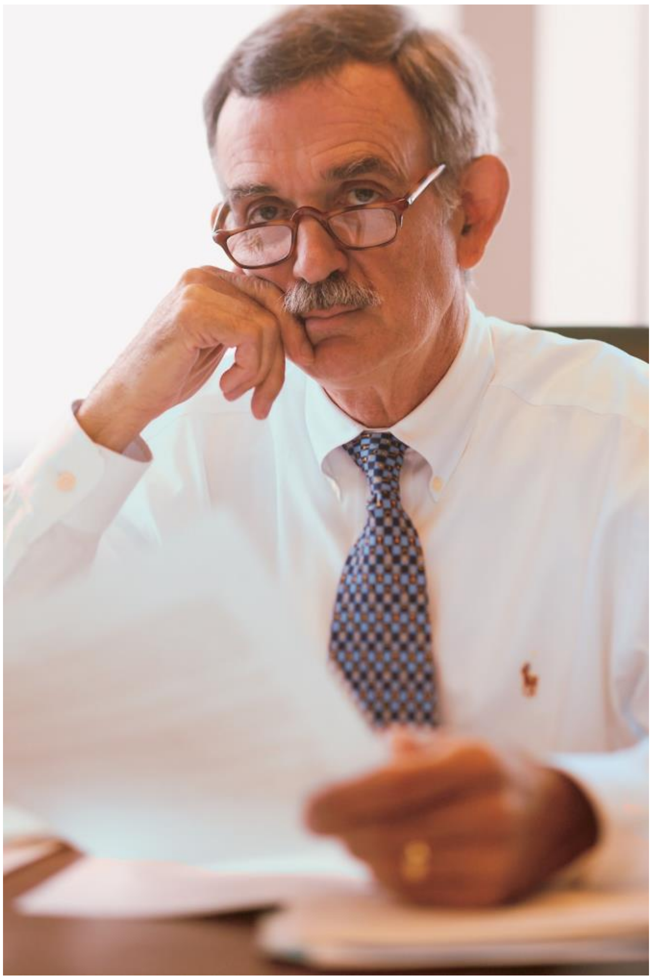

The future of retirement

Milliman's response to a consultation on investing for NEST's members in a new regulatory landscape

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EXECUTIVE SUMMARY

The forthcoming changes to the retirement landscape are a significant step in modernising the ways in which individuals can organise their finances to support them through retirement. The products available to meet retirement needs have barely changed for decades, constrained and encouraged by the old regime, and Milliman welcomes this consultation as part of a drive to challenge existing thinking and to strive for structures which better meet individuals' needs.

Retirement is no longer a point-in-time action but rather a process enacted over a period of time. Longer retired lifetime and changes in culture and demographics also mean that income needs are of a significantly different profile than in the past with a potentially large later-life need for income to fund care costs, for example. The nature of individuals' goals and activities in retirement are also vastly different to those that existed when the current generation of advice and products were developed. It is time for change.

It is therefore clear that the next generation of products and services associated with retirement need to offer ongoing advice, as the circumstances of the retiring individual evolve, and must have the ability to adapt, so that they can respond dynamically to changing needs. Many current products are sold based upon an outdated view of what retirement needs are like, and without adequately considering the need for future change. The products themselves are arguably not always appropriate for the real risks that the individual faces and can often expose the individual to other risks that they are unaware of.

The advice process and products must also recognise the innate behavioural bias for certainty and loss aversion, which may result in individuals adopting overly conservative approaches focused on avoiding one type of risk rather than the successful achievement of retirement goals overall.

At Milliman we believe this is a real opportunity for advisers to more accurately determine the goals of individuals and for providers to offer solutions which recognise these biases. This will enable consumers to make better choices which provide improved risk-adjusted returns on their retirement savings and holistically deliver a better chance of meeting their goals. Such solutions will have these key features:

1. **Security** provided by an underpin of certain income through receiving a level of guaranteed pension, whilst retaining the ability to pass residual funds on to beneficiaries at death.

2. **Tailoring** via the ability to phase the purchase of income to align with the shift in other sources of income as full retirement approaches and to reflect changing personal circumstances.

