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A framework for communicating value and risk of retirement income products

Meeting the Needs of an Evolving Market Demographic

As the baby boomer generation approaches retirement, they face the challenge of making the transition from asset accumulation to decumulation or distribution. At the same time, regulatory and economic drivers mean that financial market risks, which were previously absorbed by the product provider or employer, are now being transferred to the individual. As a consequence, retail product manufacturers are enhancing their retirement propositions to reflect the needs of the retail customer to manage these risks more effectively. The result has been the development of more complex retirement solutions offering a range of benefits: long-term retirement income guarantees, flexible income levels, continued access to capital and the opportunity to increase income or death benefits in line with underlying market conditions.

The UK Experience to Date

In an attempt to offer a 'one stop shop' solution, a number of insurers in the UK are now offering a wider range of personal pension retirement products, including annuities with investment-linked income streams and unsecured drawdown products with long-term income guarantees.

Often referred to in the UK as 'Third Way' retirement products, the name suggests these products should appeal to the middle market: to more cautious customers who may have bought an annuity, but would prefer to retain access to capital and/or investment exposure, or to drawdown customers who are uncomfortable with potential downside risk.

However, whilst these products have been sold very successfully in other markets, most notably the US and Japan, the UK experience to date has been less impressive. This has been further highlighted by the withdrawal of the Hartford from the UK market. Whilst there are a number of challenges facing manufacturers and distributors of these products, recurring feedback highlights difficulties in communicating the financial value of the benefits offered to customers. In particular, customers and financial advisers appear reluctant to pay the explicit additional charges applied in relation to the guarantees within these products.

Feedback from manufacturers and distributors demonstrates that this focus on cost rather than value may be due to customers under-estimating the scale and potential impact of the risks associated with retirement income products that do not offer long-term income guarantees.

Barriers to Communication of Risks in Retirement Products

As an example of the challenges faced by retirement customers, consider the large number of pension drawdown policies which were sold during 1998/99, on the back of a long period of stable equity growth. To ensure pensioners did not undermine the long-term sustainability of their retirement income, the amount of income that could be drawn from these policies was to be reviewed every three years, according to well-defined rules laid out by the Government Actuaries Department (GAD). For customers who bought policies during 1998/99, the first triennial review took place during 2001/02. Although the intervening period coincided with falling equity markets (FTSE fell by 30-40%), the GAD reviews resulted in income level reductions far greater than could be explained by falling equity markets alone.

This dramatic reduction in retirement income was caused by the combined impact of falling markets, lower bond yields, and increasing life expectancy. The impact on subsequent retirement income levels came as a shocking surprise to many customers and financial advisers. Customers had bought a product that put their long-term retirement wealth at much greater risk than they had understood and were willing to accept. This was despite the fact that the sales of these drawdown policies had been accompanied by a range of communication materials: explanations of potential risks, measures of asset volatility, deterministic product illustrations and critical yield analysis.

These traditional communication tools, which may have been effective in conjunction with simpler accumulation products, had failed when applied to more complicated retirement products. The reasons are pretty clear:

- These tools had failed to capture and quantify all the risk factors inherent in retirement income products – equity market, interest rate and mortality risks.
- The outputs from these tools were not presented in terms retirement customers could understand. Risks were described in generic and often relative terms, such as "Cautious", "Moderate Volatility", etc. In order to be meaningful, customers required risk information presented in terms that related directly to their own retirement needs – income levels and residual fund values (death benefits).

It is clear that in order to effectively communicate the risks in long-term retirement income products, and to demonstrate the value in guarantees that mitigate these risks, product providers need to develop more effective means of measuring and presenting risks consistently across a range of retirement income products and strategies.

An Analytic Framework for Measuring and Communicating Risks and Benefits in Retirement Products

Customers want to understand whether a particular product or combination of products will meet their own retirement objectives, be that sustaining a required level of income or allowing them to leave residual capital to their dependants. As we have seen, for customers nearing retirement, the failure to make an effectively informed decision can be very painful and irrevocable.

Given the inherent complexities of the evolving retirement market, there is an increasing consensus that more sophisticated stochastic modelling techniques are required to capture the various risk factors, and support effective communication of the risks and benefits of different retirement products and strategies.

Recognising this challenge, Barrie & Hibbert have developed an analytic framework for measuring and communicating risk in retirement products.

