132015

a world with lower returns on capital. They are also learning how to optimise their activities for the new constraints of Solvency II. Put the two together and we can think of a search for yield on Solvency II capital.

General insurance risks and supervisory priorities

In the general insurance sector, underwriting returns remain soft. On 22 June, I wrote to Chief Executives with the results of our latest 'Monitoring the Market' survey of general insurers. One unsurprising finding was that premium rates had declined in most lines of business. A perhaps more surprising finding was that, on average, London Market insurers thought rate adequacy had improved slightly. They appear to be incorporating a more benign view of future losses into their technical pricing. Many insurers raised concerns about distribution channels, particularly in the wholesale markets. More generally, our supervisory concerns in the current market include:

- Insurers may be tempted to release too much from prior year reserves to bolster current profits. Across the market, reserve releases continue to run at high levels by historical standards.
- Insurers may be underestimating risks, particularly on new business. For example, they may be too sanguine about catastrophe risks, such as significant weather events.
- Terms and conditions are loosening.
- Insurers may be tempted to expand into new lines of business with apparently more attractive returns. But these may fall outside their knowledge and expertise.

Over the course of 2017, we will carry out a number of supervisory initiatives to deepen our understanding of how individual insurers are being affected by these conditions. Our overall expectation remains that firms (and their Boards) are the first line of defence and accountable for the risks written on their balance sheets, regardless of distribution channel used. Where insurers participate in delegated underwriting arrangements, we will expect them to retain the ability to understand the impact of business written through these channels on their overall risk profile.

Our specific work this year includes:

- Reviews of underwriting and exposure management for selected lines of business at a number of large London Market insurers. In the course of these, we will seek to understand how changes in terms and conditions are carried through to planning, reserving and capital assessment. Where these insurers delegate aspects of underwriting through broker facilities, managing general agents or other arrangements, we will also assess whether they have sufficient information and control to manage their risks effectively.
- A thematic review across a number of smaller Lloyd's managing agents, to assess how distribution channels are changing.

- Reviews of underwriting and risks around pricing at a number of motor insurers. For example, we will assess how insurers protect themselves against the risk that under-pricing leads them to take on a large number of policies quickly, particularly through price comparison websites.

Life insurance risks and supervisory priorities

In the life sector, the search for yield on Solvency II capital is taking insurers in different strategic directions. Some are taking a 'capital-light' approach, focused on unit-linked liabilities and asset management. Others are growing their annuity books, particularly by taking on the liabilities of defined-benefit company pension schemes.

One of the most direct and notable consequences of Solvency II has been growth in reinsurance of longevity risk. On average, between 2015 and 2016, longevity risk transfer increased by nearly 25% across UK annuity writers. Long-dated insurance risks, such as longevity exposures, attract a high risk margin. We have been clear that we think the Solvency II risk margin is too sensitive to the level of market interest rates[2]. It is therefore too high at current low levels of interest rates, encouraging insurers to transfer longevity risk through reinsurance. The risk margin is our first priority as part of the Solvency II review. We are working in EIOPA to achieve a sensible outcome.

To be clear, though, we are not opposed to use of longevity reinsurance, including to non-UK counterparties, provided risks are properly managed. We set out our expectations in a Director's letter more than a year ago. It asked insurers to pre-notify the PRA of new longevity risk transfer and hedging arrangements, including the insurer's proposed approach to risk management. We consulted on the content of the letter and published Supervisory Statement 18/16 on 'Solvency II: longevity risk transfers'[3]. This allowed us to track activity and has been a source of useful information to supervisors. Our supervisory approach has not changed since. Through a programme of in-depth supervisory reviews, we are gaining assurance on insurers' risk management. We will then review our expectation to be notified ahead of transactions.

