

#### Insight 42: Retirement income – it all used to be so easy

Thirty years ago, securing an income in retirement was relatively simple; collect years of service in the company's pension plan (or some government pension plan for public servants) and retire on a defined percentage of your final salary. A combination of poor government policy, weak investment strategy, and rapid increases in longevity has all but destroyed this type of pension. Today, for most, the risk and financial burden of securing a retirement income has shifted from companies and governments to individuals. Turning investment assets into a stable income that will support a retiree's expenditure throughout the unknown length of their retirement is a complex problem. There are no easy solutions, as markets do not deliver consistent returns and the sequence in which these returns are experienced matter.

Client Insight, February 2018

## *You are a long time retired!*

*'The question isn't at what age I want to retire, it's at what income.'*

*George Foreman – former world heavyweight champion.*

### *Financing retirement used to be so easy.*

Thirty or forty years ago planning for retirement was relatively easy. Companies - and the Government - offered their employees pension plans that paid a lifetime income defined by the numbers of years of service, resulting in, for example, an income of 2/3 of final salary. Add in the State Pension and a little icing on the cake from any investments and retirement was sorted, at least from an income perspective. The only risk to the retiree was of an inadequately funded pension scheme if the company failed, perhaps by fraud (remember Robert Maxwell?), or less than savoury governance (e.g. BHS and Philip Green and possibly Carillion).

Successive Governments' mismanagement (e.g. Gordon Brown's raid on dividends and Tory pension contribution holidays), combined with increasing longevity, made final salary pensions unsustainable. Nearly every defined benefit pension in the UK is now closed to new members. If you have a good defined benefit plan, be thankful. If you are thinking about transferring out of one, be very careful and take professional advice.

Today, the situation could not be more different or more taxing. The responsibility to contribute to, and sensibly invest, a pension pot (and other investment pots) that is of sufficient size to fund expenditure for a retirement of uncertain length, but perhaps as long as forty years, is now resting squarely on the shoulders of each individual. Most people in employment do not realise that to have a half-decent pension in retirement, they need to be contributing 20% to 30% of their gross income every year. Not many have the financial breathing space to do so. Most would probably be surprised that to buy an inflation linked income of £33,000 p.a., for one person, aged 65, with no spouse's pension, would cost around £1,000,000 today in the annuity<sup>1</sup> market.

The obligation to buy a secure income stream with an accumulated pension pot on retirement, as was previously the general case, has been rescinded. Rules constraining how much could be withdrawn each year from a pension pot, defined by the Government Actuary's Department, have also been removed. In addition, participants in defined benefit plans (except those offered by the Government) now have the right to transfer out of the pension plan, converting a known – and guaranteed - lifetime income stream into an actual cash balance. With the new pension freedoms now available, for some, the ability to gain access to this cash and include it as part of their estate may have appeal, for others it may or may not be appropriate. The right course of action will depend on each individual's circumstances and preferences; these choices should only be made in consultation with a regulated and well informed financial planner. This decision is outside the scope and intent of this note.

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<sup>1</sup> An annuity is an insurance contract that promises to pay a specified level of monthly income to an individual for the rest of his or her life, in return for the non-refundable payment of a lump sum.

### *Turning assets into income – easier said than done.*

Instead, this note focuses on the generic challenges facing anyone who is seeking to take an income from their investments in retirement - whether held in any, or all, of: a pension pot, an ISA, an insurance bond or a taxable general investment account<sup>2</sup>.

#### **Challenge 1: choices when approaching retirement**

Anyone who has built a retirement pot faces a key decision point, as she or he approaches retirement: should they buy an annuity with some, or all, of the pot on retirement to deliver lifelong income? If the answer is yes, they face their first challenge is to make sure that at the point of retirement – or the date they intend to buy the annuity – they have sufficient assets to buy the level of income they need. Traditional advice has always been to move out of equities and into ‘safe’ cash as the number of years until retirement declines. The problem is that annuity rates i.e. the amount of income a set amount of money (e.g. £100,000) will buy, varies widely over time, as it relates to the yield on longer-dated UK gilts.

