



From Longevity Reinsurance to Integral Longevity Risk Management

The article by Marc Meertens and Bilal Koulouh in this issue shows how longevity reinsurance has moved beyond pure risk mitigation into balance sheet management, capital optimisation and business steering. That points to a broader change. Once longevity risk can be priced, transferred and reflected in capital decisions, it can no longer be treated as a technical assumption that sits mainly with the actuarial function.

For a long time, many insurers accepted longevity risk as a natural consequence of writing pension and annuity business. Market risks are usually managed through clear limits, hedging policies and risk appetites. Longevity risk has received less explicit strategic attention, even though it is central to the economics of life insurance. Insurers need a clear view on the longevity exposure they want to take on, retain or transfer. That calls for an integrated view across pricing, reserving, reinsurance, strategy and governance: Integral Longevity Risk Management.

Dr. F. van Berkum is a senior manager in PwC's Risk Modelling Services team, a postdoctoral researcher at the Research Centre for Longevity Risk (RCLR) at the University of Amsterdam (UvA), and a member of the Committee Mortality Research (CSO) of the Royal Dutch Actuarial Association. This article is written in a personal capacity; the views expressed do not necessarily reflect those of PwC, RCLR/UvA, or the CSO.



WHAT IS INTEGRAL LONGEVITY RISK MANAGEMENT?

Integral Longevity Risk Management means that longevity risk is managed as one coherent risk across the organisation. The view on future mortality improvements used in pricing should be recognized in reserving, reinsurance decisions and strategic planning. Where assumptions differ, the reason should be clear.

The framework also needs to capture feedback loops. Pricing determines which longevity exposure enters the balance sheet. Reserving shows how that exposure develops over time. Reinsurance changes the retained risk profile and affects diversification, capital requirements and may affect the risk premium needed in pricing. Strategy determines whether longevity risk is mainly reduced, retained or actively built up. Proper governance connects these perspectives and turns them into deliberate decisions.

DIVERSIFICATION BENEFITS MAY IMPROVE OR WEAKEN

PRICING: WHERE THE RISK ENTERS

Pricing is the first moment at which an insurer accepts longevity risk. In pension annuity products and buy-outs, the mortality basis directly affects competitiveness and profitability. A pricing basis has to do more than estimate expected future mortality. It should also reflect the type and amount of longevity exposure the insurer is prepared to carry.

This becomes relevant when pricing is considered together with reinsurance and capital management. After a longevity reinsurance transaction, the retained risk profile may look different. Diversification benefits may improve or weaken. The economic cost of writing new longevity risk can therefore change as well. Pricing is the entry point for new risk, and it should be consistent with the balance sheet the insurer is trying to build.

RESERVING: MEASUREMENT AND FEEDBACK

Reserving provides the ongoing financial measurement of longevity risk. Changes in mortality improvement assumptions can materially affect best estimate liabilities and own funds. An integrated framework requires regular reconciliation between pricing assumptions, reserving assumptions and observed experience. When these perspectives move apart, the issue is wider than reserve adequacy. It may also signal that new business is creating a different risk profile from the one intended.

Reserving should therefore function as a feedback mechanism. If reserving assumptions move materially away from pricing assumptions, this should call for a review of new business pricing, reinsurance strategy or product appetite. Where pricing deliberately differs from reserving, the rationale should be explicit. The difference may reflect prudence, commercial strategy, expected risk transfer or a conscious decision to accept more risk.



REINSURANCE: ONE INSTRUMENT IN THE FRAMEWORK

Longevity reinsurance can reduce capital volatility, support solvency management and create capacity for future business. As the article by Meertens and Koulouh in this issue describes, longevity reinsurance has become an important instrument for insurers with large pension and annuity portfolios. In an integral framework, however, reinsurance should be assessed in relation to the wider longevity strategy, capital position and new business ambitions.

The central question is whether risk transfer supports the broader strategy. A transaction may be economically attractive and still be less suitable if it limits future product design, adds operational complexity or transfers risk that the insurer is well placed to retain. Reinsurance can also change diversification benefits and the economic cost of retaining new risk. Those effects should feed back into pricing, capital planning and product strategy.

STRATEGY: WHICH LONGEVITY EXPOSURE FITS THE BUSINESS?

The strategic dimension is often the least developed. For some institutions, longevity risk is mainly a legacy exposure to be reduced. For others, it may support growth in pension risk transfer, retirement income solutions or annuity products. Integral Longevity Risk Management requires this position to be made explicit, while considering the impact on the broader business. Is longevity risk an unwanted balance sheet exposure, a manageable consequence of commercial activity, or a risk class in which the institution has a comparative advantage?

That strategic view should be the starting point, subsequently advancing product design and commercial targeting. Mortality risk products such as term insurance may provide a natural hedge against longevity exposure. Demand may be limited and the hedge will rarely be perfect, but an insurer with a large annuity book may still have reason to price such products competitively if they improve the overall balance sheet. In some cases, strengthening a natural hedge may be cheaper or more efficient than external reinsurance.

IN SOME CASES, STRENGTHENING A NATURAL HEDGE MAY BE CHEAPER

Product design can also reduce longevity risk by construction. Retirement products may include sharing mechanisms, adjustment features or guarantees that allocate longevity risk differently between policyholders, insurers and, where relevant, pension funds or reinsurers. Longevity strategy is thus also about the future risk profile created through deliberately designed new products.

GOVERNANCE: MAKING TRADE-OFFS VISIBLE

Governance is what makes the framework integral. Longevity risk decisions rarely sit with one function. Pricing looks at competitiveness, reserving at adequacy, risk at downside protection, capital management at solvency efficiency and the business at growth. Each perspective is relevant, but none gives the full picture on its own.

A clear longevity risk appetite is central. It should define tolerance for adverse experience and capital volatility, and give guidance on retention, transfer and new exposure. Which risks fit the strategy? Which risks should be hedged? Which risks should be avoided through product design? When is additional longevity exposure acceptable because it supports broader objectives?

This becomes particularly important when pricing, reserving and reinsurance assumptions differ. In pension buy-outs, pricing may reflect the specific transaction, while reserving assumptions are often set for the broader collective pensions book. Reinsurer pricing may provide useful evidence on mortality improvements without automatically becoming the reserving basis.

These issues should be addressed before transactions come under time pressure. Governance should define when assumption differences are acceptable, how they are explained, and whether they affect margins, capital allocation, risk appetite or reinsurance strategy. External views, including reinsurer pricing, should have a clear role as challenge, evidence or input.

FROM INSTRUMENT TO MANAGEMENT DISCIPLINE

Longevity reinsurance deserves the attention it receives. The broader development is that longevity risk itself is becoming a strategic management topic. The next step is to embed longevity risk in a coherent framework across pricing, reserving, reinsurance, strategy and governance.

A risk that sits at the heart of the insurance business should not be managed implicitly. It should be governed deliberately by actuaries through quantifying longevity risk and helping institutions understand, challenge and steer it. ■