A response from the Investment Association to NEST's consultation on 'The future of retirement'

10th February 2015

General comments

1. The Investment Association[1] is a long-standing supporter of greater flexibility in the provision of retirement income, allowing pension savers access to the right product at the right time in their lives. We are pleased to see that NEST, with its thought-leadership on investment approaches, is giving early thought to new decumulation approaches in the light of the new pensions freedoms.

2. We are neither an inherent advocate of drawdown nor a critic of annuity products. For many people, some form of annuitisation at some point in retirement is likely to be desirable. Equally, there is considerable scope for investment products, such as income funds or income drawdown, to support retirement income provision in a more widespread manner. The previous policy environment did not allow for such diversity.

3. Indeed, we believe that annuitisation and investment products, while both being ways of turning a DC pension pot into an income stream, serve different purposes. Annuities should be properly seen as providing longevity insurance while investment products provide an exposure to growth and income assets, giving individuals the opportunity to earn returns not available to them via traditional insurance products. In neither approach is it possible to fully eliminate risk – instead different risks are borne by the member with the choice of product representing a trade-off between these risks.

4. Investment products will expose members to investment risk and the risk of exhausting their fund if withdrawals are not made in a sustainable manner. However, when they come with a reasonable exposure to growth assets they may provide better protection against inflation risk[2] and possibly allow for a higher income than an annuity.

5. Annuities, on the other hand, provide protection against outliving one's savings and provide a secure and guaranteed income. However, on current behaviour, where most annuities sold in the UK are nominal, there is no inflation protection[3] and even though annuities remain good value when measured on a 'Money's Worth' basis[4], the inevitable consequence of falling long term interest rates and unanticipated increases in longevity is the low rates that have been seen in the annuities market for a number of years now.

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[1] The Investment Association represents the asset management industry operating in the UK. Our members include independent fund managers, the investment arms of retail banks, life insurers and investment banks, and the in-house managers of occupational pension schemes. They are responsible for the management of around £5 trillion of assets in the UK on behalf of domestic and overseas investors.

[2] Of course this will depend on the investment strategy followed; but any sensible retirement income investment strategy will have a reasonable allocation to assets that are more likely to provide protection against inflation then the standard fixed income portfolios backing annuity contracts.

[3] It is of course possible to purchase inflation-linked annuities but these are more expensive and for reasons unknown, not as popular with consumers.

[4] *FCA Occasional Paper No. 5, The value for money of annuities and other retirement income strategies in the UK*, December 2014.

6. Low annuity rates are particularly apparent at the ages where they are most typically purchased – ages 60 and 65. At such young ages, where the likelihood of living for many more years is still high, a product that insures against outliving savings is predictably expensive. Annuities would be far better employed later in life, when their value in providing longevity insurance is higher.

7. The real benefit of the pension freedoms is that there is no longer a binary choice between investment and insurance products, as was effectively the case under the pre-Budget 2014 arrangements. The new environment allows for sensible combinations of these classes of products which allow individuals to shape their retirement income in the way that is best for them. We believe there is a space for both investment and insurance products within a good retirement income strategy. The key is to make sure that individuals purchase the right product at the right time.

8. The remainder of our response focuses on the importance of default solutions and how investment products can be used to generate a retirement income as part of a good overall retirement income strategy. We focus in particular on income drawdown and income funds.

Answers to specific questions

Q10: What is the role of default strategies in the new regime and the run up to and throughout retirement?

9. The evidence in the NEST report summarises why default options are so important in pension saving. More recent research by the Pensions Policy Institute highlights the potential importance of defaults in the specific context of the freedom and choice agenda[5].

10. It should be noted however, that, if designing appropriate defaults in the accumulation stage is challenging, it is even more difficult in the decumulation stage due to the heterogeneity of member circumstances. While there may be differing member objectives for the default strategy in the accumulation phase, there is a strong shared underlying principle – maximising the assets available for retirement subject to member risk-tolerance. This is not necessarily true in the decumulation phase, where member preferences and resources could result in the very different outcomes of taking cash, continuing to invest, buying an annuity or combinations of these.

11. This plurality of circumstances and choice makes it harder for fiduciaries to make decisions on behalf of individuals. However, it could be argued that fiduciary duty and members' reasonable expectations of scheme decision makers require the latter to select an appropriate default for the scheme's membership. Importantly, this should reflect an assessment of member needs e.g. a sustainable income in some form. It does not prevent members from opting out should they wish to exercise the full freedom available to them.

[5] *'Supporting DC members with defaults and choices up to, and through retirement'*, Pensions Policy Institute, January 2015.