Imagine that the person has accumulated a pot of £1,000,000 and coming up to retirement has taken the seemingly sensible and safe decision to move into cash. The problem is that this amount of cash might have bought £50,000 of inflation-linked lifetime income five years before retirement, but only £30,000 when they retire. The ‘safe’ decision would have been to invest in longer-dated index linked gilts which, in most people’s eyes, are risky as their prices move around quite materially. The reason they are the ‘safe’ option is because, while falling yields on index-linked gilts drives down annuity rates with inflation protection, they also drive up the prices of the index-linked gilts themselves, raising the value of the investment pot. The retiree now has more money to spend on buying an annuity, i.e. the original £50,000 of income they had hoped for.

Let’s assume that the soon-to-be retired investor has decided that they do not want to buy an annuity. Instead they will need to find a way to generate a sensible level of income from their invested portfolio(s) to support their expenditure needs in retirement.

#### **Challenge 2: the sequence in which returns occur matters when taking an income**

At a basic conceptual level, the problem seems easily solved. We can assume a sensible expected rate of return from the portfolio based on the long-run return of its component parts, for example 5%-6% above inflation for equities and 1%-2% for bonds. So, a 60% equity, 40% bond portfolio should, after inflation, deliver a return of around 4% a year. If we withdraw this amount from the portfolio in income (e.g. £40,000 from a £1,000,000 portfolio), then the capital should be preserved over the retiree’s lifetime, shouldn’t it?

Unfortunately, not! This is because equity and bond returns are not delivered consistently at a rate of 4% year-in, year-out but perhaps up 23%, down 10%, up 10% down 4%, for instance; note that this sequence has an annualised return of 4%. This matters. Let’s look at the impact of the sequence of returns in three scenarios.

1. A £1,000 lump sum pot that has no additions or withdrawals.
2. A £1,000 pot into which £100 is added each year.
3. A £1,000 pot from which a withdrawal of £100 is made each year.

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<sup>2</sup> The sequence in which these assets should be withdrawn from these different types of pot will depend on an individual’s circumstances, tax rates etc. and advice should be sought from a regulated and experienced financial planner.

For the purposes of this exercise, we will use the following 10-year hypothetical series of annual returns (Table 1), which delivers an annualised return of 4%, whether experienced ‘forward’ or in ‘reverse’, and a level of risk of around 12%, which is comparable to that expected from a well-diversified 60% equity, 40% bond portfolio, after the effects of inflation. All cashflows are made at the start of the year.

**Table 1: 10 years of hypothetical annual returns – forward and reversed sequences**

Year	1	2	3	4	5	6	7	8	9	10
Forward	15%	17%	22%	10%	-4%	10%	-3%	7%	-10%	-17%
Reverse	-17%	-10%	7%	-3%	10%	-4%	10%	22%	17%	15%

**Scenario 1 - A £1,000 lump sum pot that has no additions or withdrawals**

To those who can remember back to their school days and basic maths lessons, the sequence in which returns are experienced on a lump sum - with no additions or withdrawals – makes no difference, in the end, because 1 X 2 X 3 (‘Forward’) is the same as 3 X 2 X 1 (‘Reverse’), as the table below demonstrates.

**Table 2: Scenario 1 - A £1,000 lump sum pot that has no additions or withdrawals**

Year end	1	2	3	4	5	6	7	8	9	10
Forward	£1,150	£1,346	£1,642	£1,806	£1,733	£1,907	£1,850	£1,979	£1,781	£1,478
Reverse	£830	£747	£799	£775	£853	£819	£901	£1,099	£1,286	£1,478

As soon as money flows into or out of the pot, the sequence in which returns are experienced has a material impact on outcomes, as we can see below.

**Table 3: Scenario 2 - A £1,000 pot into which £100 is added each subsequent year**

Year end	1	2	3	4	5	6	7	8	9	10
Forward	£1,150	£1,463	£1,906	£2,207	£2,215	£2,546	£2,567	£2,853	£2,658	£2,289
Reverse	£830	£837	£1,003	£1,070	£1,286	£1,331	£1,574	£2,042	£2,507	£2,998

This is perhaps not that surprising, because in this case in the ‘Forward’ sequence, returns are strong in the early years, when the pot is small, but in the later years, the negative returns are applied to a larger pot and do more damage (and vice versa for the ‘Reverse’ sequence). Withdrawing money reverses this outcome.

