Institute and Faculty of Actuaries

Can we help consumers avoid running out of money in retirement?

Policy briefing

Key findings

1. **What are the most important factors to consider in order to minimise the risk of consumers' pensions running out during retirement?**

   Consumers must balance the amount of income they withdraw against how long they might live to avoid running out of money.

   To have a high likelihood of a sustainable income using drawdown a typical 65 year old would need to take their pension at flat rate of 3.5% (i.e. £3,500 from a £100,000 pot). In comparison, a typical 65 year old could expect to receive 4.5%-5.5% per annum from a level annuity (i.e. £4,500-£5,500 from a £100,000 pot).

   The investment strategy also affects income sustainability and the range of outcomes. The difference between a balanced and either a cautious or adventurous investment strategy could be equivalent to around 4 years' worth of income.

2. **How does combining drawdown and annuitisation affect consumer outcomes?**

   Consumers can reduce the risk of a low income due to living longer than expected or adverse market conditions by combining drawdown with annuities. This enables them to balance flexible access vs a guaranteed income and has the potential to increase the level of income they are able to generate from their pot.

   9 out of 10 typical 65 year olds are highly likely to be able to purchase an annuity worth at least 3.5% per annum at age 75 if they take their pension at a flat rate of 3.5% via drawdown for the first 10 years of their retirement. On average these consumers could expect an income of around 6.4% once they annuitise (i.e. £6,400 from a £100,000 pot).

Ageing population

Informing the debate

March 2018

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Introduction

Background

In April 2015, the Government introduced fundamental reforms to how consumers can access their defined contribution (DC) pensions savings. Two of the most significant changes were:

- to remove restrictions on how much consumers can withdraw from their pension in any given year; and
- to remove the effective need to buy an annuity at age 75.

These reforms have significantly increased consumer choice and this has proven popular. Over one million DC pots have been accessed since the implementation of these reforms in April 2016.[i] In addition, consumers are increasingly opting to withdraw their DC pension savings via products that offer flexibility. The Financial Conduct Authority's (FCA's) Retirement Outcomes Review Interim Report (July 2017) found that since the implementation of the reforms, twice as many consumers are opting for drawdown products rather than annuities. There has also been a sharp increase in the proportion of drawdown products being purchased without regulated financial advice, rising from 5% prior to the introduction of the freedoms to 30% post-freedom and choice.[ii]

This shift towards products that do not offer an element of guarantee, combined with low uptake of advice, raises concerns that consumers may be at risk of running out of money in retirement. We appreciate that many individuals currently approaching retirement are likely to have defined benefit (DB) arrangements that will provide them with a secure income. However, the proportion of people approaching retirement that do not have DB arrangements is set to increase. Private sector DB membership has declined to around 1.4 million active members by 2017, whereas there are anticipated to be 14.2 million people saving into a DC pension by 2035.[iii]

Therefore, we have focused this research on how individuals can use their DC pension to achieve a sustainable retirement income as increasingly consumers will be reliant on their DC arrangements to secure their retirement income. We appreciate that many consumers will have additional sources of wealth such as the equity in their homes. This is outside the scope of our modelling as we wanted to focus on the role of DC pensions in delivering a sustainable retirement income. However, when communicating with consumers about their retirement income other sources of wealth should not be overlooked.

The purpose of this report is to develop information and some useful 'rules of thumb' for consumers who would benefit from using their DC pensions to generate a secure and sustainable retirement income.

The questions we have set out to answer are:

1. What are the most important factors to consider in order to minimise the risk of consumers' pensions running out during retirement?
2. How could a combination of drawdown and annuitisation affect consumer outcomes?

Our analysis is aimed at those consumers with £30,000 to £250,000 in DC pension savings as:

- the FCA Retirement Outcome Review (noted above) found that 90% of pots under £30,000 accessed since the freedoms were fully withdrawn; and
- the FCA Financial Advice Market Review found that those with greater wealth are more likely to take advice.[iv]

Therefore, we suggest that those consumers with pots between £30,000 and £250,000 are most likely to be considering partial withdrawal, but not seeking financial advice, and as a result are more likely to need greater support when considering drawdown products.

This support could be in the form of greater information and guidance on the potential benefits of hybrid solutions and the range of questions a consumer should be thinking about when making decisions regarding a hybrid approach. Alternatively, these consumers could be assisted by providers who offer non-advised hybrid solutions. We are aware of a number of industry initiatives to make these types of solutions more widely available, for example NEST's blueprint for its members.[v] However, there has been limited take-up of these types of products from the few firms that have developed them. To date these types of products have been sold through advised channels, which may also be acting as a barrier.[vi]

Results

What are the most important factors to consider in order to minimise the risk of consumers' pensions running out during retirement?

- Our modelling found that the two main factors to help provide a sustainable income were the age consumers start drawdown and the rate they withdraw their savings. We found that a consumer in normal health who enters drawdown at age 65 has a high likelihood of generating a sustainable income if they withdraw 3.5% per annum i.e. equivalent to £3,500 from a £100,000 pot.
- Comparatively, in the current environment a typical consumer at age 65 could expect to receive around 4.5%-5.5% of their pot value per annum from an annuity. This is because the annuity provider is able to pool risk among its customers, allowing them to offer a higher rate of income.
- If the individual starts drawdown at age 55 (the eligible age of access since the freedom and choice reforms) then the 3.5% reduces to 3% per annum. For example, if someone has a £100,000 DC pension pot and they access it from age 55, rather than from 65 (the current State Pension age for males), it would reduce their sustainable level of annual income from £3,500 to £3,000 per annum.*
- Our modelling found that, while secondary to the age of withdrawal and rate of withdrawal, the investment strategy influences the level of retirement income that is sustainable. Our analysis of drawdown found that the difference between a balanced strategy and a cautious or adventurous strategy could be equivalent to around four years' worth income.

How could a combination of drawdown and annuitisation affect consumer outcomes?

