Determination of discount rates for Insurance Capital Standard

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IAIS Stakeholder Meeting
Los Angeles, February 5, 2015

We operate as John Hancock in the United States, and Manulife in other parts of the world.
Executive Summary

- Choice of discount rate is among the most important decisions impacting the level and behaviour of the insurance capital metric
- Beyond deep and liquid markets, observable rates are not reliable or do not exist at all – need to be constructed
- Small changes in the long-term discount rate cause large movements in reserves for companies offering significant long term products
  - These reserve movements are only partly offset by asset movements as availability of matching long-term fixed income assets is often limited
- Volatility of reserves would result in volatile and misleading capital ratios
- “3-bucket approach” proposed for the construction of the discount curve based on principles to be consistently applied across jurisdictions:
  1. Bucket #1: Use market rates in “Deep and Liquid” markets
  2. Bucket #2: Grade
  3. Bucket #3: Determine stable long-term rate
- Specific discount rate choices will have public policy implications
The investment challenge: Liabilities are often longer than available fixed income assets

Note: While the U.S. data are used, analysis is relevant for other markets offering long-term products.
Maturity distribution of US Government debt: Supply of long-term fixed income is limited

Source: Monthly Bulletin issued by US Department of the Treasury; December 2014
Fixed income supply limitations compel insurers to back long duration liabilities with non-fixed income assets

Earnings impact of an XX bps change in discount rates

\[ \text{Earnings impact} = \$ \text{Reserves} \times \text{Duration} \times \text{XX bps change} \]

For example, $50bn \times 20 \text{ years} \times 10\text{ bps} = $1 \text{ billion}

- Changing asset prices could offset the reserve movement BUT in longer durations there are not enough fixed income matching assets, and prices of non-fixed income assets do not move in tandem with interest rates.

- If the long-term rate is extrapolated from current markets, ongoing market gyrations will destabilize capital and prompt hasty action although a path of returns over the next several decades is unpredictable.

Small discount rate movements could create excessive earnings and capital volatility.
Example: Assume a $1bn payment due in 40 years discounted at the actual year-end 30yr US Treasury Yield

| % change in Present Value over prior period | - | 74% | -2% | -33% | 48% | 9% | 22% |

Discount rate choices can introduce spurious volatility misleading regulators and other stakeholders as to the long-term financial solvency of an insurer and prompting management to take unwarranted action.
Proposal: 3-bucket approach to the construction of discount rate curve

Specific choices should consider government and corporate paper.

Specific choices could combine pure “grading” and still observable market data.

Specific choices should take into account long term returns on fixed and non-fixed income instruments.

Discount rate curve for liability payments:

- **Bucket #1 - Deep and liquid markets**
- **Bucket #2 - Grading**
- **Bucket #3 - Long term**
Discount rate choices have important public policy implications

- Approach consistent with insurance business model would use the rate consistent with asset strategies of a company
- If a more prescriptive approach preferred
  - **Bucket 1 “Deep and liquid markets”**: the rate should reflect a reasonable portfolio of assets equivalent to an acceptable credit quality
    - In North America, companies use a mix of government and corporate fixed income
    - **Discount rate choices will influence investments: government debt vs. corporates**
  - **Bucket 2 “Grading”**: relatively short as market signals are no longer reliable
    - Can consider combining pure grading with some still observable market data
  - **Bucket 3: “Long-term”**: the rate needs to be constructed
    - Critical choice for volatility of reported capital
    - **Even small movements would impact viability of long-term products and hence long-term investments, including in non-fixed assets such as infrastructure**
    - Should be a stable view through a long cycle with modest adjustments over time

- This approach may be acceptable also to IASB for IFRS 4 Phase II
Summary of Key Themes

- Discount rate determination will influence investment choices of companies and will impact the viability of long term insurance products.
- Excessive reliance on “markets” where their signals are not reliable could destabilize reported capital and encourage inappropriate action.
Thank you