Institute
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Pension Decumulation Market Research

Review of UK and Worldwide Markets

Defined Contributions Participation, Accumulation and Decumulation Working Party

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Foreword

This paper has been prepared by the Defined Contributions Participation, Accumulation & Decumulation Working Party of the IFoA. Its purpose is to review the fast evolving defined contribution (DC) decumulation market in the UK and worldwide in order to identify areas for potential further research by our Working Party or others. It is the first of a series of papers reviewing various aspects of DC pensions.

1. Introduction

1.1. Decumulation for DC members became far more complex in the UK since April 2015, when the requirement to annuitise was completely removed, putting the UK on an equal footing with the majority of other countries. For example, in one survey[1] few were confident in making the right choice and many were overwhelmed by the complexities.

1.2. The size of the DC decumulation market is likely to grow substantially over the next few years, driven in particular by those who elect to transfer their defined benefit pensions, and evidence[2] suggests that a significant proportion of these people will elect for drawdown.

1.3. Those DC participants who choose not to purchase annuities face a number of risks with the alternative of drawdown[3], of which the key ones are:

- Running out of money in retirement (i.e. longevity risk), but equally they should avoid being overly cautious and aim to spend the bulk of their DC funds unless they are deliberately planning to leave some for inheritance purposes;
- Poor investment returns, especially in the early years of retirement (sequence of returns risk) when the loss has greatest impact;
- Inflation eroding the purchasing power of retirement income;
- Sub-optimal individual decision making which can be for a variety of reasons, such as lack of engagement, lack of financial education, short-termism with adverse longer-term consequences, unpredictable change in circumstances and mental impairment in later years.

1.4. For those wishing to purchase annuities there is the further risk of low interest rates, although this risk is potentially reduced owing to the flexibility as to when the annuity is purchased.

1.5. Survey data[4] show that people particularly value a guaranteed income for life and also the flexibility to access the fund when they want; these are clearly potentially conflicting requirements. In addition, people especially value an income that grows in line with inflation and also protection from a fall in fund value due to stock market movements. Meeting such objectives is a challenge given the decision making risks listed above; the solution must be provision of guidance and a range of default pathways to meet varying needs, combined with well-managed, low cost and flexible products.

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1 State Street Global Advisors & The People's Pension (2016) *New Choices, Big Decisions*

2 Willis Towers Watson (2017) *DB member choice survey 2017: The rise on pension flexibility*

3 Blake (2016) *We Need a National Narrative: Building A Consensus around Retirement Income* Independent Review of Retirement Income

4 NEST (2015) *The Future of Retirement; A Retirement Income Blueprint for NEST members*

1.6. It is impossible to view pension decumulation in isolation of other sources of capital and income, since they will have an impact on an individual's retirement income strategy. In particular:

- State pension, as well as any private defined benefit pensions;
- ISAs (and the new LISA);
- Property, including home owner's equity release as well as buy-to-let.

1.7. Another important consideration is the provision for healthcare at advanced ages, which might consume a large amount of capital given the uncertainty as to how much the State will fund. Home equity release is one potential source of funding for that purpose, but preserving some pension savings for advanced ages can also play a role.

1.8. In the remainder of this paper we consider the following:

- **Drawdown:** withdrawal and investment strategies;
- **Longevity risk management:** types of annuity, immediate versus deferred annuities, other forms of pooling longevity risk;
- **Implementation issues:** individual behaviours, guidance & advice and the decumulation market;
- **Research opportunities:** based on the above, identifying areas of potential research, for our working party or for others.

2. Drawdown

Introduction

2.1. Under flexi-access drawdown (or capped drawdown if commenced before 6 April 2015), tax-free cash is taken and the rest of the DC funds remain invested to be withdrawn over a period of time as required. When funds are withdrawn each year as UFPLS lump sums, this can also be thought of as drawdown, since the concept is essentially the same but with a different tax treatment.

2.2. Drawdown and annuity purchase are not mutually exclusive of course, as it is possible to split the DC fund and do both, or to use drawdown at the outset and purchase an annuity later in life with the funds remaining at that time.