- Our modelling compared consumers who either bought just a drawdown product or just an annuity with different strategies that combine both drawdown and annuitisation. We found that a combination of products is beneficial. For example, consumers aged 65 could benefit from either:
  - using drawdown for 5 to 10 years and then purchasing an annuity, or
  - combining annuitisation and drawdown for 5 to 10 years and then fully annuitising.

  9 out of 10 customers using a balanced strategy and taking £3,500 per annum between the ages of 65 and 75 could expect to buy a level annuity of more than £3,500 per annum at age 75.
- Our analysis of a combination of drawdown and annuitisation demonstrates how riskier investment strategies increase the range of possible outcomes for consumers.
- It should be noted that our analysis is based on life expectancy for the general population and as a result those in poorer health may benefit from a different approach than those in average or good health.

Recommendations

Given these findings, we recommend that the main questions that consumers should consider when deciding which retirement products will best meet their needs are:

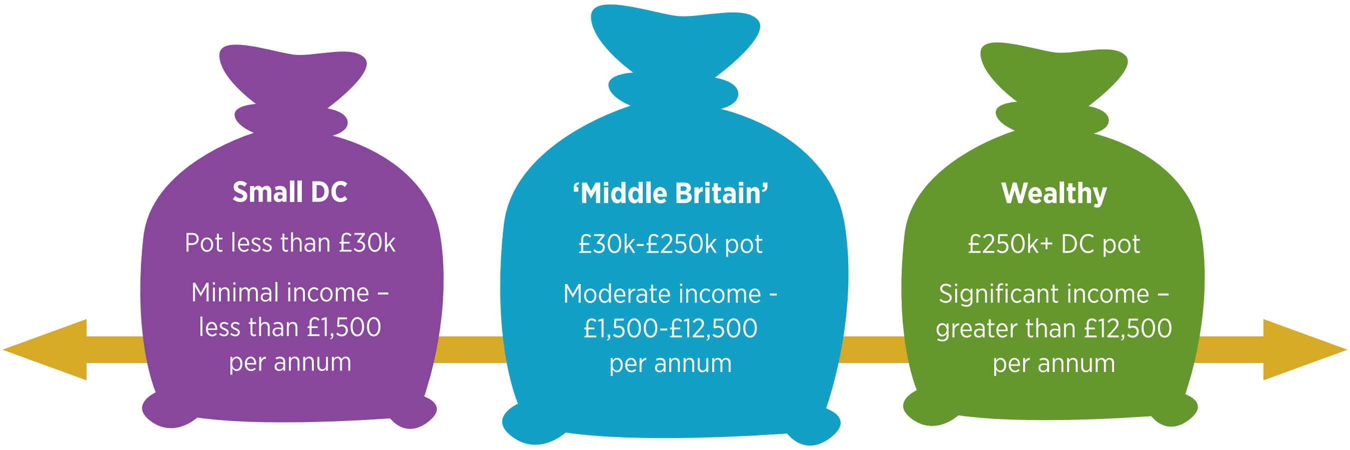
- How much income do I need to meet my needs?
- How long do I need my savings to last?
  - What age would I like to start withdrawing my pension?
  - What is my current health status?
- Would I get a better return from a drawdown product or an annuity?
- How much risk would I like to take?
  - Would I like to secure my income for life?
  - If so, at what age would it be most beneficial to do that?
  - What investment strategy is best for me:
    - Would I prefer greater certainty in how much income I can expect to generate from my savings even if this meant I may get a lower level of income i.e. am I cautious? or
    - Would I be prepared to take on more risk, which would increase the range of potential levels of income I am able to withdraw, as there is the potential for a higher return i.e. am I adventurous?

Our analysis suggests that consumers would benefit from reviewing these questions throughout their retirement, rather than planning to make a one off decision at retirement to either enter into drawdown or annuitise.

We hope that our findings better enable guidance services, pension providers and consumers alike to consider how those who purchase a drawdown product, without regulated financial advice, might secure an adequate and sustainable retirement income.

* This based on the consumer having a £100,000 pot and based on life expectancy being the age at which 1 in 4 people are expected to survive (this is greater than average life expectancy).

Our approach



Note: Figures are indicative levels at age 65

Consumer profiles

We have divided DC consumers into three broad categories based on their DC wealth and therefore the income they can generate with those savings, as evidence shows that this affects what decisions consumers make regarding how they withdraw these savings and how they make that decision (i.e. advised or non-advised). Our analysis focuses on those consumers who are able to generate a moderate income, or 'Middle Britain', as this category is most likely to benefit from improved free information / guidance on how they can turn their savings into a sustainable retirement income.

Wealthy

Those consumers with greater wealth are more likely to pay for financial advice. This is because they are more likely to have complex financial arrangements where the value of seeking advice is clear and, importantly, they are better able to afford it. This is because in addition to their DC pension they are likely to have other assets, including DB pensions, investments and, crucially, housing equity.[vii]

Small DC

'Small DC' consumers have relatively small DC pension provision and are likely to rely mainly on State Pension provision. 'Small DC' consumers may benefit from taking their DC pension as cash. This could be because:

- the pot is so small that any income would be minimal and not worth the effort
- charges can be too high in any product that can provide an income
- products are not available to people with very small pots.

Consequently, these consumers are more likely to benefit from information on benefit entitlement and taxation, rather than on how they might secure an income in retirement.

Middle Britain

We have focused on 'Middle Britain' consumers whose level of DC savings would generate a moderate income (between £1,500 and £12,500 per annum) but who are unlikely to seek financial advice. Due to the transition between DB and DC and the implementation of automatic enrolment, we anticipate this to be an increasing proportion of the population.