12. This would involve the scheme fiduciary taking a view on how members could best access their savings in retirement based on the information they have about their members and the expert advice they receive from their advisers. If there is a significant gap between what fiduciaries believe is likely to be the best strategy for a member and their likely behaviour, they could address this via their communication strategy.

13. Communication could be challenging though. Given the considerable amount of uncertainty faced by the majority of members in the run up to, and the initial phases of retirement, regarding when they might start to access their savings, how they might use them, their health in retirement etc. it is unclear whether early engagement regarding the investment or access strategy they pursue will have a significant impact on decisions and hence outcomes.

14. In principle, segmenting membership by different characteristics could lead to a different default for different groups, but identifying the right characteristics is challenging. Simply segmenting by pot size at the scheme level may not be sufficient – for each individual a holistic view of resources available to fund retirement is needed before deciding what to do with an individual pot. For example, someone with some DB income and income from another source may choose to do something different with their DC pot compared to a member who is solely reliant on their DC pot to generate a retirement income.

15. On the other hand, fiduciaries can only work on the basis of the information and advice that they have access to. Decision makers should try and maximise their information set wherever possible, but in the absence of any additional information about the circumstances and resources of the member, if it is felt that segmenting by pot size is likely to lead to more appropriate defaults for those groups of members, then that is a decision for the scheme fiduciary to make.

16. As a final point, we would note that, while default options are highly desirable, members' ability to engage in the future may improve. As the NEST consultation notes, the characteristics and experiences of the current generation of older DC members, who are more likely to have other resources for retirement, will be very different from those of future cohorts that will come to rely on their DC pensions to a much greater extent. Current low levels of engagement regarding investment and pensions should therefore not be taken as evidence of the degree of engagement by future cohorts of DC members.

Q17: Does investing through retirement, as an alternative to immediate annuitisation, have a significant role to play in meeting the retirement needs of DC savers?

17. As set out above, we do not see annuities and drawdown as competing products, but as complementary ones. Indeed, the debate has long since moved on from being about whether individuals should drawdown or annuitise. Increasing longevity has challenged conventional assumptions about the optimal age to annuitise and the best age to purchase an annuity is now up for debate. What is clear is that the benefits of

risk-pooling are not realised until later in life – and certainly not at the ages of 60 and 65, when the majority of annuities are currently purchased.

18. This in turn leads to the question of how to turn a DC pot into a sustainable retirement income. Some important analysis in this regard was set out in a 2009 research paper by Maurer and Somova[6], published by the European Fund and Asset Management Association (EFAMA), which demonstrated that the optimal retirement income strategy at age 65 would for many people involve holding a proportion of pension assets in equities early in retirement and switching to bond holdings and annuities progressively over time. Relative to annuitising fully at age 65 individuals following this optimal retirement income strategy can expect to achieve a significantly higher retirement income, at a comparatively low risk.

19. Modelling in this study shows that the median outcome from following such a strategy allows for a higher level of consumption than an annuity until age 82 (at which point the consumption level falls below that of an annuity). In other words, individuals have the potential to consume more than an annuity in the early part of their retirement, precisely when the probability of living an additional year is highest.

20. Looking across the distribution of outcomes, all but the worst 10% of outcomes under the mixed equity/bond/annuity portfolio result in superior outcomes – as measured by the present value of expected lifetime consumption – than annuitising fully at age 65. For all levels of household wealth, 70% of households can expect to enjoy substantially higher lifetime consumption levels if they follow the mixed retirement income strategy instead of annuitising fully.

21. The benefits of investing through retirement arise because with individuals living longer, the benefits of investment diversification extend well into retirement, as diversification creates the kind of upside potential not found in conventional annuities, while providing downside protection against the higher risks associated with a portfolio that is concentrated in equity holdings.

22. While precise numbers are of course a function of models and their underlying assumptions, this result should be fairly intuitive – a well-designed and executed investment portfolio with some exposure to growth assets will carry a risk premium relative to purchasing an annuity, which can be thought of as an investment in high-quality bonds (subject of course to adjustments resulting from pooled mortality risk). The expected return from investing in the mixed portfolio should therefore be higher. The key to good retirement income investment strategies is how to control the volatility that arises from taking risk. Some of the issues around this are discussed in our response to the next question.

23. In addition to the benefit of higher expected consumption, investing through retirement has two additional benefits over annuitisation on retirement that arise through the individual continuing to retain control over their money – increased

[6] '*Rethinking Retirement Income Strategies – How Can We Secure Better Outcomes for Future Retirees?*' Raimond Maurer and Barbara Somova, 2009, published by EFAMA.

flexibility to cope with changing circumstances and the ability to satisfy bequest motives. Both of these factors are likely to become more important over the course of retirement, suggesting that people are likely to be better off waiting to annuitise.