The framework can be summarised as follows:

| | |
|----|--|
| 1. | <p>Our core stochastic projection model, the Economic Scenario Generator (ESG), is used to generate a large number of forward-looking economic scenarios covering all the risk-factors affecting retirement customers.</p> <p>A standard set of ESG calibration assumptions have been developed independently by Barrie & Hibbert's Financial Economic Research team, specifically for the purposes of retail product analysis. The calibration assigns appropriate probabilities or likelihoods to each economic scenario and is updated on a quarterly basis in order to reflect changes in market conditions.</p> |
| 2. | <p>Based on these economic scenarios, we calculate a set of associated 'customer outcomes' for any specified retirement product or income strategy.</p> <p>To do this, we need to apply a set of product rules together with details of a customer's liability (cash flow) profile to calculate the associated income and death benefit outcomes under each economic scenario.</p> |
| 3. | <p>Based on these customer outcomes, we calculate a number of key risk measures which relate directly to the individual customer's particular retirement objectives.</p> <p>These risk measures allow the customer or their financial adviser to take an informed view as to whether the product is able to meet the specified retirement objectives in terms of retirement income and/or bequest.</p> |

This analytic framework can be used to better understand how different retirement products compare in relation to a retirement customer's specific objectives. Advisers and customers can use the outputs to make informed decisions as to which product (or combination of products) best fits their own retirement objectives.

Case Study - Mr Sprightly

To illustrate how this framework can be applied, consider Mr Sprightly, a healthy 60 year-old male with a retirement fund of £1 million, an income target of £50,000, and a wish to leave cash to his children if he dies early in retirement.

Exhibit 1 compares eight generic retirement products using a series of risk measures which relate directly to Mr Sprightly's stated retirement objectives:

Exhibit 1 – Comparison of Retirement Risk Metrics by Product

| | | Fixed Annuity | Index-Linked Annuity | Naked Drawdown (30% Equity) | Naked Drawdown (70% Equity) | Pension Drawdown (30% Equity) | Pension Drawdown (70% Equity) | Third Way (30% Equity) | Third Way (70% Equity) |
|--------|------------------------------------|---------------|----------------------|-----------------------------|-----------------------------|-------------------------------|-------------------------------|------------------------|------------------------|
| Age 75 | Probability Income > £50,000 (%) | 100% | 87% | 100% | 97% | 74% | 70% | 100% | 100% |
| | Median Retirement Income (£ pa) | £74,000 | £68,752 | £50,000 | £50,000 | £56,053 | £63,700 | £57,494 | £62,586 |
| | Lower 95% Retirement Income (£ pa) | £74,000 | £43,472 | £50,000 | £50,000 | £39,607 | £27,665 | £55,000 | £55,000 |
| | Median Death Benefit (£) | £0 | £0 | £715,829 | £845,931 | £692,034 | £773,828 | £576,934 | £634,948 |
| Age 90 | Lower 95% Death Benefit Value (£) | £0 | £0 | £350,203 | £103,015 | £408,331 | £315,452 | £251,136 | £0 |
| | Probability Income > £50,000 (%) | 100% | 85% | 68% | 67% | 5% | 30% | 100% | 100% |
| | Median Retirement Income (£ pa) | £74,000 | £93,432 | £50,000 | £50,000 | £25,868 | £32,260 | £57,494 | £62,586 |
| | Lower 95% Retirement Income (£ pa) | £74,000 | £32,923 | £0 | £0 | £13,836 | £8,489 | £55,000 | £55,000 |

An important point to draw from Exhibit 1 is that the different retirement products deliver very different income and death benefit profiles. The consequences of a bad decision might be pretty significant and very difficult to recover. However, the good news is that the output risk measures in Exhibit 1 should help Mr Sprightly make an informed decision as to which of these product options best meets his retirement objectives:

- If Mr Sprightly was concerned only with maximising his lifetime income (in relation to his target of £50,000 per annum), then the best option would be to buy an immediate annuity.
- However, since Mr Sprightly would like to be able to provide death benefits to his children, he needs to consider which of the other (unsecured) products offer a sufficiently secure annual income of at least £50k.
- If Mr Sprightly was most concerned with maximising potential growth in both income levels and death benefits, then the Pension Drawdown option with high equity exposure would probably work best. This offers the highest median retirement income and the second highest projected death benefit.
- Although the standard drawdown / ASP options offer higher potential death benefits, these options leave Mr Sprightly exposed to a significant risk of income shortfall, particularly if he lives into old age. Under the standard Pension Drawdown with 70% equity exposure, the lower 5% income level at age 90 is £8,489!
- In this Case Study example, the 'Third Way' products (i.e. drawdown with income guarantees) appear to deliver Mr Sprightly's required income level with certainty, but also offer access to death benefits.
- The final question for Mr Sprightly is the level of equity exposure that should under-pin the 'Third Way' product. The choice between the 30% and 70% equity options will be determined by Mr Sprightly's risk preferences – particularly in relation to residual death benefits. Although the higher equity option offers a better chance of growing income and death benefits, there is much higher risk that the residual fund value and associated death benefits are significantly eroded, or even exhausted, before he reaches age 75.

The income and death benefit profiles summarised by the risk measures in Exhibit 1 are presented graphically in Exhibits 2a and 2b. These charts show the distribution (potential upside and downside) of income and death benefits for each of the different product options.