Withdrawal strategy considerations

2.3. A key element of drawdown is the withdrawal strategy, which determines how much income to take each year. A number of factors will contribute to such a strategy[3]:

- The amount drawn will need to be restricted to the extent that funds are to be preserved for later years, in order to avoid running out of money in retirement including the potential need to finance healthcare;
- Personal views about the pattern of expenditure in retirement. For example, there may be mortgage payments to meet in the shorter term while expenditure in later years is typically reduced;
- It might be decided to restrict the amount withdrawn to avoid any income becoming subject to a higher marginal rate of tax;

- Those people at risk of a lifetime allowance charge on reaching age 75 might choose to withdraw more monies to avoid this;
- If there are other private pensions, there may be reasons why it is preferable to defer taking these and utilise more drawdown funds in the interim. Likewise, there is the option to defer taking the State pension, the relative merits of which could be explored;
- For those with other forms of savings, it might be decided to draw on them first as part of inheritance planning, since on death they are subject to inheritance tax whereas pensions are paid tax-free on death before age 75 or taxed at the recipient's marginal rate on death after age 75. Furthermore, ISAs drawn are received tax-free whereas pensions are taxed at the marginal rate. The new LISA will have a similar tax treatment to the ISA.
- In particular, home equity-release plans, involving borrowing using one's home as collateral, can also play a role in the financial planning of the elderly, for example to finance healthcare;
- The investment strategy is another relevant factor, because fluctuations in the value of the remaining fund will affect the amount that can be withdrawn;
- Where longevity risk is to be hedged at a future date, the cost will need to be factored into the withdrawal strategy.

Safe withdrawal rate (SWR)

2.4. The concept of a 'safe withdrawal rate' was first developed by the US financial planner William Bengen in 1994, as the % of the fund which can be withdrawn in the first year, with the same monetary amount taken in future years adjusted by inflation, such that the fund would last for at least 30 years. Based on historical investment returns, he calculated a 4% SWR and his "4% rule" has been widely adopted by others.

2.5. There are various problems with a SWR[5]:

- It assumes future investment returns will match those used to derive the SWR, which will be based on past experience. This seems especially inappropriate in the current low yield environment when the SWR is based on returns achieved in the past under very different economic conditions;
- The SWR needs some personalisation to reflect the chosen investment strategy and the level of fees incurred. For example, it is suggested that the SWR varies by country and is a mere 0.2% in Japan;
- It fails to quantify the risks. For example, a more adventurous investment strategy will support a higher SWR but with a higher probability of failure. The investment risk is particularly prevalent in early years, which SWR fails to capture;
- It does not capture personal factors such as life expectancy and spending preferences, as well as personal attitude to risk.

2.6. Some research[6] explores whether it is possible to derive rules of thumb for SWR and concludes that they would need heavy caveating since much depends on an individual's needs for flexibility versus certainty, which might change in time. The research also explores how the risk attached to using a SWR might be quantified through use of stochastic simulations to

[5] Morningstar (2016) *Safe Withdrawal Rates for Retirees in the UK*

[6] Dundas & West (2015) *What should consumers do with their retirement savings* IFoA's Turning Savings into Retirement Income Working Party Update

show a range of future fund values with probabilities expressed in percentiles, along with the age at which the fund value is expected to reduce to zero (the point of ruin).

2.7. Another study[7] adopted a similar approach and reached similar conclusions, suggesting a SWR of closer to 3% rather than 4%.

2.8. A New Zealand study[8] proposes four alternative rules of thumb to cover a range of circumstances, with simple guidelines to help people make an appropriate choice, with a view to their being referenced widely and consistently.

Alternatives to the SWR

2.9. Various alternatives to the SWR have been proposed, which reduce the risk of running out of money early but result in variable, unpredictable levels of withdrawal and are more complex to understand and implement, significantly so in some cases. For example, the Guyton-Klinger rules[9]:

- Giving up an inflationary increase when the previous year's investment return was negative and when that year's withdrawal rate would exceed the initial rate, with no make-up for missed increases;
- Extract gains from the best performing asset class in the previous year, moving gains not required for immediate withdrawal into a cash account to support future withdrawals;
- Reduce spending by 10% if the current withdrawal rate rises above 20% of the initial rate;
- Increase spending by 10% if the current withdrawal rate has fallen by more than 20% below the initial rate.