3. **Opportunity** to grow the level of guaranteed income over time.

4. **Flexibility** provided by access to supplementary funds to address unexpected requirements.

5. **Innovation** through revised investment approaches which help avoid value-destroying behaviour and offer a more acceptable balance between investment rewards and the risk of loss either in terms of account value or income.

The tools and techniques required to deliver these solutions are available now.

In our response to NEST's consultation we are pleased to have the opportunity to provide input about how such solutions can work and have been successfully used in other markets.

DETAILED RESPONSES

1. **How will the trend for changing retirement patterns and provision affect what:**
   a. **members need, and**
   b. **employers want, from DC schemes in the future?**

MILLIMAN RESPONSE:

a) Flexibility to postpone retirement and/or phase pension income in to align with continued participation in work are two fundamental ways for members to handle the risk that pension income will be less than they require. Flexibility to integrate the NEST pension with other pensions so that the total pension income is level could also be beneficial.

Protection from living longer than expected – this remains a key issue and implies that at least some element of guaranteed income for life will be needed as opposed to pure ad-hoc fund withdrawals which may be exhausted too soon. This may be a particular issue for the mid-range earners, as noted, where a fall back onto pure state benefits is likely to offer a living standard substantially lower than that enjoyed pre-retirement.

b) The Consultation Paper discusses the willingness / ability of individuals to continue working but there is a question over the appetite of employers for this. At some stage they will want to replace older workers and so there should be interest in schemes delivering outcomes which enable older employees to retire when the time is right for both parties. This points towards the adequacy of pension pots in general but also to the provision of appropriate risk management and certainty of outcomes for both parties.

2. **How will the trends identified in this chapter evolve, and what does this mean for DC design?**

MILLIMAN RESPONSE:

Our view of the evidence is that it reinforces the point that there will be a vast range of individual circumstances and it seems unlikely that these will be predictable – this comes back, once again, to the need for flexibility in the solutions offered.

3. **What conclusions should be drawn from the evidence presented on spending, housing wealth and debt for the needs of future NEST members in retirement? What other data on consumption and wealth should we be taking into account?**

MILLIMAN RESPONSE:

We agree that the significance of DC pension provision is likely to grow in future as other sources of retirement income decline. Furthermore, given the flat rate nature of the Basic State Pension, DC seems likely to be a key route for individuals to make some linkage between pre- and post-retirement income levels and living standards. These shifts raise the question of member risk appetite – the increased reliance on DC might imply a need for increased conservatism in DC investment as members have reduced diversification over their sources of income in retirement. On the other hand, the increased reliance on DC to provide at least some alignment of pre-/post-retirement living standards makes it critical for members to seek attractive returns on their funds for as long, and as consistently, as possible to avoid dramatic unexpected changes in circumstances due to market movements. Bridging this gap will be challenging and we see a bigger role for investment approaches which offer exposure to upside performance but with a safety net of some downside and volatility protection.

Flexibility around benefit provision is important. The ability to secure some level of guaranteed income to top up the BSP is likely to be a key aim for many. However, access to a residual fund, not committed to income, to provide for unexpected requirements will also be attractive but requires discipline to avoid it being drawn upon for the wrong reasons – this raises the issue of the need for continued guidance / advice throughout retirement.

4. Given the heterogeneity of likely spending patterns in retirement, is it possible to reflect these in the design of retirement solutions?

MILLIMAN RESPONSE:

An attempt to provide pre-determined retirement benefit profiles which align to the wide range of possible member requirements seems likely to result in excessive complexity. However, DC schemes can provide members with the basic tools to meet the great majority of their needs via a combination of a certain income stream plus a residual fund to support ad-hoc requirements. It may be possible to shape the certain income stream to align with different member requirements to some extent, but members can ultimately shape this themselves by saving surplus income in some periods to top-up in others (as they do pre-retirement). Lumpiness to income requirements which goes beyond this level could be managed through ad-hoc withdrawals from residual funds. The longevity of such funds will therefore be an important consideration for members and hence also for scheme design.