Q18: 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.**

24. Linking up our answers to questions 10 and 17, we believe that for the majority of members, a default strategy that is based on investing through retirement, combined with a degree of annuitisation later in life may lead to the best outcomes. We recognise, however, that NEST member expectations may focus on how the downside risk during the investment phase may be mitigated. This is likely to be a broader theme in the post-Budget retirement income debate.

25. In a retirement income strategy that is based heavily on investing through retirement, there is a significant role for defaults to play. This is because as with the accumulation stage:

    - There is potential for economies of scale in delivery costs.
    - They address behavioural biases, which may be particularly prevalent among inexperienced investors.
    - They overcome the inertia bias that is prevalent amongst investors who may be initially engaged at the point of entering a strategy but subsequently become disengaged, leaving them at risk of being in a strategy which may no longer be suitable for them – for example because their circumstances or needs change over time.

26. A decumulation stage default strategy could also embed an appropriate drawdown rate (see below for further analysis of this issue) thereby assisting members not to drawdown their funds too quickly in retirement. Member engagement could be focused on the more tangible issue about what outcomes might be from such a strategy.

27. Good governance must be at the heart of any good default strategy. As with the accumulation stage, scheme fiduciaries should clearly set and state the investment objectives and beliefs of the default strategy and then ensure that this is implemented effectively. The fiduciary can then effectively independently monitor the performance of the strategy and sustainability of withdrawal rates in the best interests of the members.

28. An effective default strategy is likely to be a mass-market (non-advised) multi-asset fund whose asset allocation actively changes as best thinking, regulation and markets evolve. Such funds are likely to:

    - Involve a focus on volatility management – particularly on the downside and in the early years of retirement, given sequencing risk[7] and retirees' likely limited capacity to absorb losses;
    - Aim for stable (but not fixed) pay-outs that are responsive to the market environment;
    - Have sustainable pay-out rules that do not exhaust the fund.

29. One additional key principle that a default strategy should embed is the right of the member to choose to exit the strategy at any point and at no penal cost (including the ability to cash out). This is easily achievable in an investment product but it does raise an interesting question with respect to the balance between investment and insurance products in a default strategy that relies on both.

30. The need for flexibility along with the cost of guarantees probably precludes their provision through investment products in a default strategy. Guaranteed retirement income streams are likely to be best provided through annuities purchased by or on behalf of the member. The degree of certainty desired will involve a trade-off between that certainty and the degree of flexibility, including the member's ability to opt out of the default strategy. This is a further factor that scheme fiduciaries will need to consider when choosing an appropriate default strategy.

31. The investment industry has provided significant innovation in the multi-asset space over recent years in the form of total return funds, diversified growth funds and target date funds. Such solutions have significantly increased the investment sophistication of what smaller investors such as DC members can invest in, offering risk-management at reasonable cost with in-built governance. We may also see greater innovation in income funds, which have long been a feature of the investment fund market.

32. Product providers – either asset managers seeking to work with insurers or vertically integrated providers – will be in a position to combine these types of investment innovation with insurance products to design integrated 'third-way' products that can be used to provide retirement income strategies of the type described in our answer to Q17.

33. We leave the analysis of the insurance elements of such products to others and instead focus on some of the issues to consider when looking at investment approaches to delivering retirement income. In particular we examine two approaches to investing through retirement – income drawdown, which is well established in the pensions market, and income funds, which while common in the

[7] Sequencing risk refers to the impact of poor returns in the early years of the decumulation stage – such negative outcomes can be very hard to recover from and significantly increase the risk of exhausting one's pension pot. Thus mitigating this risk is of key importance for a sustainable retirement income strategy.

retail funds sector, have not traditionally been used as a way of accessing a DC pension pot.

An analysis of income drawdown – comparison between different withdrawal patterns

34. Income drawdown is the traditional way of taking an income from a DC pension while continuing to remain invested. As the name suggests, it is consistent with using up pension saving over time and as such, in the absence of a bequest motive, is an efficient way to use pension savings to finance consumption in retirement.

35. There are two key design issues to think about in an income drawdown product: asset allocation and withdrawal rates. Asset allocation will be based on taking into account member objectives, risk-reward preferences and volatility management – there will be many different strategies available to cater for different preferences in this area. In choosing default drawdown strategies, scheme fiduciaries will, as with the accumulation phase, need to define investment objectives for the membership that can then be used to inform an appropriate asset allocation strategy.

36. Our response focuses on the question of design appropriate withdrawal rates, which is a more objective question. The selection of a suitable withdrawal rate is about managing the trade-offs between providing an adequate income while using the fund in an efficient fashion – neither consuming so much that the fund is exhausted long before the individual is expected to die, nor consuming so little as to provide an inadequate income while leaving the fund largely intact, such that a large amount is left on death. We would argue that withdrawal rates should be embedded into the default strategy by the investment manager, thereby taking the decision-making burden away from individuals and scheme fiduciaries.