2.10. The 'floor and ceiling' strategy[10] places a cap on spending increases (e.g. 5% more than the prior year) when market returns are high and a floor on the reduction in spending (e.g. a 2.5% reduction on the prior year) in bad years.

2.11. The natural yield approach is to withdraw only the dividends and income generated by the portfolio, thereby preserving the capital.

2.12. Withdrawal strategies that tail off in later years, to reflect assumed lower expenditure requirements, can also be explored[11].

2.13. Two strategies which ensure the fund does not run out before dying are:

- The amount of income withdrawn is calculated as that provided by an annuity if purchased using the fund value at the time;
- The amount withdrawn is a constant % of the fund value. This approach was recently suggested[12] as a default strategy with a drawdown rate in the range 4% to 6%.

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7 Aegon (2017) *What's the new sustainable income rate in retirement?*

8 Retirement Income Interest Group of the New Zealand Society of Actuaries (2017) *Decumulation Options in the New Zealand Market: How Rules of Thumb can help*

9 Guyton & Klinger (2004) *Decision Rules and Maximum Initial Withdrawal Rates*

10 Bengen (2001) *Conserving Client Portfolios During Retirement* Journal of Financial Planning, Part IV, Vol. 14 Issue 5

11 E Denbee (2008) *Modelling income drawdown strategies* Investment Management Association

12 M Johnson (2017) *Auto-protection* Centre for Policy Studies

2.14. Another approach which ensures the money does not run out before dying is to invest in a 'guaranteed drawdown' product, which is a recent innovation from the US and is described further in section 3.

Investment strategy

2.15. Someone planning to adopt drawdown needs to anticipate this and ensure that the investment strategy at the end of the accumulation phase is appropriate. Increasingly this is being recognised in the construction of lifestyle default strategies specifically designed for drawdown, with retention of significant proportions of return-seeking assets at the selected 'retirement age'. Some 'target date funds' take this concept a step further[13] by offering the DC investor a single product that can be retained during both accumulation and decumulation.

2.16. Liquidity is one consideration when setting investment strategy and this could be facilitated through having an earmarked cash fund[4] to meet immediate needs. The investment strategy is likely to differ from the accumulation phase with a shift in emphasis from growth to income[14] in order to support planned withdrawals while minimising the need for enforced sale of investments. One suggestion[15] is to hold cash for the first two years to meet immediate cash-flow needs, followed by a cash-flow matching investment strategy for three years and thereafter adopt a growth strategy.

2.17. If the time horizon for the drawdown is very short, then the whole fund is likely to be retained in cash. Otherwise, the investment strategy needs to provide an appropriate balance between two key objectives:

- An investment return that at least keeps pace with inflation after allowing for the impact of fees, in order to support the withdrawal of an inflation-linked income;
- Capital protection, especially in the early years when market falls have a large impact on the amount of future withdrawals.

2.18. This balance will reflect individual needs and attitudes to risk, which makes it problematic to have a default investment strategy[16], although it can be argued[12] that a default strategy is needed as not everyone will make an active decision. Typically, capital protection will be especially important in the early years, when market falls have the most impact, as well as at more advanced ages, but de-risking should only occur when there is a clear rationale[15].

2.19. Providing a return in excess of inflation implies a significant proportion of return-seeking assets such as equities and property. Diversification is key to controlling risk and this is the philosophy behind the growing popularity of diversified growth funds[17]. Absolute return funds aim for investment growth under all market conditions, by diversification and use of derivatives, with a benchmark return of a fixed percentage above cash.