An alternative view could be that spending will adjust itself to the given income such that NEST can simply provide a certain pension and allow the retiree to spend or save within that with no provision of a residual drawdown fund.

5. Taking into account current retirement decisions, what people say they want and what the evidence says about behavioural biases, how are savers likely to act under the new freedoms?

MILLIMAN RESPONSE:

Clear themes in the consultation paper note the impact of uncertainty and associated fear upon decision making. The implication is that this can lead to poor outcomes for individuals as high certainty is sought almost without regard for the alternatives or the potential impact upon the ability to achieve the range of goals noted in the Consultation Paper Figure 2.3. Another theme is the bias by which adverse outcomes are weighed more heavily than positive ones.

In aggregate, this may result in too much member focus on failure avoidance rather than the successful achievement of retirement goals.

These challenges point to the need for approaches which can continue to offer a degree of certainty, i.e. a level of guaranteed income underpin, but which can also address underlying goals. The framework therefore needs to provide a more acceptable balance between investment rewards and the risk of loss either in terms of account value or pension income.

6. What member behaviour risks do providers need to manage?

MILLIMAN RESPONSE:

Given member preferences for some degree of certainty over the outcome of their retirement saving, we expect guarantees to remain in demand. However, providing guarantees (for example a guaranteed income for life) brings with it some behaviour risks which need to be considered carefully in their pricing and management:

Lapse risk – in particular the degree to which this might vary with changing financial conditions with the guarantee provider potentially being selected against as the value of the guarantee fluctuates.

Option exercise risk – where flexibility is provided to, say, defer the commencement of guaranteed income or to stop and re-start income, there is the risk that actual behaviour differs from what was expected.

Such risks are already present for unit-linked guaranteed products sold in the retail market and can be mitigated through careful attention to the product design.

We feel that there is also a behaviour risk with regard to invested funds – namely, that inappropriate member behaviour is triggered by investment experience. For example, market falls which translate to falls in fund value prompt panic and members then realise investments unnecessarily at depressed prices harming overall returns. We note that modern risk management techniques can be applied to investment funds to help mitigate this risk by protecting members' funds from the worst impacts of severe market declines.

Finally, with regard to member satisfaction, there is a risk for providers that members simply take too much out too soon and that funds deplete prior to death. It might be argued that this is not a risk that providers can readily manage. However, it is actually an important risk for the new regime as a whole which points to the need for a holistic approach perhaps via extension of the guidance guarantee in some form.

7. Are there other risks and objectives to be taken into account for DC savers approaching and in retirement?

MILLIMAN RESPONSE:

Ongoing changes to the rules governing both private and state pensions would make planning more difficult for all stakeholders and create additional uncertainty for members, undermining confidence and engagement. In light of this, scheme designs which focus on addressing core needs without being tied tightly to any particular facet of the current rules seem to offer the best mitigation of this risk.

A potential problem for members may arise if communication of risks and benefits focuses solely around a pot of money accumulated pre-retirement instead of considering their whole pension investment life-cycle through to the ultimate delivery of pension income – this perhaps requires a shift in emphasis.

8. What works in terms of communicating and getting DC savers to engage with decision making in the approach to retirement? How can we help members make good choices before and during retirement?

MILLIMAN RESPONSE:

Behavioural studies show that people generally anchor their decisions close to “now” and find it challenging to accurately prioritise the future. Some success has been achieved by behavioural psychologists in helping the individual to visualise their future self when being asked to make those decisions. For example, the use of artificially “aged” photographs of the person to show them at retirement has been found to help them consider their needs at that point more clearly. Likewise using compelling scenarios or case studies to anchor the discussion properly so the current self can somewhat relate to the future self-achieve similar improvements in cognitive reasoning. Addressing this bias towards the present is important in encouraging the right behaviours early enough for them to have a beneficial effect.

Getting members to make a domestic budget as if they were retired today requires little effort and can be expressed as a target and then compared to the amount of monthly pension funded so far and the level of future contributions required to fund the outstanding part.