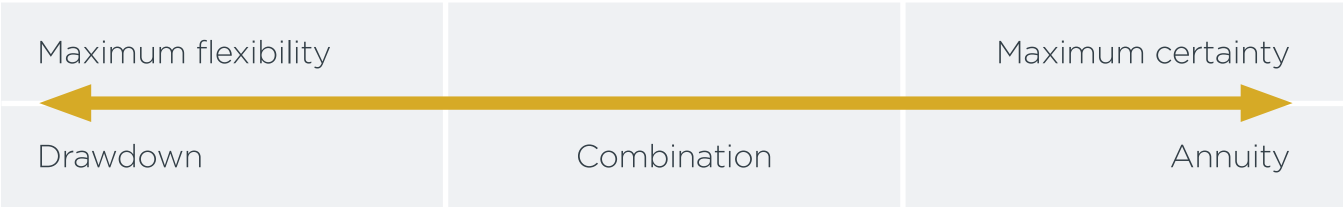
A key consideration will be over how many years the money should be withdrawn and how much should be withdrawn per annum. In addition to wanting to create a sustainable income the other main consideration for the rate of withdrawals are:

- tax as the income will be taxed at the individual's marginal rate of tax
- whether they have other assets at their disposal (current housing trends suggest in the future this growing proportion of 'middle Britain' are also less likely to have housing equity, making the case for turning their DC pension into a sustainable income even more important [viii])
- charges for products, as initial data post-freedoms is showing that few people are shopping around before purchasing drawdown products.[ix]

To manage these complex considerations without financial advice is challenging, which is why we believe this group is in greatest need of information and guidance.

Range of options

‘Middle Britain’ consumers are able to take a wide range of decisions that can correspondingly lead to a wide range of outcomes. We have used the following simple approach to help create a framework for our analysis:



Flexibility

Consumers who value flexibility above all may be better served by entering into drawdown in retirement. However, this means the consumers takes on all longevity and investment risks themselves. To manage these risks individuals may have to engage with their pension and make a series of decisions throughout their retirement. This approach means that should the individual die before their pot runs out any remaining funds will transfer to their estate.

Certainty

Consumers who wish to secure their income throughout retirement may be better served by purchasing an annuity. However, this comes with a reduction in their ability to flex their income, up or down, to reflect their changing needs in retirement. It also requires them to make decisions about how they might wish to pass on pension wealth to their families, for example by purchasing spouse’s benefits or guarantees, or by using the certainty of their future income to give them greater confidence in gifting other assets during their lifetime.

Combination

As an alternative to these extremes, it may be more suitable for some consumers to use an approach that combines features of both. This could allow flexibility during the earlier stages of their retirement with longevity protection at the end.

In our analysis of this sliding scale between flexibility and certainty our primary goal has been to avoid running out of money. We appreciate, though, that different individuals will have different aims in their retirement planning and will place different values on different outcomes. Nevertheless, we felt that the most pressing need for the majority of individuals would be to ensure they do not exhaust their drawdown pot during their lifetime.

Results

There are a number of factors that need to be managed if we are to help consumers avoid running out of money in retirement. A combination of drawdown and annuity can help to manage this risk and increase the likelihood of a good consumer outcome.

What are the most important factors to consider in order to minimise the risk of consumers' pensions running out during retirement?

The most influential determinant of how long an individual's DC pension income will last is how much they take out. Although this is intuitive, there is still significant debate around how much money consumers can reasonably withdraw each year without running out of money in retirement. The aim of our analysis is to investigate whether there is a withdrawal rate that is likely to be sustainable for our 'Middle Britain' consumer who is in average or good health – those in poor health are likely to have a shorter life expectancy and may therefore benefit from an alternative strategy. We hope that analysis such as this can help provide consumers with a rule of thumb, or at least a starting figure, from which to decide an appropriate amount to withdraw from their pension (if their aim is to not run out of money) in the current environment.

Figure 1 shows the probability of exhausting the fund after a set number of years for consumers employing different withdrawal rates (these are expressed as a percentage of the initial fund value).

Our modelling shows that an income rate of 3.5% is highly likely to be sustainable as there is a 90% probability of a £100,000 pot withdrawn at this rate, from age 65, not running out after 30 years.[x] As the focus of this analysis is 'Middle Britain' consumers who are not likely to access financial advice, we have intentionally sought a greater level of certainty than might be appropriate for advised consumers.

Consumers withdrawing at a higher rate than 3.5% per annum increase the risk of running out of money. Our analysis suggests that once the rate of withdrawal is 5% per annum or greater it is unlikely to be sustainable. Those in poor health might consider a higher rate of withdrawal as being sustainable, given their shorter life expectancy.

By comparison, in the current environment 3.5% per annum is approximately 1%-2% lower than a typical consumer at age 65 could expect to receive per annum from an annuity. This is because the annuity provider is able to pool risk among its consumers, allowing it to offer consumers a higher rate of income.

Figure 2 (overleaf) shows the median fund values for a variety of income levels using a balanced multi-asset strategy.

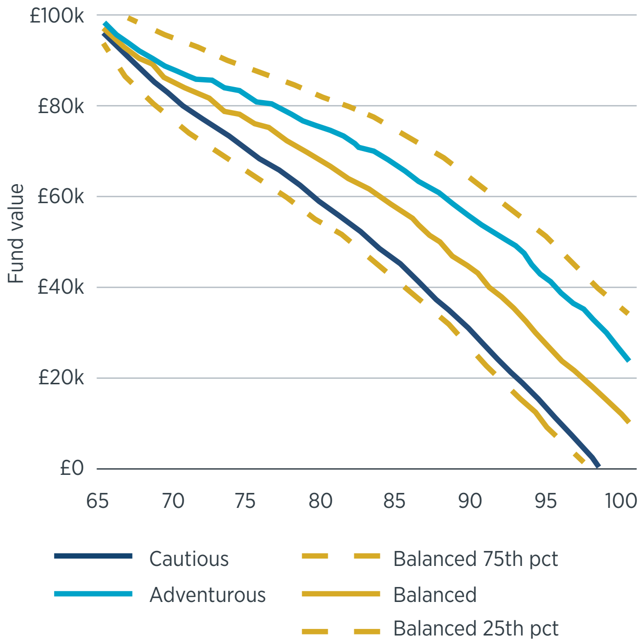
Figure 1: Probability of not exhausting funds based on amount withdrawn per annum and number of years withdrawn