2.20. A benchmark return above inflation offers no guarantee of a 'real' (above inflation) return, but hedging inflation is expensive. It has been suggested[4] that the use of diversification, derivatives and good active management is a more preferable means of achieving a real return while managing downside risks. Furthermore, inflation protection may be less

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[13] MarketWatch (23 August 2016) *5 reasons to think twice about your target-date fund*

[14] Moneywise (4 June 2014) *How to run a drawdown plan*

[15] Cox (2015) *Helping consumers and providers manage defined contribution wealth in retirement* Sanlam Private Wealth

[16] Pensions Europe (2015) *DC design principles*

[17] Pension & Lifetime Savings Association (2015) *Diversified growth funds, Made simple guide*

important at advanced ages, as consumption generally declines and consumer discretionary spending is replaced by the need to fund healthcare.

2.21. A fixed term annuity can be regarded as a drawdown investment with guarantees. It provides a regular retirement income for a number of years (typically 5 or 10) as well as a 'maturity amount' at the end of the specified period. On maturity, there is the option of purchasing another fixed term annuity or a lifetime annuity, or employing a flexible drawdown strategy.

2.22. With-profits funds also offer guarantees. They have suffered considerable reputational damage but could yet play a role in future.

2.23. Withdrawing pension assets to finance buy-to-let property has received some popularity[3], but is more often done using tax-free cash rather than taxable drawdown income.

3. Longevity risk management

The annuity market

3.1. The key benefit of annuities is that they offer (in most cases) a guaranteed income for life, thereby providing a hedge against longevity. This is especially important as people tend to under-estimate their life expectancies[18,15,3]. The longevity hedge is a key advantage over drawdown.

3.2. Nevertheless, take-up of annuities tends to be low, owing to their lack of flexibility (especially after the Government abandoned the creation of a secondary annuity market) and perceived lack of value for money. Annuitisation is only relatively high in countries where there are local influencing factors[19,20] such as a restriction on free choice or subsidised annuity rates, examples being Switzerland, Chile, Singapore, Denmark and Ireland.

3.3. Selecting and purchasing an annuity is a complex matter, due to the wide range of choice in types of annuity and significant variation in price between providers. Evidence suggests this process is carried out with mixed success[21]. The two main issues are (a) failure to get the best market price by shopping around an instead purchasing the annuity from the existing pension provider, and (b) failure to obtain enhanced terms where life expectancy is lower than average due to ill-health. In addition, the annuity market does not serve well those with small DC funds.

3.4. Annuity prices reflect the regulatory requirement of insurers to invest the premiums received in low risk (and currently low yielding) bonds and to maintain capital reserves to support the annuity business. Another feature is the requirement to offer unisex rates which results in insurers having to overcharge males (with lower life expectancies than females) and correspondingly undercharging females. It can be argued[3] that annuities will become more expensive in the non-compulsory world of the future, as lower sales reduce economies of scale and they will be bought by those with higher than average life expectancies.

Annuity features

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[18] IFoA, American Academy of Actuaries & Actuaries Institute Australia (2015) *The challenge of longevity risk : Making retirement income last a lifetime*

[19] Pensions Policy Institute (2015) *Freedom and choice in pensions : comparing international retirement systems and the role of annuitisation*

[20] Oxera (2014) *The retirement income market : country analysis* Financial Conduct Authority

[21] Wells (2014) *Pension annuities : A review of consumer behaviour* Financial Conduct Authority

3.5. A flat, or level, annuity is by far the most common choice in spite of a stated preference by many for inflation protection[21], usually because it is the default option or because it provides the largest income at the outset.

3.6. Index-linked annuities provide an income with inflation protection but are expensive in the current low interest rate environment. Annuities with fixed annual increases or subject to an annual cap can be cheaper (depending on the terms) but offer only partial inflation protection.

3.7. Joint life annuities and annuities with guarantee periods up to 10 years were the only death benefit options prior to April 2015. Since then, longer guarantee periods are available along with capital protection annuities which pay out the annuity purchase price less pensions paid prior to death. This extension of death benefit provision has enabled annuities to compete with drawdown in terms of offering value for money on death and inheritance potential.

3.8. Investment-linked annuities provide an income that is dependent on the performance of the underlying investments, so the income can go down (subject to a guaranteed minimum) as well as up. They can be either unit-linked or with-profits and offer the prospect of higher income than a conventional annuity, but one that is less predictable and which could be lower. The market for such annuities is low.