With insurers transferring more longevity risk and the associated returns, the profitability of writing annuities depends increasingly on the mix of assets chosen to back them. Yields on government bonds are low and spreads on corporate bonds narrow. Insurers are therefore searching for yield in less liquid, direct investments. These include equity release mortgages, commercial property and infrastructure financing. Based on supervisory information, around 25% of annuities are backed by such direct investments currently. But insurers have plans for that proportion to increase to 40% by 2020. These assets can be a good match for long-term annuity liabilities. Moreover, increasing investment in real assets may have wider economic benefits. However, they often lack observable market prices and external credit ratings. It is therefore more

[2] Source: Record of the November 2016 Financial Policy Committee Meetings published 6 December 2016 http://www.bankofengland.co.uk/publications/Documents/records/fpc/pdf/2016/record1612.pdf
[3] http://www.bankofengland.co.uk/pra/Pages/publications/ss/2016/ss1816.aspx

difficult for insurers to assess credit and other risks. Investing in and managing these assets also requires different skills. For example, when bonds are downgraded, an insurer may expect to be able to sell them. But when a direct investment begins to go wrong, the insurer will probably only be able to sell at a fire-sale price. It needs the capability to renegotiate and restructure the debt.

One particular area of growth has been equity release mortgage lending. Life insurers take on almost all of the flow of new equity release mortgages in the UK. This now stands at around £13 billion or 1.4% of non-linked assets.

We published a discussion paper on Equity Release Mortgages last year. A typical such mortgage is a loan to an older borrower that does not require regular interest payments. Instead interest accrues over time and is repaid, together with the principal, from the proceeds of the sale of the house when the loan becomes due. That is usually when the borrower either dies or goes into long-term care. Borrowers have a 'no negative equity guarantee'. It protects them from being required to pay back any more than the value of their property. In economic terms, the insurer has sold the borrower a put option on the house.

Equity release mortgages can be a valuable product for borrowers, allowing them to unlock the equity in their homes. They can also be an appropriate asset to back annuities as part of a diversified portfolio. But they are a more direct exposure to house prices than conventional mortgages for which the lender's primary source of repayment is the borrower's income. Insurers are protected by low loan-to-value ratios. However these will tend to increase over time as interest is rolled up, particularly if the interest rates exceed house price appreciation. And the Solvency II Matching Adjustment increases the effective loan-to-value ratio by allowing insurers to bring forward a portion of the expected income on the loan into current capital.

The Matching Adjustment allows an insurer to reduce the value of long-term liabilities, such as annuities, by discounting them using a spread in excess of risk-free rates. The idea is that if long-term liabilities are fully matched by long-term assets, the Matching Adjustment captures the excess market returns in relation to risks to which such a buy-and-hold investor is not exposed. It is calculated as the remainder after subtracting two components of the market yield on an asset: first, the equivalent risk-free rate; and second, the so-called Fundamental Spread, which is mapped from the credit rating of the borrower and used as a proxy for risk. One desirable effect of the Matching Adjustment is to insulate an insurer's capital position from volatility in market prices. In its November *Financial Stability Report*[4], the Financial Policy Committee concluded that the Matching Adjustment reduces potential instability across the financial system. Another effect is to bring forward part of the future yield on an insurer's assets into current capital. A bigger Matching Adjustment therefore improves an insurer's return on Solvency II capital.

[4] http://www.bankofengland.co.uk/publications/Pages/fsr/2016/nov.aspx

Under Solvency II, Matching Adjustment assets need to be "bonds or other assets with similar cash flow characteristics"[5]. They also need to have cash flows that are "fixed and cannot be changed by the issuers of the assets or any third party". UK insurers can restructure assets through internal securitisations in order to produce senior tranches that meet the Solvency II tests for the Matching Adjustment. A material amount of illiquid direct investments by annuity writers have been transformed in this way. The Matching Adjustment benefit is capped at the level of BBB-rated assets. Insurers are therefore targeting a Matching Adjustment 'sweet-spot' in order to maximise the return on Solvency II capital. Market contacts have described to us an excess of funding for infrastructure projects near that sweet spot.

Given the potential impact on an insurer's capital position, we are taking a close supervisory interest in this area. First, we will consider whether insurers are taking an appropriate Matching Adjustment in calculating their base balance sheets. Put another way, the Fundamental Spread must fully reflect the risks the insurer has retained. Restructured direct investments typically have neither market prices nor external ratings. An appropriate Matching Adjustment therefore depends on an insurer's own valuations and internal ratings. We will verify that internal ratings capture the full range of risks. They should not have a persistent bias compared to those from regulated External Credit Assessment Institutions (ECAIs). Yesterday we published Supervisory Statement 3/17[6]. It sets out how we will seek to obtain assurance on the exposures which present the greatest risk to our objectives. It also explains how we may use independent reviews to obtain an opinion on insurers' internal ratings of those assets.