Term	Income Rate								
(years)	1%	2%	3%	3.5%	4%	5%	6%	7%	8%
10	100%	100%	100%	100%	100%	100%	100%	100%	100%
15	100%	100%	100%	100%	100%	100%	98%	81%	36%
20	100%	100%	100%	100%	100%	89%	49%	7%	0%
25	100%	100%	100%	98%	92%	50%	6%	0%	0%
30	100%	100%	97%	90%	70%	13%	0%	0%	0%

Note: A 100% figure indicates that none of the 1,000 stochastic scenarios used in our modelling led to the fund being exhausted at the relevant time, suggesting that there is only a very low chance of running out of money

Figure 2: Median fund value with balanced investment strategy for £3,500, £4,000, £5,000 and £6,000 per annum withdrawal rates

Figure 3: Median fund value with £3,500 per annum withdrawal under different investment strategies



It is clear that the rate at which funds are withdrawn creates a significant difference in the length of time the accumulated pot will last. Our model found the median outcome from withdrawing £3,500 per annum (3.5% of a £100,000 pot) lasts beyond age 100. When withdrawing £4,000 per annum where the investment strategy is balanced the median outcome is that funds run out around age 96, this gives an additional eight years of income compared to the £5,000 strategy. A withdrawal rate of £6,000 per annum is unlikely to last to age 85. Cohort life expectancy for males and females aged 65 are 86 and 88-89 respectively, although 'Middle Britons' are likely to have a higher than average life expectancy and the high life expectancy variant would mean life expectancies of 87 for males and 90 for females.[xi]

In addition to exploring a potential rule of thumb, or starting point for consumers on the amount they might wish to withdraw per annum, we also wanted to help consumers think about the impact of their chosen investment strategy. Our investigations found that while the investment strategy influences the income a consumer could expect to generate from their pension, it tends to be a secondary driver after the income withdrawal rate. Figure 3 compares the potential different outcomes from utilising different investment strategies under the £3,500 per annum strategy.

Figure 3 shows that consumers could be exposed to a wide range of outcomes as a result of investment strategies.

At the median fund value, the difference between a balanced strategy and a cautious or adventurous multi-asset strategy could be equivalent to around four additional years of income.

How could a combination of drawdown and annuitisation affect consumer outcomes?

Our investigations demonstrate that combining annuities and drawdown is likely to provide consumers with an attractive combination of higher incomes and lower risks. Intuitively this combination allows consumers to diversify and this can dramatically reduce the risk of running out of money at older ages.

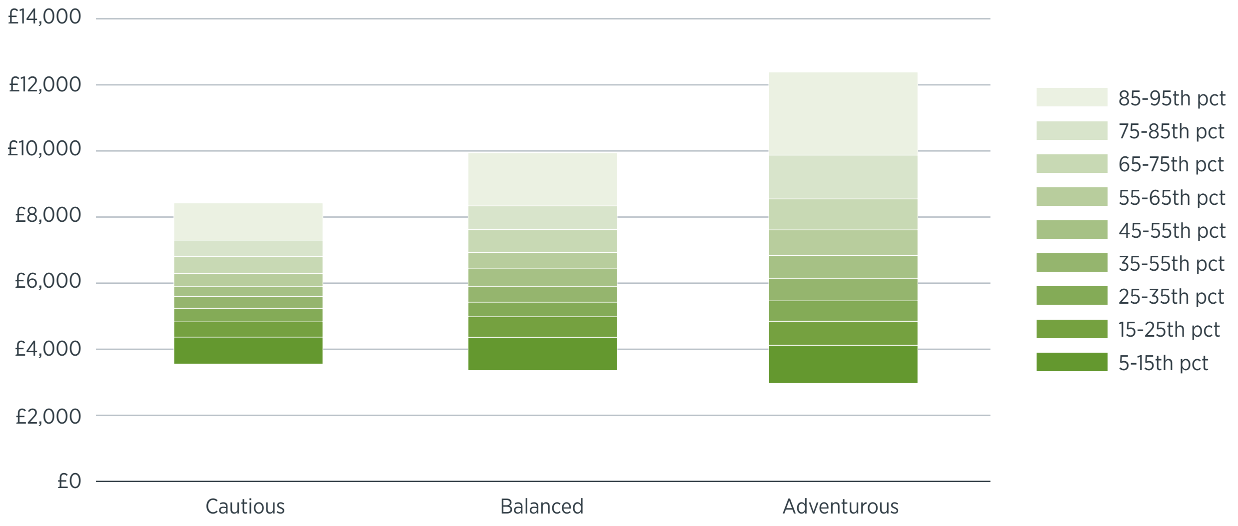
We found that consumers aged around 65 and in average health could benefit from either:

1. Using drawdown for 5-10 years and then purchasing an annuity
2. Partially annuitising at age 65 and using drawdown for 5-10 years before fully annuitising.

To test the benefits of these strategies we compared them against consumers who either bought an annuity at outset or only used drawdown. As these strategies end with a guaranteed income for life we do not consider the length of time the pot is expected to last. Instead we have looked at the range of potential annuity incomes which can be purchased at age 75 using the projected fund value at that time.

1. Drawdown followed by annuity purchase

Figure 4: Projected nominal income levels from £3,500 per annum drawdown from age 65 and purchasing a level annuity at age 75



	Cautious	Balanced	Adventurous
25th percentile	£4,829	£4,992	£4,883
median	£5,738	£6,143	£6,469
75th percentile	£6,811	£7,595	£8,596

Under the balanced investment strategy, our modelling shows that taking £3,500 per annum drawdown would almost always leave sufficient funds to purchase a level annuity providing at least this level income for life with a significant chance of providing a greater income. Our modelling showed that 9 out of 10 consumers using a balanced strategy taking £3,500 per annum age 65-75 could expect to buy a level annuity of more than £3,500 per annum at age 75. However, it should be made clear that such a strategy does have risks as well. Poor returns during the drawdown period would erode the remaining pot beyond the level where the target annuity income can still be afforded. However, these results show that this strategy could provide consumers with a good chance of higher income, as well as enjoying the flexibility of drawdown during their active retirement years and the certainty of having an income for life from age 75.