3.9. The relaxation in April 2015 allowing annuity income to fall led some to suggest annuities shaped to match retirement income needs[22]. A "U"-shaped profile would allow for higher income at the beginning and end of retirement, while a "J"-shaped one would have more income at the end of retirement to pay for healthcare.

Annuities offering flexibility

3.10. Products that offer the security of an income for life and some flexibility in income would seem the perfect combination. While such products exist, they are very complex and are targeted at high net worth investors rather than the mass market. The guarantees are typically backed by hedging strategies.

3.11. One example is the variable annuity[23], which can be used in both the accumulation and decumulation stages, or in just the latter. This product offers as 'living benefit options' a guaranteed minimum withdrawal benefit, a guaranteed lifetime withdrawal benefit or, through annuitisation, a guaranteed minimum income.

3.12. Guaranteed drawdown[24] provides a guaranteed minimum income subject to certain restrictions on the level of withdrawals, but with flexibility to increase withdrawals with a corresponding reduction in guaranteed minimum income.

Deferral of annuity

3.13. The price of an annuity is reduced to the extent that it allows for the probability of dying in any future year, but that reduction is lost for those years during which the purchase of the annuity is deferred. This is known as 'mortality drag' and represents a loss in benefit of longevity risk pooling. Provided one can earn a sufficiently high investment return to compensate for mortality drag, it is financially advantageous to defer the annuity purchase.

3.14. Mortality drag increases with age, as the probability of death rises, while the appetite to invest in return-seeking assets tends to reduce with age, and consequently the optimum age

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[22] The Telegraph (17 September 2014) *J or U-shaped annuities: Organising retirement income*

[23] Morgan Stanley (2016) *Understanding variable annuities*

[24] MetLife (2015) *Guaranteed drawdown: Giving you confidence about your retirement income*

to purchase the annuity is generally thought to be around 75 to 80. However, for someone who is very risk averse or who has longer than average life expectancy, an immediate annuity purchase is the optimal strategy.

3.15. Another benefit of deferring the annuity purchase is to provide flexibility of income, or in case of a change of circumstances, such as ill-health which could enable the purchase of an enhanced annuity. Other reasons for deferring the annuity purchase are where there is a bequest motive and/or there are other valuable assets such as property[25].

3.16. One risk of deferring an annuity purchase is that the price may rise, from a fall in interest rates or increase in life expectancies. Spreading the purchase over a period can help mitigate this risk.

3.17. Deferred annuities (known is the US as longevity risk annuities) provide a means of securing an annuity to commence at a future date on terms fixed at the date of purchase. Deferred annuities are very capital intensive for insurers, while they are generally not attractive to individuals reluctant to commit so much capital to provide for future longevity protection. As such, there is no market for deferred annuities at the present time.

3.18. Purchase of annuity at advanced age, e.g. immediate needs annuities[26] are a special type of lifetime annuity purchased to help finance long term care, with the income paid tax-free directly to the care provider. The minimum available age is usually 60 and they are individually underwritten.

3.19. A ruin-contingent life annuity[3] pays out only if both the pensioner is still alive at a certain date and there has been weak investment performance prior to that date, the payments being inflation protected. They are not currently available in the UK.

Annuities are not the only solution

3.20. An alternative approach to annuities for pooling longevity risk[4] is to make payments into a collective, but uninsured mortality pool, which starts paying out an income in later life. One attraction of this approach is that, unlike annuities, people are not required to commit substantial capital in advance towards longevity protection, something many are reluctant to do. Instead, they make regular, modest contributions over many years, suggested to be at around 1.5-2.0% of the accumulated fund each year. The scheme could use longevity insurance (e.g. longevity swaps) to hedge some or all of the longevity risk.

3.21. This concept is closely related to the historical tontine, and a number of academic papers on this theme have been published recently, such as Bräutigam et all (2017)[27].

3.22. Such schemes can potentially provide less costly longevity protection than annuities as they are not subject to the same risk-based capital requirements of insurers, they reflect actual mortality experience rather than a pre-determined assumption and they permit more investment freedom. On the other hand they do not provide the guaranteed level of income of annuities and are complex to understand.