37. The material that follows is taken from a paper[8] that we published in 2008. Different income drawdown strategies contain within them different risk and reward profiles. One common perception about the danger of income drawdown is the risk of exhausting the fund. It is undeniably the case that exhausting the fund is a real concern with any approach to withdrawal that uses a fixed monetary value per year.

38. However, our research demonstrated that is it possible to construct an approach where an individual, by definition, never actually exhausts the fund and where the risk of a fund that performs extremely poorly is comparatively low. Crucially, in none of our approaches were individuals assumed to vary their withdrawal rates away from the specified percentages from year to year (although providers could decide to find a way of smoothing income). The withdrawal operates according to a simple rule depending on the strategy.

39. Based on an asset mix of 60% equities, 20% bonds and 20% cash products, we used stochastic modelling to generate a distribution of possible future financial market outcomes in order to analyse the following different strategies for a 65-year old male retiree:

[8] '*Modelling Income Drawdown Strategies*' IMA Research Paper, March 2008.

- A fixed value per year;
- A fixed percentage of the remaining fund per year;
- A variable percentage of the remaining fund per year; and
- An approach related to an individual's remaining life expectancy.

40. In addition to looking at the median values for the income stream and residual fund size, we also examined the outcomes for the 10th and 90th percentiles, in order to ascertain better the magnitude of risk and reward for individuals in the event of significantly poor or strong performance by their fund. The percentiles illustrate confidence intervals for simulated time periods: i.e. the 10th and 90th percentiles illustrate the outcome that might occur 10% of the time for a given age cohort (e.g. those who start drawing down in year x).

41. Unless otherwise stated, all results are presented in real terms. The most natural way to compare the income generated by different drawdown strategies is with an annuity. The research used the prevailing rate available on an index-linked annuity in October 2007, at the time the analysis was completed. Given the uncertainty around future inflation, an index-linked annuity was deemed to be the most suitable for comparison with a real income stream from a diversified portfolio.

Fixed value per year

42. With respect to fixed value withdrawal strategies, two approaches were modelled, starting at age 65: one based on 4.66p per £1 in real terms, which was the prevailing index linked annuity rate when the research was completed, and 5.59p per £1, or 120% of the prevailing annuity rate[9] at the time of the research. The results of this exercise are shows in table 1.

Table 1: Fixed value (real terms) withdrawals and life of fund

Withdrawal amount starting at age 65	**Age at which funds run out**		
	10th Percentile	**Median**	**90th Percentile**
4.66p per £1	**83**	**98**	**>110**
5.59p per £1	**80**	**90**	**>110**

43. In both approaches, the risk of running out of money is very real and almost certainly unacceptable given likely improvements in longevity. With the 10th percentile (i.e. 90% of the time you will do better) running out at 82 even when only withdrawing the annuity rate, it makes no sense for the individual not to take advantage of the risk pooling and greater income certainty offered by a standard annuity.

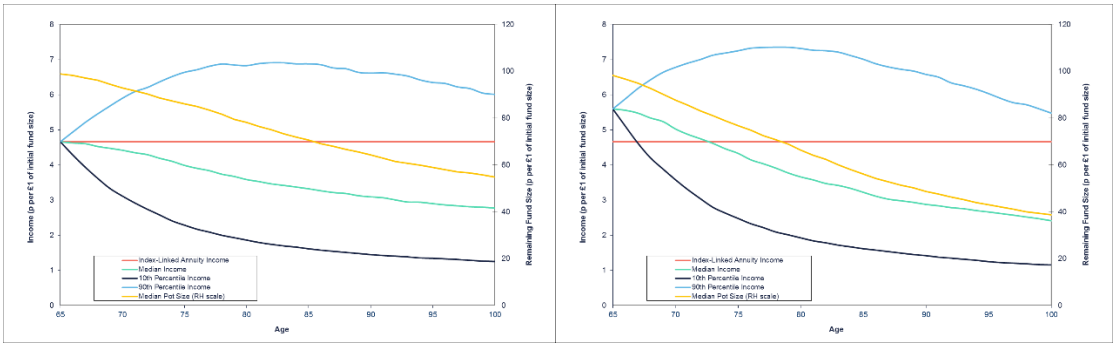
[9] The prevailing income drawdown rules at the time allowed for a maximum withdrawal of 120% of the Government Actuary's Department's quoted annuity rate. Current rules allow for a maximum of 150% and from 6th April 2015, the limit will disappear entirely.

