



The Pensions Institute

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Paul Kirkman Esq
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Dear Mr Kirkman

Proposed product specification for Sandler stakeholder products

Thank you for your letter of 5 February containing the HM Treasury – Department of Work & Pensions consultation document “Proposed Product Specifications for Sandler ‘Stakeholder’ Products” (February 2003).

In response, I would like to make the following comments:

1. Although it is important that the stakeholder suite of products are simple, low cost and risk-controlled, it is equally important that they are well-designed. A particularly important example is the pension product which to be effective must be designed as an integrated product across both the accumulation and decumulation phases in order to help mitigate the range of risks (contribution risk, investment risk, mortality risk etc) that members of such schemes face.

Briefly well-designed pension schemes are designed from back to front by addressing the following questions:

- How long do I expect to live in retirement, bearing in mind my planned retirement age and improvements in life expectancy in retirement?
- What standard of living do I desire in retirement?
- What level of pension fund do I need to have accumulated over my working life in order to meet this standard of living in retirement, taking into account the expected returns and risks from investing in different classes of assets and my attitude to financial risk?
- Given this fund size and the asset classes in which I intend to invest, what level of contributions do I need to make to my pension scheme during my working life to meet my target pension fund with a specified degree of success, taking into account the anticipated length of my working life and the chances of being temporarily out of the workforce due to, say, spells of unemployment or child care?

We have been working on design issues in DC pension schemes at the Pensions Institute and I enclose the following papers:

- David Blake, Andrew Cairns and Kevin Dowd (2001) PensionMetrics: Stochastic Pension Plan Design and Value-at-Risk during the Accumulation Phase *Insurance: Mathematics & Economics*, 29, 187-216 (<http://www.pensions-institute.org/wp/wp0102.pdf>)
- David Blake, Andrew Cairns and Kevin Dowd (2003) PensionMetrics 2: Stochastic Pension Plan Design During the Decumulation Phase (<http://www.pensions-institute.org/wp/wp0103.pdf>).
- David Blake (2003), Take (Smoothed) Risks When You Are Young, Not When You Are Old: How To Get The Best From Your Stakeholder Pension Plan (<http://www.pensions-institute.org/wp/wp0304.pdf>)

The last paper shows, using stochastic modelling, that the best investment strategy for the accumulation phase of a defined contribution pension plan is one that limits the range of returns that are credited to the plan member's account. In particular, it shows that with-profit accumulation programmes which make use of a smoothing fund to smooth out returns over time dominate unit-linked accumulation programmes. However, for the decumulation phase, the paper demonstrates that it is hard in practice for an investment-linked decumulation programme to beat the income and security provided by a standard annuity, although again with-profit decumulation programmes dominate unit-linked decumulation programmes. Return smoothing is therefore a valuable feature of any long-term investment programme both during the accumulation and decumulation phases and this has important implications for the design of Sandler 'stakeholder' products.

In particular, the decumulation phase is as critical as the accumulation phase, so a stakeholder annuity product is an essential component of a well-designed stakeholder pension plan, contrary to the assertion in the HM Treasury – Department of Work & Pensions consultation document. The stakeholder decumulation product should probably be a standard life annuity with a transparent management charge; if an investment-linked decumulation product is also offered it should again be of the with-profit type.

2. A related matter concerns the restrictions placed on the asset allocation of the stakeholder pension funds, in particular whether the implementation of a 60% maximum equity exposure or a lifestyling dynamic asset allocation strategy is desirable.

What evidence is there to show that a 60% maximum equity exposure is sensible? What shortfall risk is faced at retirement? (i.e., what is the probability of failing to achieve the target pension at retirement?). The PensionMetrics approach could be used to answer these vital questions.

3. We have shown at the Pensions Institute that deterministic lifestyling is not in general optimal and is dominated by a strategy that we call stochastic lifestyling which takes into account both the degree of risk aversion of the plan member and the correlation between the plan member's salary progression and asset returns over time. I enclose the following paper:

Andrew Cairns, David Blake and Kevin Dowd (2003) Stochastic Lifestyling: Optimal Dynamic Asset Allocation for Defined Contribution Pension Plans (<http://www.pensions-institute.org/wp/wp0003.pdf>).

4. Many of the risks that pension plan providers face during both the accumulation and decumulation phases cannot be hedged with existing financial assets. Two key examples are wage risk and longevity risk. The government could help private sector providers hedge wage risk by issuing wage-indexed bonds. Price-indexed bonds help private-sector providers hedge price inflation risk, but not productivity shocks. Wage-indexed bonds would help private-sector providers hedge both retail price and productivity shocks.

Price-indexed bonds provide an imperfect hedge for wage shocks, but there is no effective means of hedging longevity risk. This is why we at the Pensions Institute have designed survivor bonds, life annuity bonds whose coupon payments decline at the same rate as the population of 65-year olds on the issue date of the bond die out and so would provide an excellent hedge for longevity risk. I enclose the following paper:

- David Blake and William Burrows, (2001), Survivor Bonds: Helping to Hedge Mortality Risk, *Journal of Risk and Insurance*, 68, 339-348 (<http://www.pensions-institute.org/wp/wp9910.pdf>).

5. With-profit products are certainly a misnomer. They are in fact zero-cost collars (if they have the 100/0 structure). Perhaps names based on this such as 'zedcol', 'zerococo', 'rococo' or 'collared' products.

I would be happy to discuss any of these papers with you should you wish.

Yours sincerely

Professor David Blake
Director