3.23. In spite of their merits, such longevity pooling is currently rare in practice and it remains to be seen how quickly this market will develop. In one Australian scheme[28], twice yearly the money

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[25] Mayhew Smith & Wright (2015) *Pension pots and how to survive them* Cass Business School, Faculty of Actuarial Science and Insurance, City University of London

[26] FT Adviser (2016) *Getting to grips with immediate needs annuities*

[27] Bräutigam, Guillen & Nielsen (2017) *Facing up to longevity with old actuarial methods: a comparison of pooled funds and income tontines*

in the mortality pool is divided amongst current members as 'living bonus payments'. The share is determined by the actuary and is based on age, gender, period of investment, amount invested and other factors, with older members invested longest generally get the most. The living bonus payments gradually grow in importance and, from about age 88 onwards they dominate the total pay-out.

3.24. Collective DC schemes[3] are permitted in the UK by the 2015 Pension Scheme Act to allow risk sharing between members. There are a number of difficulties with implementing such schemes, and in terms of pooling longevity risk a key criticism is the potential for inter-generational subsidies which can be deemed unfair.

4. Implementation issues

Individual behaviours

4.1. Experience in the UK on the new DC flexibilities is limited to date. In one survey[1] it was noted that the biggest change is perceived in in being able to access all DC monies at age 55, as opposed to no longer having to buy an annuity (already seen as poor value). 25% tax-free cash is taken in most cases, while drawdown is more popular than annuities, unless there are guaranteed annuity rates.

4.2. Looking at some observations from around the world[29]:

- People tend to choose drawdown rather than annuities where possible;
- Drawdown without longevity insurance can result in funds being withdrawn too slowly or too quickly;
- Many people monitor their drawdown funds and adapt withdrawals in line with changes to the market and their needs;
- The use of pension pots to repay debt is significant.

4.3. The unpopularity of annuities seems to be especially driven by their lack of flexibility, concerns about getting value for money if they die early (combined with underestimating the risk of living longer than expected) and, for smaller pension pots, the feeling that the low income purchased is not worthwhile.

4.4. It has been noted[30] that people still value certainty and security, but dislike the word annuity. Stocks and share ISAs are popular for retirees to invest their tax-free cash and cash lump sum withdrawals, partly due to tax-free investment growth and flexibility.

4.5. One study[31] looks at research on older workers attitudes, knowledge and preferences. Most people are passive rather than active decision makers, being susceptible to 'nudges' (e.g. auto-enrolment is better than communications stressing pitfalls of not having pension).Behaviour change models are of limited use as individuals are not actively engaged in making rational decisions, while change is not within their gift.

4.6. Assisting people in later years is a particular issue, noting that financial literacy is reported to decline 1% to 2% each year after age 60, although the rate does not steepen with advanced

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[28] Mercer (2016) Lifetime Plus Member Guide

[29] Pensions Policy Institute (2015) *How might the UK pensions landscape evolve to support more flexible retirements*

[30] Spence Johnson (November 2015) *Deeper perspectives: The changing UK retirement income market*

[31] DWP (2012) *Extending working life: Behaviour change interventions* Research Report no 809

age[4]. This could be a particular issue for those seeking to buy an annuity at more advanced ages, a good strategy in many cases as noted earlier, as an annuity purchase is complex.

Provision of guidance & advice

4.7. In view of the complexity of choice, most people need assistance in making retirement choices, but individual advice is costly and impracticable for many. This is compounded by the lack of a clear definition of advice, which results in organisations being reluctant to offer much needed guidance, for fear of being accused of straying into advice with resultant financial penalties. Current consultation aims to address this, but no change is imminent.

4.8. Experience from around the world[20] reveals a mixture of approaches. For example, in the US employers have a fiduciary duty to provide advice, in Ireland guidance is generally provided by administrators, while in Chile the Regulator provides the guidance. In Denmark and New Zealand there are Government initiatives to improve understanding. In the Netherlands a pensions dashboard was recently introduced, incorporating both private and State pensions.