These results also demonstrate how riskier investment strategies increase the range of possible outcomes for consumers.

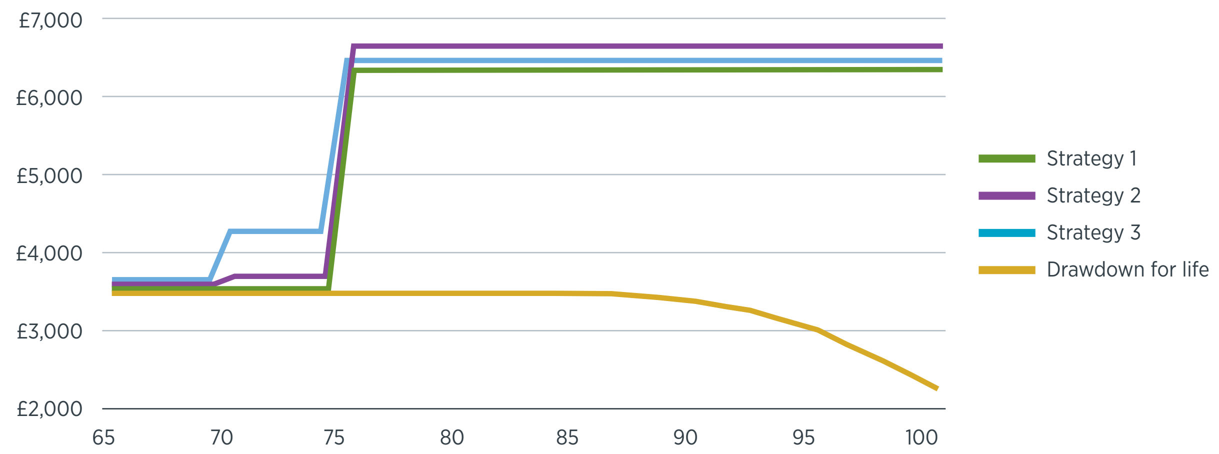
Our modelling has assumed consumers annuitise at age 75 regardless of the prevailing market conditions, as while we would like to see consumers engage regularly with their pension, we realise this is unlikely. However, it may be possible that a more dynamic strategy, allowing for market conditions, could produce better outcomes. This could be an area for further investigation.

2. Partial early annuitisation and later full annuitisation

Partial annuitisation comparison with drawdown

We also investigated the potential outcomes from various partial annuitisation strategies – where consumers start by taking an income from drawdown and buy an annuity with their remaining pension pot once or twice during their retirement journey. Figure 5 shows a comparison of the expected range of outcomes from pure drawdown with three partial annuitisation strategies. This is based on a pot size of £100,000.

Figure 5: Average annual nominal income from various annuitisation strategies from age 65



Strategy Ref	Initial annual income from drawdown	Proportion of remaining pension pot spent on an annuity at different ages	Long term expected retirement income
1	£3,500	100% at age 75	£6,400 each year from age 75
2	£3,500	50% at age 70 100% at age 75	£6,600 each year from age 75
3	£1,750 (note the remaining £1,750 comes from an annuity at age 65)	50% at age 65 50% at age 70 100% at age 75	£4,300 each year from age 70 £6,500 each year from age 75
DD	£3,500	0%	Expected income starts to reduce from age 85

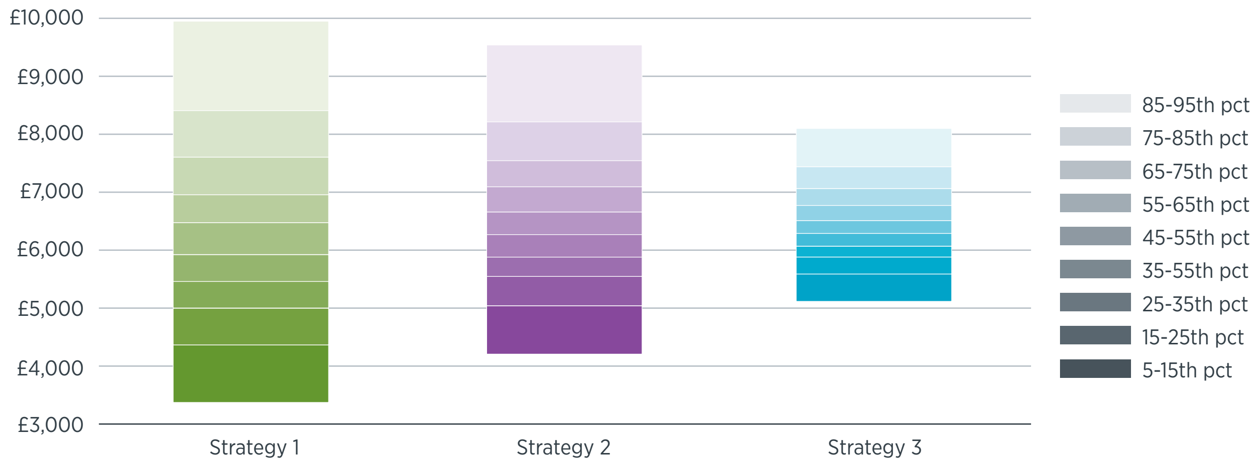
This shows buying annuities at later ages increases sustainable annual incomes. This is not surprising given we have already learnt that an annuity will generally provide a higher income for life than a consumer is able to achieve using drawdown. However, this approach keeps some of the flexibility of drawdown for the first few years of retirement.

Analysing each strategy in turn:

- Strategy 1 shows that on average if a consumer withdraws £3,500 each year using drawdown from age 65 and fully annuitises at age 75, the average outcome is to receive an income of around £6,400 each year from age 75.
- Strategy 2 shows that on average if a consumer withdraws £3,500 each year using drawdown from age 65, then partially annuitises at age 70 with half of the pension pot and uses the remaining pot at age 75, then they will, on average, receive an income of £6,600 each year from age 75.
- Strategy 3 shows partial annuitisation at ages 65 and 70 using the remaining pot at age 75. Average income increases at age 70 and then again at age 75 to an income of £6,500 each year.
- The drawdown for life strategy keeps a stable income of £3,500 per annum until the average reduces around age 85 or 90 as some consumers' money runs out.