Giving members positive feedback on any form of engagement has to be encouraging. Consideration should also be given to the degree to which benefits are perceived to be “locked in” as the fear of making current decisions increases if the decision feels irreversible. In reality most people do not later exploit the flexibility and so the right outcome is achieved.

9. How can we help mitigate the risks associated with cognitive decline as people get older?

MILLIMAN RESPONSE:

There should be a streamlined, but robust, process which enables members to put in place arrangements to transfer decision making to others in the event of them becoming incapable to exercise that control themselves – the current process to put in place a power of attorney can be complex and time consuming.

A key challenge however will be to identify cognitive impairment and trigger the transfer of decision making responsibility at an appropriate time – a possible approach might be the use of routine testing beyond a certain age (similar to monitoring suitability to drive).

10. What is the role of default strategies in the new regime and the run up to and throughout retirement?

MILLIMAN RESPONSE:

A default strategy will, by necessity, be a fairly blunt instrument but it needs to reflect an approach which is reasonable for the broad sweep of members until such time that individual decisions are made. In the absence of an initiative which will deliver a sea change in member engagement well in advance of retirement the preferences of many members with regard to how they will access their retirement funds seems unlikely to known with any degree of confidence. Thus, any default strategy which presupposes a particular access approach runs the risk of “getting it wrong”. There is a risk here in terms of the potential at least for the perception of customer detriment.

Perhaps there is a need to consider a broader framing of objectives to align with a product independent expression of risk appetite and goals which customers might find easier to understand. For example, do targets expressed in terms of an inflation measure + x% or volatility of y% really resonate with members or might information around aspects such as the potential for them to see a decline in their account balance from one year to the next be more aligned with members' concerns.

Finally, we note that alternative strategies can still be offered for those that do engage and for whom a more closely tailored approach might therefore be feasible.

11. Should we consider having more than one default strategy for different types of member, and which variables can be reasonably used to differentiate member needs in the event of no member engagement?

MILLIMAN RESPONSE:

We felt this would be challenging in light of the information which might be available in order to differentiate members. Nevertheless, there have been considerable advances in the development and use of sophisticated data analytics over recent years, so-called "big data", and it is possible such an approach might identify some leading indicators of member preferences and behaviour. However, no system will be perfect and the question therefore arises over what happens if members are misclassified. This feels to us like a material risk and perhaps implies that practical advances in this area would need to progress in tandem with regulation.

12. Based on the member evidence presented, should the default target retirement age remain the same as state pension age? If not what are the alternatives?

MILLIMAN RESPONSE:

In terms of a target retirement age, we felt that State Pension Age (SPA) represented a reasonable default for the present. However, we note the trends in terms of increased heterogeneity in terms of when individuals withdraw from the labour market and also that SPA is to an extent a political parameter. In this context, it seems to us worthwhile to monitor trends in the ages at which people leave the labour market and potentially adjust the target age accordingly.

Again considering the trends around increasingly flexible and phased retirement experience, it struck us that multiple target dates might ultimately be needed for example to reflect when individuals start to access their pension savings - increasingly, as noted in the Consultation Paper, this will not be coincident with exit from work.

13. Based on the evidence presented, should purchasing annuity income be part of retirement planning for DC savers? If so - on average - what age should this purchase happen?

MILLIMAN RESPONSE:

In our view, considering the purchase of an annuity should certainly remain part of retirement planning for DC members. Indeed, annuities are likely to play a continuing role for some members due to the guaranteed income for life they provide. However, at least in their current form, they lack significant flexibility for members. Furthermore, while annuities deliver certainty in some regards, a member's overall return (internal rate of return) from an annuity can be highly uncertain as it depends very much on how long the member survives post purchase. Consequently, we feel it is important to consider a range of measures of success when considering retirement outcomes as the ones that really matter will inevitably vary between individuals.

Nevertheless, the continuing preference by many for some degree of guaranteed income needs to be addressed alongside the rising demand for solutions which enable individuals to address a range of alternative goals e.g. the ability to provide an inheritance. Given this, we expect further innovation in the annuity market as well as the increased use of alternative solutions such as unit-linked guaranteed products which can deliver a flexible range of benefits whilst providing full liquidity over the invested funds.

