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Newsflash

Climate Biennial Exploratory Scenario

The results are out – what's next for insurers?

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On Tuesday 24 May 2022, the Bank of England (BofE) published the results of the Climate Biennial Exploratory Scenario (CBES) which explored the financial risks posed by climate change for the largest UK banks and insurers.

Introduction and key messages

The CBES included three scenarios exploring the transition and physical risks relating to climate change: Early Action (on climate change), Late (and disruptive) Action, No Additional Action. Please see our previous newsflash for more details of the key elements of the scenarios specified by the BofE.

Three key messages from the CBES are:

- The results showed an average annual drag on profits of c.10-15% across participants and scenarios
- There is more to do on climate risk management, with a range of risk assessment and modelling approaches taken by the participating firms. There are opportunities for improvements and lessons to be learnt from good practices across the industry.
- Without a carefully managed transition, potential macroeconomic impacts could be triggered by firms' climate risk management strategies.

The results

The aggregate results show that, for life and general insurers, the No Additional Action scenario would be likely to have a more significant impact than either of the transition scenarios. For life insurers, this was primarily due to investment losses with an overall impact of just over 15% of total market value. This compares to 8% and 11% in the Early and Late Action scenario respectively.

Losses of these magnitudes could make individual firms, and the financial system overall, more vulnerable to other future shocks.

As expected, the projected investment loss path varies by the scenario modelled, as shown in the chart below. For Early Action, the path shows a steady but tailing off reduction in value as the economy transitions to net-zero. In comparison, the Late Action scenario, where there is a sharp transition to net-zero, shows a shock reduction in asset values around the 10-year mark. The No Additional Action shows a steady reduction in asset values as the impacts of climate change are felt globally.

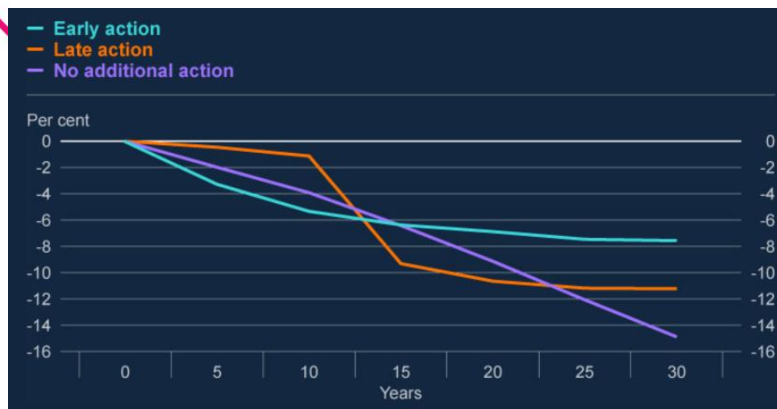

Figure 1: Change in market value of insurers' invested assets. Source: Chart 4.7, Results of the 2021 CBES

General insurers projected a rise in average annualised losses of around 50% on UK exposures and 70% on US exposures, by the end of the No Additional Action scenario. However, it should be noted that the scenarios used a fixed balance sheet assumption, meaning that they did not consider the extent to which it would be possible to accommodate repricing over the 30-year time horizon.

It is also worth noting that the CBES scenarios do not capture tail risks; incorporating tail risk scenarios would highlight further risk areas which did not come to light in the CBES scenarios. Tail risk scenarios include extreme weather events; these could lead to systemic shocks if they, for example, materially affect key sectors (e.g. flooding at a Stock Exchange of global importance, or a hit to manufacturing of a product of systemic significance, such as semiconductors; extreme weather events or other climate shocks could also hit the agricultural system); such shocks could lead to trade wars which have been shown to lead to impacts on asset prices. Balance sheet impacts, once scenario analysis becomes more sophisticated, could show there is worse to come.

Climate risk management – more work to do

There is evidence that the CBES exercise has encouraged non-participating firms to develop their risk management capabilities further, indeed, we have seen an uptick in firms opting to perform a "shadow CBES" exercise. Nonetheless, the BofE consider firms need to do much more fully to understand and manage their exposure to climate risks, including investing in:

- **Data capabilities** to allow for greater scrutiny of data and projections supplied by third-party providers, plugging data gaps and increase understanding of their counterparties' and clients' transition plans; and
- **Climate risk modelling capabilities**, for example which explicitly incorporate possible future carbon prices into pricing, lending, and investment decisions.

As climate scenario modelling becomes a regular consideration for financial services firms, they will need to find ways to conduct scenarios cost-effectively. Considered scenarios need not necessarily be the same as the CBES scenarios, which were designed for large firms and to meet the needs of both banks and insurers.

There are opportunities for improvements in climate risk management.

The ability to assess and model physical risks in the CBES varied across firms, largely reflecting their varying capability to modify existing models. The BofE noted firms should scrutinise any third-party models used to ensure that they deeply understand the assumptions used and the elements which are not captured. Where limitations in third party models are found, it is suggested that the modelling could be adjusted, with these adjustments informed by reviews of academic research for example.

Good practice for modelling assets includes:

- Using bespoke modelling approaches for sectors with specific climate vulnerabilities such as power, oil and gas, and transport; and
- For large holdings, it includes explicitly linking bond and equity valuations on the same counterparty.

Firms are encouraged to demonstrate validation and review of results by comparing them to alternative models and engaging with internal and external specialists.

Potential macroeconomic challenges to firms' responses to climate risks

A common mitigation approach to the scenarios included in the CBES exercise was for participants to reduce their exposure (limit supply of finance or insurance) to carbon-intensive sectors such as fossil fuel producers. Without a carefully managed transition, the reduction in investment in these sectors could outpace investment in sustainable energy alternatives and improvements to energy efficiency, ultimately leading to knock-on impacts on businesses and consumers as these sectors struggle to access finance.

General insurers planned to increase the price of insurance to reflect the increases in physical risk in the No Additional Action scenario. Under this scenario around 7% of UK households could be forced to go without insurance – either because their properties become uninsurable, or they cannot afford insurance at the prices offered. This risk could be in part mitigated by investment in flood defences, increasing flood resilience measures for properties, encouraging flood-resilient repairs, and the extension of a publicly supported UK flood reinsurance pool.

Actions and next steps

The findings from CBES will inform:

- Where more intensive action is needed by firms (both individually and collectively) to address the issues identified in SS3/19;
- The Financial Policy Committee's thinking around financial stability policy issues related to climate risk and the PRA's supervisory policy in this area;
- How the management of these risks, or the failure to do so, might affect the provision of financial services to the real economy; and
- Future work on regulatory capital requirements (noting the exercise will not be used to set capital requirements related to climate risk).

At Hymans Robertson, we have been working with insurers on their scenario modelling, development of data provision, compliance with TCFD and other climate-related regulatory requirements, and setting net-zero transition strategies. If you are interested in any of these topics, or you would like to discuss climate change or any of the above further, please get in touch.

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