Fixed percentage of the remaining fund per year

44. One alternative to fixed value withdrawal strategies is an approach using fixed percentages. The great advantage of this strategy is simplicity: every year, a set percentage of what is left is removed. However, as Figures 1(i) and 1(ii) show[10] based on withdrawals of 4.66% and 5.59%, the balance between fund size and withdrawal rate is not good from the point of view of gradual consumption of pension assets through retirement. Where the withdrawal rate is similar to the expected rate of return on the investment, the pension fund remains more or less intact. If the bequest motive is incredibly strong, perhaps this may be an acceptable strategy for an individual, but probably not from a public policy perspective.

Figure 1: Fixed percentage withdrawals

(i) 4.66% **(ii) 5.59%**



Variable percentage of the remaining fund per year

45. Given the residual pot sizes left over under the fixed percentages are rather high, the research then considered the results from modelling a series of variable percentages:

- ***Linear increase***, from 110% of the index-linked annuity rate (5.13%) for a 65 year old man to a maximum of 23.13% for a 110 year old man.
- ***Equivalent annuity***, taking quoted annuity rates between 65 and 75 and extrapolating forward based on increasing age and upwardly adjusting the withdrawal rate to reflect this.
- ***Canadian approach***, based on the rules for minimum withdrawals in the Registered Retirement Income Fund (RRIF) pension scheme used for income drawdown in Canada.
- ***Exponential increase***, from 110% of the index-linked annuity rate (5.13%) for a 65 year old man to almost 100% for a 110 year old man.

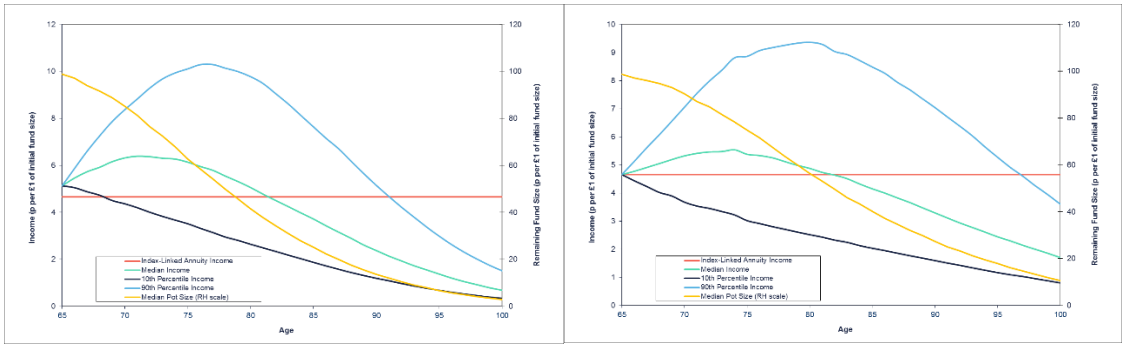
46. Using a linear increase certainly retains the advantage of simplicity. However, while this provides an income above an annuity for the first fifteen years for the median case, the likelihood of income peaking some years into retirement may not be

[10]With respect to the reading of figures, both the income streams and median pot size are presented on the same chart. The left hand axis represents the value of the income stream per £1 of initial pot size. So for example if the value aged 65 is 0.0466, an income of 4.66p per £1 can be expected. Hence, an individual with an initial pot of £100,000 would receive a payment of £4,660. The median, 10th and 90th percentiles all correspond to this axis. The right hand axis measures the remaining pot size. This is measured as a value per £1 of initial pot size. For example a value of 0.910 means that 91p per £1 of the initial pot size remains. The individual who started with £100,000 would have £91,000 remaining.

advantageous in terms of likely consumption patterns. This is illustrated in Figure 2(i).

Figure 2: Variable percentage

(i) Linearly increasing **(ii) Equivalent annuity**

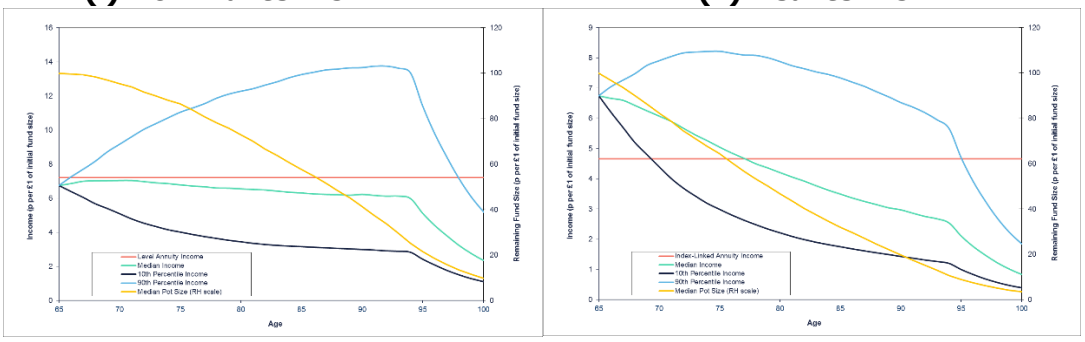


47. The 'equivalent annuity' approach suffers from a similar potential problem, with the income peaking at around the age of 75, although the subsequent decline in income is less marked than under the linear approach (Figure 2(ii)).