Finally, we are not convinced that the inflation protection available in annuities today (RPI- or CPI-linked) is necessarily appropriate for pensioners' spending patterns.

14. Would iterative purchase, phased annuitisation, or fixed term-annuities be a better way for DC savers to secure incomes?

MILLIMAN RESPONSE:

In our view, a phased approach to the purchase of income guarantees can have some advantages for members providing:

- Flexibility to adapt benefit specifications as circumstances change
- Ability, from some solutions at least, to benefit from income increases
- Evidence of the benefit from the member's commitment to retirement saving which may provide positive reinforcement and encouragement to continue at a time when members might be expected to be more interested and concerned about the outcome of their retirement provision.
- Reduction in purchase risk as benefits are secured in tranches over a number of years there is less exposure for individual members to a single specific set of financial conditions.
- Potential diversification of counterparty risk – benefit tranches might be purchased from alternative providers reducing a member's exposure to the experience of any single provider.

Against this, the approach is likely to increase costs which will need to be borne by members. Phased approaches to the delivery of guaranteed pension income are explored in a forthcoming Milliman research paper entitled "Defined Ambition Pensions – A Review of Some Opportunities for Insurers"

15. Should deferred annuities be included in the toolkit for DC retirement solutions?

MILLIMAN RESPONSE:

Once again we felt these should be considered as another potential element of retirement solutions. However, we recognise the practical challenges with the provision of these products and it remains to be seen if an active market can be developed.

16. Are there other ways of helping members hedge longevity risk?

MILLIMAN RESPONSE:

Annuities provide longevity insurance in two ways – through the mortality cross-subsidy from year to year and by guaranteeing the size of that cross-subsidy in future years.

In Sweden, the cross-subsidy is credited to any unit-linked insurance that has a death benefit less than the fund. It has been normal for the rate of such mortality credits to follow a mortality table that is pre-determined and contractual from the issue date of the policy.

The Swedish state pension system, PPM, does not guarantee the cross-subsidies but distributes the realised cross-subsidies at the end of each year.

NEST could consider a similar approach.

17. Does investing through retirement, as an alternative to immediate annuitisation, have a significant role to play in meeting the retirement needs of DC savers?

MILLIMAN RESPONSE:

This depends very much upon individual circumstances but overall we feel it does have the potential to play a significant role. However, a great deal depends on the selection of an appropriate investment strategy.
Given increased life expectancy in retirement a very cautious approach, e.g. 100% investment in cash, may deliver comfort in terms of the removal of negative nominal returns but will also make it highly likely that the member's fund will be exhausted prior to death.
Exposure to assets which can deliver higher returns is required to sustain income levels for the longer periods members now expect to spend in retirement. Clearly such assets bring with them increased risk and the sequence of returns problem noted in the consultation paper is a significant issue. The challenge for providers is therefore to develop solutions which offer sufficiently attractive potential returns at an acceptable level of risk, providing members the opportunity to benefit from positive stock market performance but also protecting them from severe and sustained market falls. Modern dynamic risk management techniques are increasingly being applied to deliver such solutions and offer members more attractive risk-adjusted returns. Such approaches are also highly flexible and can be tailored to different risk appetites, for example by setting different volatility targets and levels of additional capital protection.

18. If you were designing a default drawdown strategy for NEST members, how would you do it? We believe such approaches will require innovation and are therefore interested in solutions that address the following issues:

- **governance – including setting pay-out rules**
- **asset allocation and risk management**
- **flexibility for members**
- **incorporation of insurance for market and longevity risk**

MILLIMAN RESPONSE:

Governance & pay-out rules
With a drawdown product that does not provide any guarantee, there is a clear need to address the risk of fund exhaustion. The consumer is highly unlikely to know what level is optimal for balancing their current income needs, and so the fiduciary or product provider is likely to need to provide an advisable rate of drawdown, that is clearly communicated not to be a guaranteed rate. Clear communication points to a simple rule, such as a rate expressed as a % of the initial fund at retirement, which can be maintained throughout retirement with a 'high' degree of success. Any such rate will be necessarily dependent on the underlying fund's asset and risk management strategy. This also means that blanket rules, such as Government minimum or maximum rates, cannot solely be relied upon. We provide a reference to our own Milliman research analysis that explores this in more depth in the appendix of this document.