Exhibit 2a shows the distribution of projected annual income at age 75. This illustrates the extent of the shortfall risk under the standard drawdown/USP options. Furthermore, the two bars to the right hand side of Exhibit 2a clearly demonstrate how the guarantees inherent in the two 'Third Way' options mitigate this income shortfall risk.

Exhibit 2a – Income at Age 75

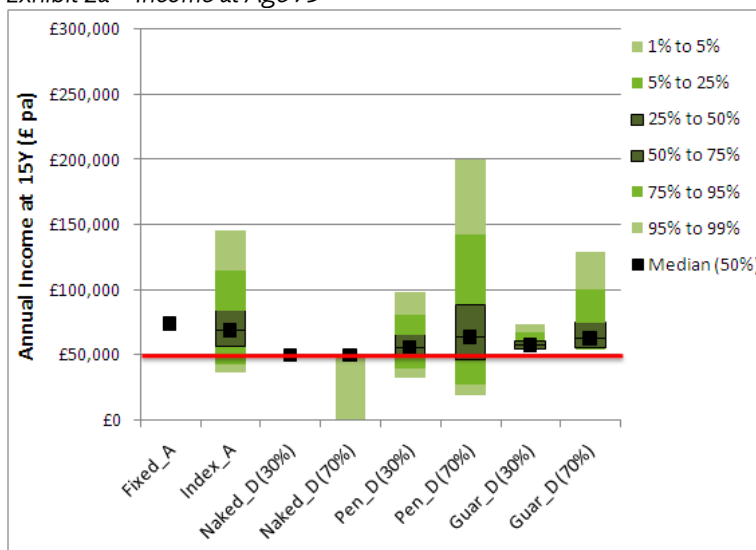
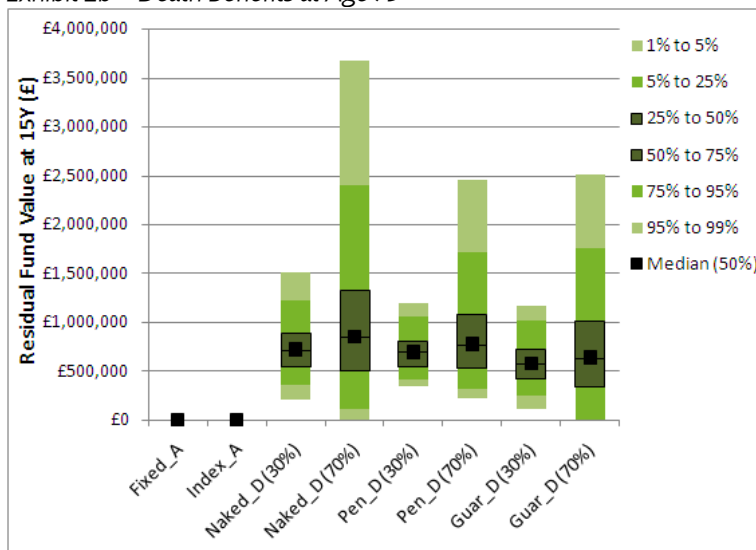


Exhibit 2b – Death Benefits at Age 75



Summary

This case study highlights that different retirement products offer very different income and death benefit profiles. As such, customers need to be clear about their own retirement objectives and priorities in order to make a well-informed decision as to the retirement product or strategy that is most suitable for them.

This example has used a series of risk measures which our customer can relate directly to his own retirement objectives. Although we have used a number of generic assumptions, this case study analysis has suggested that 'Third Way' products may be appropriate for a large number of baby-boomers approaching retirement.

Practical Applications

The analytic framework we have developed allows us to measure and communicate risk in retirement products, on a basis which relates to a customer's own retirement objectives. The following two practical applications of this framework will be the subject of upcoming Market Insight reports:

Product Analysis and Comparison

Thus far, surveys of the UK retirement product market have been restricted to assessment and comparison of different product features such as charges, fund options, guarantee levels, minimum investment amounts, etc. For advisers and customers, understanding and interpreting this volume of information is likely to be a painful exercise.

We have applied the analytic framework described here to specific retirement products currently available in the UK retirement market. The outputs will allow advisers and customers to assess these products in terms that relate directly to their particular retirement objectives, and to make more informed decisions as to which of these products are most appropriate. This approach can significantly reduce the need for financial advisers to disseminate and interpret large amounts of information regarding complex product features.

This analysis will show that although these products are targeted at the same broad group of potential customers, the different products already in the UK market offer very different income and death benefit profiles. This suggests that customers need to be quite clear about their own retirement objectives if they are to make an effective and informed decision as to the most appropriate product.

Retirement Portfolio Planning

There is no rule that says retirees must allocate their entire retirement savings to a single product or strategy. We will show that, just like asset allocation for accumulation customers, retirement customers should consider allocating their retirement savings across more than one type of retirement product in order to best meet their retirement objectives.

We will also show how the analytic framework described in this report can be extended to enable customers and their advisers to find the best **combination** of retirement products by allocating these in 'optimal' proportions in a **retirement portfolio**.

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