Second, we will review whether insurers have the appropriate governance and risk management to make and hold illiquid, direct investments. This includes expertise across all three lines of defence. For example, where internal ratings reflect in part what actions the insurer would take to recover value if the asset became distressed, that insurer should have appropriate credit work-out capabilities.

Third, we will consider whether insurers' capital requirements properly reflect the risks to which they are exposed when holding illiquid direct investments in a Matching Adjustment portfolio. In particular, Solvency II internal models should capture effectively all the risks in a 1-in-200 stress. We are currently doing thematic work on 'the Matching Adjustment in stress' that will influence our future thinking in this area.

Risk concentrations

A broader concern is that the search for yield on Solvency II capital could lead insurers to take excessively concentrated risks. In general insurance, we are currently running a stress test designed to identify concentrations of exposure to a number of possible natural and man-made catastrophes. Perhaps more worrying is the potential for hidden concentrations. More than 25 years after asbestos-related claims contributed to the near collapse of the Lloyd's of London market, insurers continue to face related losses.

[5] http://www.bankofengland.co.uk/pra/Documents/solvency2/matchingadjustmentletteroct2014.pdf
[6] http://www.bankofengland.co.uk/pra/Pages/publications/ss/2017/ss317.aspx

A peril with potential for hidden exposures is cyber[7]. Sizing cyber exposures across the industry is therefore difficult. But it is clear that the risk is growing. To give one estimate, the Lloyd's Business Blackout scenario – analysing the implications of a cyber attack on the US power grid – puts global insurance losses to $US40bn.

Yesterday we published a supervisory statement setting out our expectations for the prudent management of cyber underwriting risks[8]. It distinguishes affirmative from non-affirmative or 'silent' exposures, where the insurer has not explicitly included (or excluded) cover. We expect insurers to take steps to bring non-affirmative exposures within risk appetites agreed by their boards. Possible ways of achieving this include: introducing robust wording exclusions, offering explicit cover with additional premium and attaching specific limits to cover. Finally, we have also been considering how we might respond to a large loss affecting many insurers that could change market conditions. We have worked closely with the industry and Lloyd's over the past few months following our consultation last year.

Turning to life insurance, a potential concern is that the shift towards direct investments might in future lead to a concentration of exposure to UK property. Excluding unit-linked business, UK insurers' property-related exposures grew significantly over the course of 2016[9] to stand at 11% of non-linked assets. The most rapid growth has been in mortgages and loans secured on property, particularly equity release mortgages. Our analysis of insurers' equity release exposures suggests that a stress roughly aligned to the FPC's banking system stress test (a 30% fall in house prices and 0-0.5% growth per annum thereafter) could lead to industry-wide losses of £2-3 billion (see table and chart below).

The Prudent Person Principle in Solvency II is an important safeguard against concentration risk[10]. It requires insurers to invest only in assets whose risks they can "properly identify, measure, monitor, manage, control and report". Moreover, assets must be "properly diversified" so as "to avoid excessive reliance on any particular asset, issuer or group of undertakings or geographical area and excessive accumulation of risk in the portfolio as a whole". Assets not admitted to trading on a regulated financial market are required to be kept to "prudent" levels. The illiquid direct investments I described earlier would typically fall into this category. Later this year, we plan to set out in a supervisory statement our expectations of how UK insurers should invest their assets in accordance with the Prudent Person Principle.