Asset allocation and risk management
We agree that a risk management and asset allocation approach that provides a degree of capital protection is a critical part of being able to support a sustainable drawdown strategy, for the following reasons:

- During the retirement phase, pensioners typically have reducing capacity to add to funds from other sources (e.g. employment), making the risk of short-term investment loss more acute.
- Realising assets at depressed prices during a market crisis, to fund income payments, can damage the ability of long-term growth to sustain future income. An approach that reduces exposure to high-risk assets ahead of time and/or provides hedging gains to help fund income payments is an effective way to mitigate this risk and increase the sustainability of the fund.
- Furthermore a risk-managed approach can help enable the pension fund to better participate in market recoveries following the crisis, compared to static “buy and hold” approaches.
- Severe falls in fund value from one year to the next may unduly concern pensioners and/or fiduciaries, and discourage them from investing in higher risk/higher growth assets that help deliver returns to better meet future income needs. A risk management approach that explicitly hedges extreme downward return risk, would help mitigate this behavioural risk.

We also agree that there is a trade-off between the level of capital protection that can be provided, and the burden of providing this through reduced investment return. This can be delivered through a sophisticated approach of managing the level of protection dynamically with time to balance this trade-off appropriately – there are examples of such products already in the US market place. Our research analysis, referenced in the appendix, shows that a suitably calibrated risk-managed approach can increase the sustainable income withdrawal rate by as much as 2 percentage points per annum (expressed as a percentage of the initial fund available at retirement).

Flexibility for members

The clear advantage of a drawdown approach, whether in non-guaranteed form or with attaching guarantees (such as a guaranteed lifetime withdrawal benefit), is its flexibility to be able to meet future income and expense needs that may be unknown, have bespoke inflationary costs, and be lumpy. There is a clear desire to combine this flexibility with guarantees, which may compromise this flexibility to a varying extent depending on the product. So a key point to consider in maintaining optimum flexibility is allowance for the partial or phased purchase of guarantees in a scheme design to balance this trade-off.

Market and longevity risk

For a product that satisfies the trade-off between the flexibility of a drawdown fund and guarantees, we see clear value in the guaranteed lifetime income withdrawal product or framework. The United Technologies Companies example discussed, provides a good example of how this framework can be achieved. With existing providers of this product in the UK market place, and other UK insurance companies publicly expressing interest in this product, this would seem likely to be a viable solution. We also see further scope for innovation in this product, such as through enhanced risk management strategies and the use of the health underwriting techniques of the fixed annuity market, to help bring more competitive guaranteed benefits. This is to address one of the main challenges that the product has previously faced – namely that benefit levels compare poorly to a fixed annuity when looking purely at the metric of initial guaranteed income for a given investment amount.

19. Should NEST consider some form of risk sharing as part of a solution for NEST members in retirement – if yes, what sort and why?

MILLIMAN RESPONSE:

This needs to be considered by type of risk (from pages 54 & 55 of the NEST consultation paper):

Conversion risk

No. This should be built in by NEST hedging pension payments through retirement.

Inflation
Not unless different pensioners suffer very different rates of inflation such that their positives and negatives can be offset.

Longevity (also mentioned on page 120)
Yes. Either through insurance or, if the terms for insurance seem onerous, through socialisation within the membership.

Flexibility
No. Socialising this risk would allow some members to game/anti-select the others. Flexibility is a choice of the member and should be provided on neutral (market) terms.

Investment risk
Probably not, because differences in experienced market volatility cannot be separated from the associated returns. If a member invests in a high-risk high-return fund, other members should not bear that risk.

Market timing risk
No. This risk is better managed by NEST hedging the benefit payments.

Clarity
This is a political and brand risk for NEST. It can mitigate this through tight legal contracts.

Cost
This is best mitigated by NEST being successful and spreading its costs over a wider base.