4.9. Provision of streamlines guidance[3] could be the solution, involving a simple decision tree combined with a limited set of pre-designed pathways to suit various needs. Since not everyone will make an active decision, there will be a need for a default pathway which offers flexibility to make changes at a later date[4].

4.10. Another suggestion[32] is that guidance be compulsory for larger DC pots, with rules of thumb being applied for smaller DC pots.

4.11. Provision of information is a key consideration[18], both at retirement and beyond. A proactive approach is needed to combat financial illiteracy. Ideas include standard information templates showing the pros and cons of various options, conversions of capital into income and life expectancy illustrations (to include the spouse) with attaching probabilities. The risk attached to making bad decisions needs to be explained, especially in absence of default options.

4.12. Online tools are now commonly available. One concern is that deterministic projections are misleading, in not conveying the level of uncertainty, such as the risk of poor returns in early years which can drastically alter the long-term average return achieved. It has therefore been proposed that stochastic projections are required[3].

4.13. A very actuarial approach to retirement planning is to compare the net present value of future liabilities with assets as in a valuation balance sheet[33].

4.14. Anticipating future investment return helps to make the outlook better. However, it has been suggested[34] that a risk-free return should be used for planning purposes, with investment risk an add-on recognising the uncertainty that it introduces. The risk-free approach is used in one published benchmark in the US for on a 20 year index-linked drawdown combined with a deferred annuity.

The decumulation market

4.15. A good retirement financial strategy[3] needs cost-effective solutions which help manage the risks, while providing the flexibility people want, with implementation facilitated for those unable or unwilling to make rational decisions. Proposed 'quasi-default' retirement income plans would have the following features:

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[32] New Zealand Society of Actuaries (16 November 2015) *Decumulation debate* Financial Services Forum

[33] Rudd & Siegel (2013) *Using an economic balance sheet for financial planning* Journal of Wealth Management, Vol. 16, No. 2: 2013

[34] Sexauer & Siegel (2013) *A pension promise to oneself*, CFA Institute Financial Analysts Journal, Vol. 69, No.3

- Drawdown in conjunction with a deferred annuity, or securing essential expenditure and offering flexibility for non-essentials
- 'Safe harbour' products with clearly explained features, flexible access and offering value-for-money.

4.16. Managing longevity risk is one of the key considerations, and in that context the main criteria identified[18] are:

- Adequacy: requiring intelligent default products offering flexibility in the early years and lifetime guarantee in later years
- Information: as discussed earlier
- Flexibility: product innovation to attract customers and meet their needs
- Equity: inter-generational and to be addressed through government policy
- Sustainability: low charges to ensure commercial attraction and hence long-term viability.

4.17. A recent suggestion[12] is to auto-annuitise at age 80, with the ability to opt-out, in order to protect against longevity risk while retaining freedom and choice.

4.18. In choosing retirement solutions, from an employer's perspective the biggest concerns[35] are fiduciary risk and cost. Reasons for a reluctance to use insurance products include administrative complexities, lack of portability, high fees and fiduciary risk.

4.19. The growth of master trusts offers an alternative to retail solutions and seem well suited to serve the mass retirement market.

4.20. One solution for hedging systematic longevity risk is for the Government to issue longevity bonds[3].

5. Research opportunities

5.1. Some thoughts for further research include:

- Alternative approaches to longevity pooling, involving exploring how much needs to be set aside and the levels of income that can be expected in later years along with the likely variability;
- How annuities could be amended to better serve the future;
- Design of a limited set of retirement pathways and criteria for allocating individuals to a particular pathways, perhaps through the use of profiles, and incorporating a default strategy for those who make no selection;
- Ways of communicating the relative merits of different options, and in particular the risks of making bad choices;
- The role of stochastic projections in explaining the risk of different options;
- A framework for advising people on an appropriate investment and longevity risk strategy, including explaining the damage caused by selling at the bottom of the market and when to purchase an annuity, and how to manage risks

[35] Willis Towers Watson (2016) *Lifetime income solutions: What actions are employers taking to reduce employees' longevity risk?*

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