48. This challenge of ensuring a more steady income is even more starkly illustrated in the Canadian RRIF. As the RRIF is designed to provide a level income in nominal terms, it was simulated in those terms and sees a gradual decrease in income in the median case, but with a very sharp drop around the age of 95 (see Figure 3(i)). However, this decrease becomes much more pronounced when this income flow is considered in real terms, falling by the age of 85 to around 50% of the age 65 income (see Figure 3(ii)).

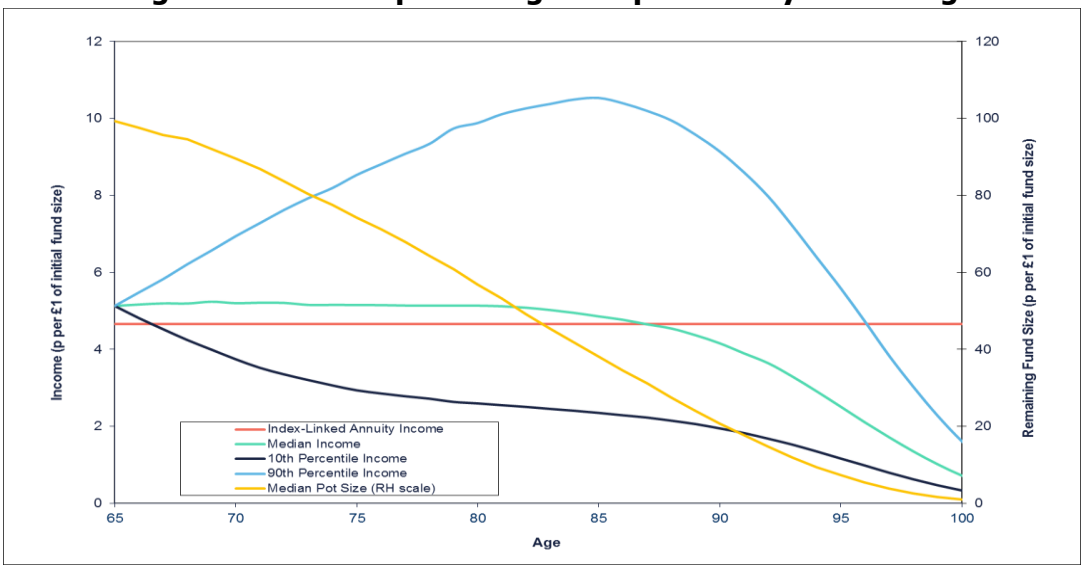
Figure 3: Canadian RFIF

(i) Nominal terms **(ii) Real terms**



49. One way of addressing this uneven income stream is to use an exponential approach, which combines increasing percentage withdrawal with a falling fund size, in order to stabilise the income flow. As illustrated in Figure 4, this leads to a reasonably steady income for the median case, dropping in the later years from 85 onwards.