[7] These include losses as a result of both malicious acts (eg cyber attack, infection of an IT system with malicious code) and non-malicious acts (eg loss of data, accidental acts or omissions); and involving both tangible and intangible assets.
[8] http://www.bankofengland.co.uk/pra/Pages/publications/ss/2017/ss417.aspx
[9] From around £84 billion to nearly £99 billion. Data are taken from Solvency II returns. They include direct property holdings, loans and mortgages secured on commercial and residential property and real estate investment funds. Some of the change may be due to reclassification of reporting by insurers.
[10] Source: Article 132 of the Solvency II Directive https://eiopa.europa.eu/regulation-supervision/insurance/solvency-ii

Conclusion

In conclusion, the search for yield on Solvency II capital is changing insurer behaviour. In response we are spending more time understanding how risks are changing, including through more in-depth supervisory reviews. Our approach to supervision remains forward looking and judgment based. We will use all the supervisory tools available to us to ensure that UK insurers are adequately capitalised and managing their risks prudently.

Table 1: Indicative stress testing of life insurers' aggregate ERM books to house price falls

Losses begin to accrue for sharp house price falls beyond 25%[i]

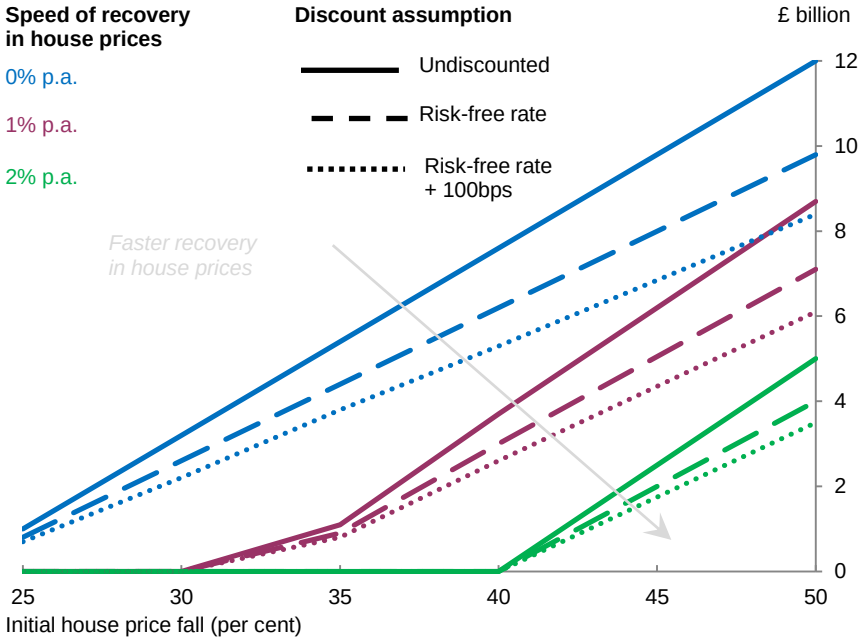
Discounted impact (£ billions)

Scenarios: (a) @RFR + 100bps; (b) Discounted @RFR only; (c) Undiscounted future impact

Recovery rate - Residential property prices pa	25%			30% (ii)			35%			40%			50%		
	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
0.0%	0.7	0.8	1.0	2.2	2.6	3.2	3.8	4.4	5.4	5.3	6.2	7.6	8.4	9.8	12.0
0.5%	-	-	-	0.1	0.1	1.0	2.3	2.7	3.3	4.0	4.6	5.7	7.3	8.5	10.4
1.0%	-	-	-	-	-	-	0.8	0.9	1.1	2.6	3.0	3.7	6.1	7.1	8.7
1.5%	-	-	-	-	-	-	-	-	-	1.0	1.2	1.5	4.9	5.6	6.9
2.0%	-	-	-	-	-	-	-	-	-	-	-	-	3.5	4.0	5.0
2.5%	-	-	-	-	-	-	-	-	-	-	-	-	2.0	2.4	2.9
3.0%	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.6	0.7
3.5%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.5%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sources: Solvency II submissions and Bank calculations.

(i) Input assumptions: LTV 30%; 15 years to maturity; ERM rate of 6.5%; and UK's ERM volume of £13.3bn.
(ii) The 2017 bank stress test reflects a 33% peak-to-trough house price shock.


Speed of recovery in house prices
0% p.a.
1% p.a.
2% p.a.
Discount assumption
Undiscounted
Risk-free rate
Risk-free rate + 100bps
Faster recovery in house prices
£ billion
12
10
8
6
4
2
0
25
30
35
40
45
50
Initial house price fall (per cent)