However, the average incomes shown above disguise a wide variety of outcomes at age 75. The fact that most of the consumers' funds have remained invested, even partially, for 10 years, means that there are a wide variety of outcomes. Figure 6 (overleaf) shows those outcomes:

Figure 6: Projected nominal income levels from age 75 for strategies 1, 2 and 3



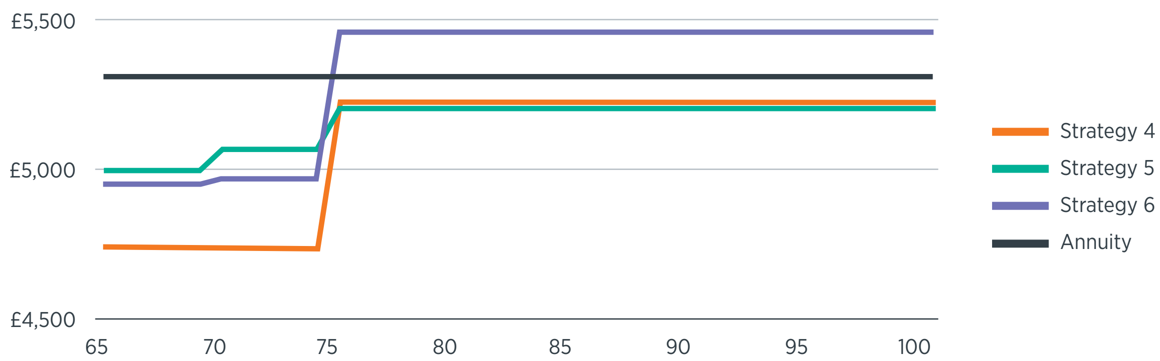
Each shade represents 10% of the people who have opted for that strategy. Strategy 1 involved full annuitising at age 75 only so there was a wider variety of outcomes compared to annuitising at two ages in strategy 2 and at three ages for strategy 3.

This shows that for strategy 3, where partial annuitisation occurs sooner there is a reduced range of outcomes. Earlier partial annuitisation reduces the risk of lower incomes, but also reduces the potential for higher incomes. Partial annuitisation allows consumers to buy 'minimum income floors' to guarantee part of their income for the remainder of their lifetime, but also reduces flexibility.

Partial annuitisation comparison with annuities

We next compared potential outcomes from the same partial annuitisation strategies, but with a higher initial rate of drawdown that is closer to current annuity rates (4.5% to 5.5% per annum). Again, this is based on a pot size of £100,000. This comparison is more valuable for people whose initial consideration is to take an annuity at retirement.

Figure 7: Average annual nominal income from various annuitisation strategies



Strategy Ref	Initial annual income from drawdown	Proportion of remaining pension pot spent on an annuity at different ages	Long term expected retirement income
4	£4,750	100% at age 75	£5,200 each year from age 75
5	£5,000	50% at age 70 100% at age 75	£5,070 each year from age 70 £5,200 each year from age 75
6	£4,950 (this figure includes partial annuitisation)	50% at age 65 50% at age 70 100% at age 75	£4,970 each year from age 70 £5,450 each year from age 75
Annuity	£5,300	100% at age 65	£5,300 each year from age 65

This shows buying annuities at later ages has a marginal effect on sustainable annual incomes. However, the delay in buying annuities keeps some of the flexibility of drawdown for the first few years of retirement, which would be valued by many consumers.

Analysing each strategy in turn:

- Strategy 4 shows that, on average, if a consumer withdraws £4,750 each year using drawdown from age 65 and fully annuitises at age 75, from age 75 they will receive an income of around £5,200 each year.
- Strategy 5 shows that, on average, if a consumer withdraws £5,000 each year using drawdown from age 65, partially annuitises at age 70 and fully annuitises at age 75, from age 75 they will receive an income of around £5,200 each year.
- Strategy 6 shows that, on average, if a consumer partially annuitises at ages 65 and 70, with a starting income of £4,950 each year from age 65 using some drawdown, and fully annuitises at age 75, from age 75 they will receive an income of around £5,450 each year.
- Buying an annuity at age 65, for a typical consumer, in the current market is likely to provide an income of around £5,300 each year.

The information above shows average outcomes. We also show the results again across a range of percentiles:

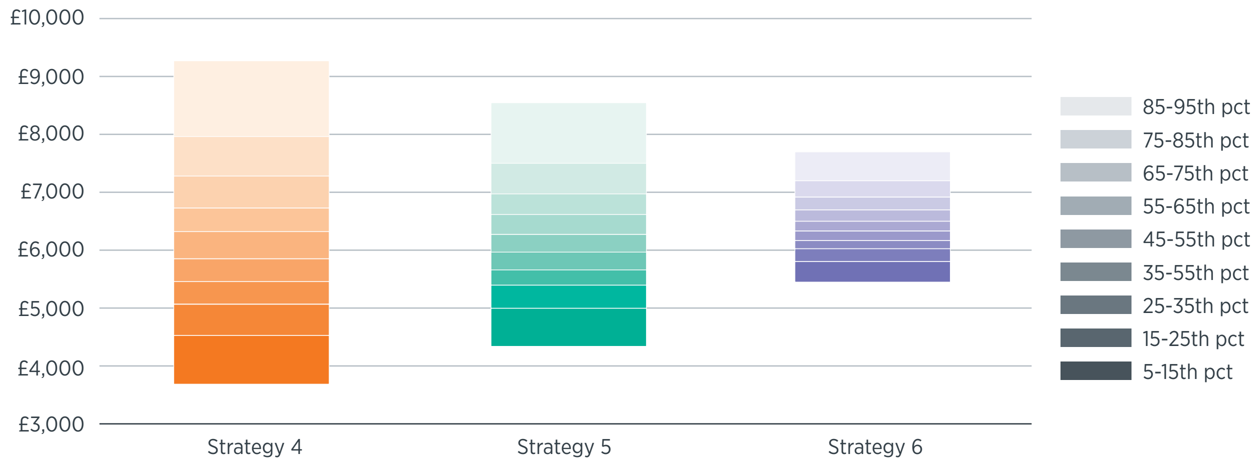
wish to retain some of the flexibility afforded to them by the freedom and choice regime. The appropriate balance between certainty and flexibility depends on the consumer's attitude to risk and capacity for loss.