Figure 4: Variable percentage – Exponentially increasing

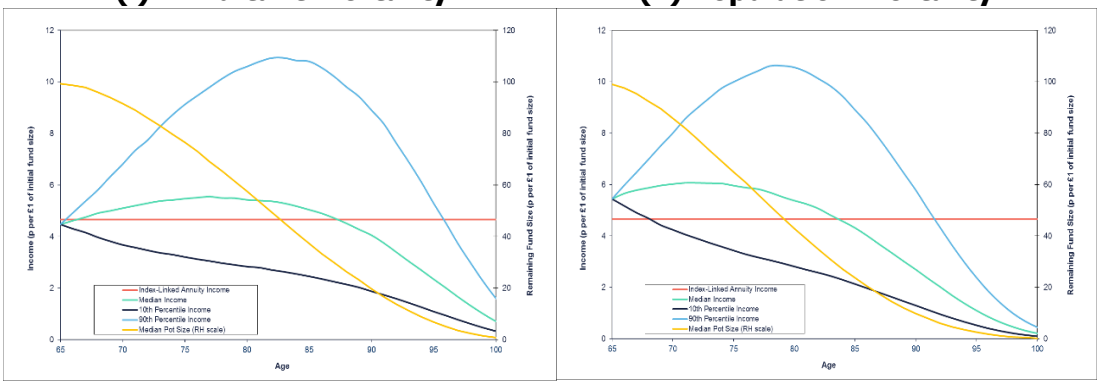


Withdrawals as a function of remaining life expectancy

50. Finally, the research considered a 1/E(t) approach where the income withdrawn is dependent on the pension holder's life expectancy at the given year t. This was modelled using both life expectancies for the annuitant population and the broader population. While this approach has a high fund growth potential due to lower withdrawals in early years (i.e. the fund remains relatively intact), this low level of withdrawal may be a substantial disadvantage from an income perspective. Income peaks in the mid-to-late 80s in the median case for both groups. See Figures 5(i) and 5(ii).

Figure 5: 1/E(t) based on:

(i) Annuitant mortality **(ii) Population mortality**



Some observations on income drawdown as an approach to investing through retirement

51. As well the above analysis of different withdrawal strategies, our research also included the calculation of the Money's Worth of annuities and drawdown[11] under

[11] For income drawdown strategies, our research used a Money's Worth calculation to estimate the likely return per £1 of the original pension pot that would be received in retirement, when compared with the risk free rate. In this way, Money's Worth, rather than being a measure of the value for money available from a drawdown product, is instead used as a way of illustrating the potential return in an income drawdown strategy. A value greater than one, as we frequently find when modelling returns in income drawdown strategies measures a likely return compared to the risk free rate as a proportion of the original premium.

these different withdrawal strategies. This work demonstrated that drawdown had considerable scope to provide good returns to pension savers.

52. Returning to the perceived risk that individuals can exhaust the fund and run out of money, there is an additional point to make here beyond the fact demonstrated by the research that this can be easily avoided with an appropriate withdrawal strategy. Namely, that DC pension entitlements must be seen in the context of other resources available to individuals to fund their retirement. Many will have access to other DC or DB entitlements and other sources of income, including the State Pension and access to means-tested benefits. These State entitlements ensure that it is impossible for anyone to 'run out of money'.

53. In summary, it is clear from the modelling results presented above just how important withdrawal strategy is in determining not only the actual evolution of the fund size, but the shape of the income stream year-on-year. With the exception of the fixed value strategies, the only strategy where the money simply runs out, the two are intricately intertwined.

54. However, it is not the intention of this response to put forward a 'best of breed' solution for income drawdown. Income stream preferences may vary considerably between individuals for personal or perhaps anticipated health reasons. The shape of the income stream most suitable for members is one of the points that scheme fiduciaries must think about when defining their default retirement income strategy.

Income funds – an alternative to traditional income drawdown

55. An alternative to traditional income drawdown could be income funds. These are well established products in the retail funds market but have thus far not been used in the DC pensions market as a way of accessing a pension pot. They could be an alternative to traditional drawdown products, particularly where people have strong bequest motives.

56. Income funds invest in income-generating securities with the specific aim of providing the investor with an income, while leaving the capital invested. Of course, market fluctuations could erode the value of the capital, but in theory the capital should not be depleted as much as under a traditional drawdown strategy, where the focus, as highlighted above, is on ultimately drawing down the fund. This desire to preserve capital is why income funds may be a superior alternative to drawdown where there is a strong bequest motive.

57. To examine the potential of income funds to provide a secure and sustainable stream of income in retirement, we simulated an income fund using the historic performance of the UK stock market between 1900 and 2013. The fund pays out dividends every year to investors over consecutive 30 year periods, starting with that which ends in 1929 and finishing with that which ends in 2013 (i.e. the performance of a £100,000 investment over 30 years made at the *start* of 1900, 1901 etc. up to 1984).

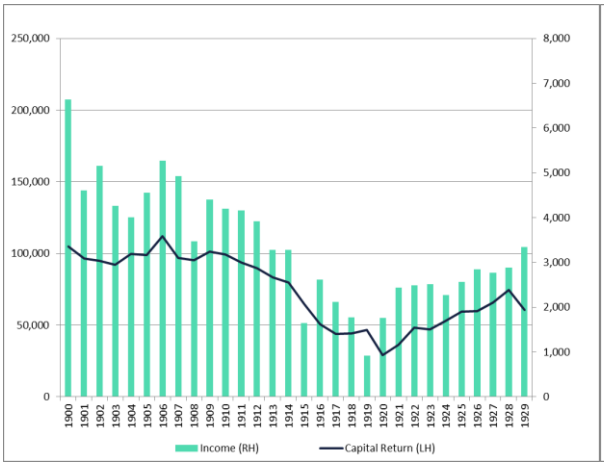
58. The results of this analysis confirm the viability of an income strategy and suggest that the volatility in the capital value (particularly on the downside) does not

translate as strongly into volatility in annual income, which remains relatively stable over time, at a rate of 3-5% per annum.