Market risk (page 120)
The risk management technique referred to here is smoothing. There can be some merit in socialising the timing of benefit payments where that timing is predetermined well in advance and cannot be gamed by the member. However, the appropriate price for this is the cost of hedging the fixed benefit amount, thus the risk socialisation can be obviated by hedging the benefits instead.

Market timing & economic risk (page 120)
This boils down to the same thing as market risk above. Market risk is expressed as if the fund is running to fund a lump sum cash benefit whereas this market timing risk includes the impact of changes in interest rates.

20. Would there be benefits in combining a risk sharing approach and pure DC, and if so, what would these be?

MILLIMAN RESPONSE:

Longevity
There seems to be no reason why NEST could not implement longevity insurance today with an external provider. Socialisation of longevity risk, as carried out in the Swedish PPM system, would probably need NEST to acquire an insurance licence (although no doubt a structure could be found routing this through an external insurer).

Smoothing market risks
With-profits insurance socialises mortality risks and market risks by smoothing the returns given to policyholders. Smoothing is a strong feature of with-profits. Unfortunately, with-profits business has now fallen out of favour.

Smoothing requires the build-up of a buffer that can be used to subsidise poor returns in the future. It is hard to start smoothing without a positive buffer. For smoothing to be effective, the buffer needs to be large. In theory, the buffer can be built up from a combination of a regular charge on 'normal' investment performance and a heavier charge on good performance.

With smoothing, not all the member's investment return will be necessarily be given to the member, and this needs to be recognised and explained to the member. When an investment shock occurs, either up or down, the impact of smoothing can be large: a series of years with -10% investment return could see members maturing early benefiting from smoothing but later members getting no benefit if the smoothing buffer is exhausted.

Overall, we believe that while the concept of risk sharing may be initially attractive, there are significant practical issues involved in setting this up from scratch.

APPENDIX 1

FURTHER COMMENT: CHAPTER SEVEN

On page 111 you set out an overview of the volatility management techniques, which describes the general features of the process well. You cite two potential issues of this technique. We comment on these as follows, explaining why we believe these do not pose material concern.

1. **Rebalancing Cost:** The reduction of risk that the managed volatility approach brings, ultimately does come at a cost through the buy-high/sell-low momentum nature of the strategy. It is important not to forget that this cost comes hand-in-hand with a reduction in risk. For the default drawdown strategy you could argue that a greater emphasis should be placed on the management and/or reduction of risk, and so this is a price worth paying. Such managed volatility techniques can also be demonstrated to enhance 'risk-adjusted' returns.

2. **Systemic Risk:** The operation of a successful strategy relies on the liquidity of markets in which it is traded, and hence the most popular approach for managed volatility funds is to utilise the low cost, highly liquid futures markets. We note that, unlike many other derivatives markets, the liquidity of the futures market held up very well during the Global Financial Crisis, with market volumes actually increasing[1]. In the US market, despite rapid growth of these funds to more than $200 billion[2] of AUM in the variable annuity space alone, from our experience in managing these types of funds and our own analysis of the market, we have seen that the futures market has had more than enough capacity to absorb the hedging activities of these funds. We have seen no evidence to date of systemic risk resulting from these stress situations. Furthermore, there are practical measures such as the spreading of trades over multiple days, which can be utilised to mitigate systemic risk, and still result in an effective execution of the strategy objectives.

[1] See statistical summary in: http://uk.milliman.com/insight/2014/Overnight-trading-strategies/

[2] This includes managed volatility funds, as well as funds adopting similar dynamic risk management strategies.

APPENDIX 2

Q18 – RESEARCH REFERENCE

We have recently conducted our own research into determining an appropriate and sustainable withdrawal rate for an income drawdown fund, which would seem relevant to answering this question. This can be found at: http://us.milliman.com/uploadedFiles/insight/2014/6-percent-rule.pdf.

ABOUT MILLIMAN

Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.
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MILLIMAN IN EUROPE

Milliman maintains a strong and growing presence in Europe with offices in Amsterdam, Brussels, Bucharest, Dublin, Dusseldorf, London, Madrid, Milan, Munich, Paris, Stockholm, Warsaw and Zurich.

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