Additional considerations

The benefits of partial annuitisation strategies are likely to be reduced, or not available, for some consumers if they are looking to buy a partial annuity with smaller pension pots. For example, a consumer is unlikely to be able to buy an annuity with less than £10,000 and is likely to obtain reduced annuity rates if they are using less than around £30,000.

In addition, the risk of inflation needs to be considered because this could also adversely affect consumer outcomes. We recognise that inflation is a very real risk and that many consumers could benefit from products which are index-linked. However, we have focused on nominal analysis for the purposes of this initial investigation to reflect current consumer behaviours, particularly non-advised consumers, who typically favour seeking the highest possible income from outset without inflation protection. There is also evidence that inflation-linked annuities offer poorer value for money than standard annuities. This could be a useful area for further research.[xii]

Figure 8: Projected nominal income levels from age 75 for strategies 4, 5 and 6



Strategies 4 to 6 have a similar variety of outcomes to strategies 1 to 3. The levels are just that much lower because more income has been taken in the first 10 years of retirement.

This shows that the earlier you annuitise, the more predictable longterm incomes will be. Median and average incomes are similar but waiting to annuitise brings greater flexibility and a wider variety of outcomes.

We believe a mix of drawdown and annuity strategies may therefore be suitable for those consumers who wish to reduce the risk of their income falling below a certain level, but who

The results are based on the model running a range of withdrawal options for a 'Middle Britain' consumers with a DC pot of £100k at age 65 and in normal health. These results can be scaled proportionately to other DC pot sizes, thereby having relevance for the full range of 'Middle Britain' pot sizes.

Conclusion

The introduction of freedom and choice means that consumers have a greater range of options available to them when deciding how to withdraw their DC pension savings. This increased flexibility enables consumers to better match how they withdraw their pension to meet their personal needs.

However, understanding how to balance flexibility with certainty, so that consumers do not run out of money in retirement, is complex. The freedoms also removed the requirement for advice for many consumers purchasing income drawdown products, and so it is important for free information and guidance to be available. If it isn't, there is a risk that more people will run out of money in retirement and this will have implications for state expenditure on means-tested benefits and could result in increased levels of poverty at older ages.

Research has found that where there is consumer awareness of a rule of thumb and the source is considered credible it can improve financial well-being by increasing engagement and financial capability.[xiii] We consider it important that consumers are given sufficient information to understand the risk of them running out of money during their retirement, and crucially, what actions they might take to mitigate this risk.

To help DC consumers secure an adequate income in retirement the IFoA has undertaken a series of analyses aimed at our members, pension providers, guidance services, regulators and Government. We hope to contribute to the developing evidence base on how consumers might be helped in their decision making. This report aims to provide a rule of thumb, or starting point, for those consumers considering how they can make use of the freedoms while ensuring their retirement income lasts the duration of their lifetime.

By using a stochastic model, we have investigated:

- a suitable level of drawdown for consumers we have identified as 'Middle Britain'; and
- a number of strategies that incorporate both drawdown and annuitisation to strike a balance between flexibility and certainty.

We have focused on those consumers with DC pot(s) worth between £30,000 and £250,000 as these consumers are most likely to be considering drawdown without seeking financial advice. Therefore, free information and guidance services could play a significant role in their decision making.

Our analysis shows that in a typical scenario a drawdown rate of 3.5% per annum is highly likely to be sustainable and that the main factors that consumers need to consider when deciding how much to withdraw are:

- the age at which they start to drawdown
- the proportion of their pot that they withdraw each year and whether it will be enough to meet their income needs
- how long this means their income will last and whether this is likely to last their lifetime – this is complex and will require an understanding of life expectancy and assessment of their health
- how much risk of running out of money in later life are they willing to bear and to what age
- how much investment risk are they willing to bear and whether greater certainty of income or the potential for higher returns is more important to them.

By modelling a range of strategies involving drawdown and annuitisation, including partial annuitisation and deferring full annuitisation, our aim is to identify potential retirement income planning solutions. Our intention for these solutions is that consumers would not have to go for either extreme of:

- managing all of the risk of them running out of money themselves, or
- locking all of their savings away at age 65.

In addition to managing this trade-off, our analysis found that by combining drawdown and annuitisation, consumers can potentially generate a larger overall income from their pension pot.

For people considering this strategy, a crucial decision will be at what point to annuitise what proportion of their pot. Our analysis found that in a typical 'Middle Britain' scenario, consumers can increase their likelihood of a good outcome if they delay annuitisation until they are in their early to mid-70s (this is based on the them being in average or good health).

This suggests that where consumers enter drawdown the pensions industry (providers, guidance services and Government) could usefully communicate, or nudge these consumers towards the possibility of annuitisation once they reach 70.

Deciding how much to withdraw and whether to adopt a hybrid strategy and what that hybrid strategy might look like (i.e. what proportion to enter into drawdown and what proportion to annuitise – and when) is complex. To help consumers make these complex financial decisions we recommend that Government, regulators, the pensions and advice industries, as well as guidance services, work collectively to develop communications aimed at 'Middle Britain' consumers who may wish to use drawdown, but do not want to pay for financial advice.

However, there is a large proportion of consumers who have low levels of engagement; for these consumers defaults could play a crucial role. This report supports our conclusion that the development of defaults that incorporate elements of flexibility and certainty can help people to secure a good outcome in terms of their retirement income. We hope that our analysis will be useful for those providers considering defaults in addition to information and guidance services.