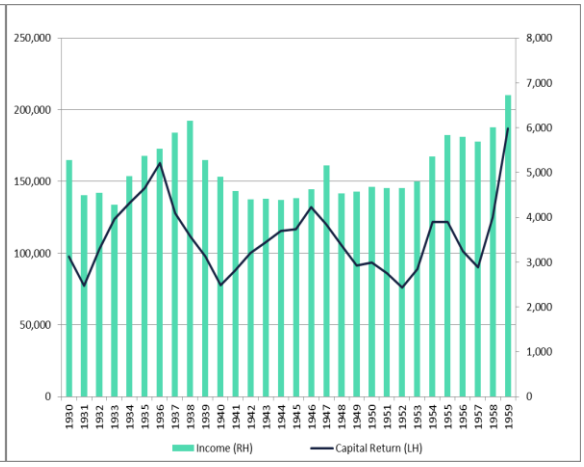
59. By way of simple examples derived from these results, we show four successive 30 year periods[12] spanning 1899 - 2013. These are shown in figures 6(i) – 6(iv) below.

Figure 6: Historic performance of a UK equity income fund – capital value of an initial £100,000 investment and the annual income generated

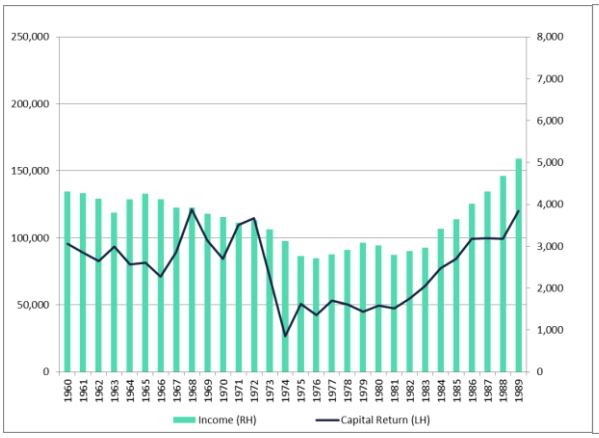
(i) 1900 – 1929



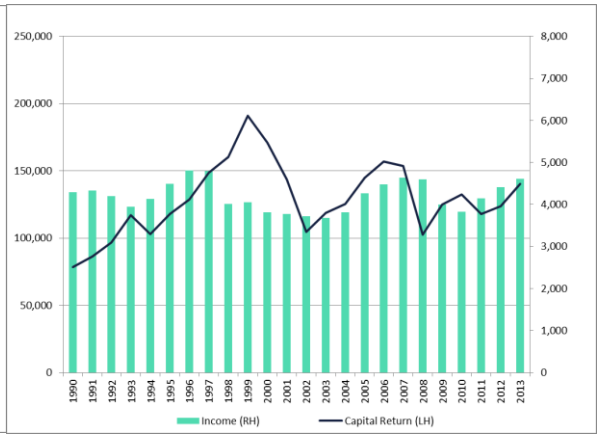
(ii) 1930 – 1959



(iii) 1960 – 1989



(iv) 1990 – 2013



Source: Investment Association analysis of data from Barclays Capital Equity-Gilt Study

60. In each case, £100,000 is invested at the start of each period. The dark blue line (read on the left hand axis of each chart) shows the capital value of the initial investment made, while the aqua bars show the income generated annually (read on the right hand axis). All figures are in real terms.

61. The capital value is clearly very volatile in all four of these periods, which is unsurprising since this is an equity fund. However, from the perspective of a pensioner seeking to derive a stable income, the crucial feature to consider is the annual income that is paid out.

[12] The last period is only 24 years due to availability of data.

62. While the profile of the annual income paid out over these four periods does, as would be expected, exhibit some correlation with the underlying capital value, in general the income paid out is much more stable than the capital. It is only in the first of the four periods considered that there is a prolonged fall in income, between 1906 and 1919.

63. Of course, this analysis is based on a 100% UK equity allocation – an income fund designed specifically for retirement would be likely to have a more diversified approach, both in geography and asset allocation, which would help reduce some of the volatility seen in the charts, a feature that is likely to be key in retirement, given individuals' reduced capacity to recover from losses.

64. Nevertheless, what this analysis demonstrates is that there is potential for an income fund both to provide a reasonably secure and sustainable income while preserving capital for bequest purposes – it is noticeable from the charts that while capital may be volatile, it is not depleted to the extent seen in the income drawdown analysis. We believe that such approaches should therefore also be part of the choices available to retirees thinking about how to access their DC pension using investment products.