Importantly, while consumers remain in drawdown this should not be a 'one-off' decision even if they are in a default strategy. Drawdown products should have a review mechanism, or some functionality built in, that is able to respond to adverse circumstances and take action to reduce the risk of running out of money. Ongoing member communication is needed to ensure members are aware of their schemes' performance – some providers already have this functionality.

Our analysis shows that in a typical scenario a drawdown rate of 3.5% per annum is highly likely to be sustainable.

Recommendations

The introduction of freedom and choice will only achieve its potential to enable consumers to meet their personal needs if they are supported to make more informed retirement income decisions and if defaults are designed to compliment this new environment.

This approach could enable consumers to take advantage of the benefits of the new freedoms while helping them to pay adequate attention to the risk of running out of money in retirement.

Clear communication to consumers that there are a range of possible outcomes and an indication of what those ranges are would lead to better informed decision making. To deliver this we recommend that the potential benefits of combining drawdown and annuitisation are:

- covered within the government's guidance offering
- encouraged through consumer protections
- offered by pension providers to non-advised consumers – one way to achieve this could be through the development of defaults.

This would ensure that consumers are nudged towards behaviours that are likely to lead to good outcomes.

In particular, this should focus on getting consumers to take action based on:

- how long they might need their money to last in retirement
- how much they need or want to access each year; and
- what balance of flexibility and certainty they desire.

To achieve this, the pensions industry, regulators, information and guidance services, as well as the Government will need to work together to deliver a collective communications strategy and appropriate defaults for those consumers not willing, or able, to engage.

Consumers who enter drawdown would benefit from being nudged towards annuitisation once they reach age 70 by pension providers, guidance services and Government.

Appendix – methodology and modelling assumptions

This appendix contains a detailed description of the modelling we have carried out along with the data and assumptions underpinning this.

In particular, we have looked at:

- full or partial level and index-linked annuities purchased at different ages
- varying income levels
- drawdown with five risk-graded investment strategies.

Only products that are available to consumers without a financial adviser have been considered. This approach reflects the majority of the advised and non-advised market and excludes complicated '3rd way guaranteed products' that are only available via an adviser.

Model

We have investigated a wide range of consumer retirement choices by considering numerous combinations of annuity and drawdown. We have assessed these using a model developed by the Rationale for Retirement Behaviour Working Party that we have amended to better suit our needs.

The model starts with a pot of £100,000 for an individual aged 65. The user can then specify annual amount to drawdown and the percentage of the pot to annuitise at each age. The model allows these inputs to be specified annually. We considered five multi-asset investment strategies that we believe to be reasonable decumulation strategies; we appreciate the asset mix may differ for accumulation investment strategies (for example an adventurous strategy during the accumulation phase may have a greater proportion of its assets allocated to equities than we would expect in decumulation and have therefore allocated here):

The model projects the run off of the invested fund allowing for the chosen drawdown, annuity, and investment strategy for 1,000 different sets of stochastic investment returns. Where an input requires annuitising at a future date, the annuity rate applied takes into account the gilt yield for the specific stochastic scenario. We have allowed for a 1% annual management charge in the asset return calculation.

We can then assess the distribution of either fund values or income levels across the 1,000 scenarios to determine the relative attractiveness of different scenarios. We have also assessed the probability of exhausting the original fund by a specific time based on the percentage of scenarios under which the fund value has fallen to zero by this point.

Data

The stochastic investment returns data were provided by Moody's Analytics and were calibrated to 31 December 2016.

The annuity factors were taken from the Money Advice Service website and are as at 5 April 2017.[xiv] The annuity factors were based on a single life annuity, for a healthy non-smoker, who lives in the G2 4PP post code. This is the postcode representing the middle of the sociodemographic mix according to the Index of Multiple Deprivation.[xv] We have used the Money Advice Service's website to determine annuity rates using postcodes at either end of the sociodemographic scale which shows that the postcode we have used produces an income in the middle of the possible range. Therefore, we are comfortable that the postcode will not have a skewing effect on our results, although it must be remembered that for any particular individual their

Strategy	Asset allocation				
	Cash	Gilts	Corporate bonds	Equity	Property
Cautious	15.0%	50.0%	25.0%	10.0%	0.0%
Slightly cautious	0.0%	35.0%	47.5%	15.0%	2.5%
Balanced	0.0%	25.0%	45.0%	25.0%	5.0%
Slightly adventurous	0.0%	15.0%	42.5%	35.0%	7.5%
Adventurous	0.0%	5.0%	40.0%	45.0%	10.0%

own postcode can have a material impact on the cost of buying an annuity.

The level and index linked annuity incomes from a pot of £100,000 used in the modelling are set out in the table below:

Age	Level annuity income (£ p.a.)	Index linked annuity income (£ p.a.)
65	5,308	3,339
66	5,394	3,342
67	5,483	3,475
68	5,544	3,630
69	5,712	3,702
70	5,914	3,889
71	6,170	4,211
72	6,388	4,433
73	6,641	4,633
74	6,927	4,886
75	7,258	5,128

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Contact us

If you would like to know more about the IFoA's work please contact us at: **policy@actuaries.org.uk**

Beijing

14F China World Office 1 · 1 Jianwai Avenue · Beijing · China 100004
Tel: +86 (10) 6535 0248

Edinburgh

Level 2 · Exchange Crescent · 7 Conference Square · Edinburgh · EH3 8RA
Tel: +44 (0) 131 240 1300 · **Fax:** +44 (0) 131 240 1313

Hong Kong

1803 Tower One · Lippo Centre · 89 Queensway · Hong Kong
Tel: +852 2147 9418

London (registered office)

7th Floor · Holborn Gate · 326-330 High Holborn · London · WC1V 7PP
Tel: +44 (0) 20 7632 2100 · **Fax:** +44 (0) 20 7632 2111

Oxford

1st Floor · Park Central · 40/41 Park End Street · Oxford · OX1 1JD
Tel: +44 (0) 1865 268 200 · **Fax:** +44 (0) 1865 268 211

Singapore

163 Tras Street · #07-05 Lian Huat Building · Singapore 079024
Tel: +65 6906 0889

www.actuaries.org.uk