**Table 4: Scenario 3 - A £1,000 pot from which £100 is withdrawn each subsequent year**

Year	1	2	3	4	5	6	7	8	9	10
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Forward	£1,150	£1,229	£1,377	£1,404	£1,252	£1,267	£1,132	£1,105	£904	£668
Reverse	£830	£657	£596	£481	£419	£306	£227	£155	£64	£0

This scenario equates to taking an income in retirement. Even though the return sequences both deliver the same outcome on a portfolio with no cashflows, in a withdrawal scenario, weak returns and withdrawals in the early years ('Reverse') deplete the portfolio substantially, and when the better returns come in later years, these returns are applied to a far smaller portfolio balance. The result, in this case, is an impecunious retirement for those experiencing the 'Reverse' sequence. Whilst, withdrawing £100 (or 10% of the starting balance) is unrealistically high, the point is made. Even at a 4% withdrawal rate we can see the marked effect of the sequence of returns, over 10-year period.

**Table 5: Scenario 3 - A £1,000 pot from which £40 (4%) is withdrawn each subsequent year**

Year	1	2	3	4	5	6	7	8	9	10
Forward	£1,150	£1,299	£1,536	£1,645	£1,541	£1,651	£1,563	£1,629	£1,430	£1,154
Reverse	£830	£711	£718	£658	£679	£614	£631	£721	£797	£871

In essence, the main worry for those in retirement is a large and prolonged period of poor returns in the first 10-15 years, as the depleted portfolio must survive another 20 or even 30 years.

### *Let's take a trip to Monte Carlo*

Using a 'Monte Carlo' tool<sup>3</sup> that simulates the returns of an investment portfolio with similar return (4% after inflation p.a.) and risk (~12%) characteristics as the 10-year numbers above - but over 10,000 simulated 40-year investment lives - allows us to gauge the risk of running out of money with such a strategy. The table below indicates the chances of doing so over different retirement horizons.

**Table 6: Chances of running out of money over different time horizons**

Horizon (years)	10	20	30	40
Chances of running out (approx.)	0%	5%	20%	30%

You can see that there is a material risk of running out of money with such a strategy, but on the other side of the coin, most of the time, the strategy will be successful. Deducting costs, will increase the chances of running out of money.

### **Challenge 3: making sure you don't outlive your money**

The key to mitigating the risk of running out of money is to understand how important this income is to the retiree. If they have most of their basic income needs covered by other sources of stable income, such as a final salary pension, State Pension, or an annuity, then they may well have considerable flexibility to alter the amount withdrawn from their portfolio. Reducing the level of income taken, or simply not drawing from the portfolio, when returns are poor, can materially improve the chances of success. As an example, varying the withdrawals based on the size of the portfolio – relative to its starting size - can have a materially positive impact on rates of success. Some simple rules are set out below. Note that these will depend on each retiree's circumstances and their ability to vary income.

**Table 7: Dynamic withdrawal rates, dependent on portfolio size (e.g. £1,000,000)**

Portfolio (% initial value)	< 60%	< 80% > 60%	> 80%

<sup>3</sup> This tool uses a process called Monte Carlo simulation that randomly picks returns from a return distribution defined by the average return and the annualised standard deviation (risk %). In this case it takes picks 40 years of returns and makes a 4% withdrawal (based on the starting amount, so a constant £40,000 per year on £1,000,000 portfolio). Each 40-year outcome is equivalent to one investment life. 10,000 investment lives are run in this way, which allows us to gauge the chances that such a strategy will work.

Withdrawal rate	2% (£20,000)	3% (£30,000)	4% (£40,000)
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Applying these rules (using the same risk and return and 10,000 investment lives, as in Table 6) one can see in Table 7 below, the powerful impact of reducing how much is withdrawn.

**Table 8: Dynamic withdrawal rules - outcomes**

Horizon (years)	10	20	30	40
Chances of running out (approx.)	0%	0%	1%	3%

For others, with limited flexibility in terms of the income they need, tough choices are faced: draw less from a less risky portfolio; buy an annuity to cover some, or all, of the essential expenditure; hold a ladder of index-linked gilts; downsize the house, if the money gets low; or even go back to work. The most appropriate strategy is entirely dependent on each retirees' individual circumstances.

#### *The value of retirement advice*

It is evident that many people in, or approaching, retirement need to take advice from a well-qualified and experienced financial planner. Choices to transfer from a final salary scheme, buy an annuity or set up a withdrawal strategy are highly complex. Tax and regulation make an already complex issue, even more challenging. Modelling an individual's circumstances and evaluating and understanding his or her requirement for income certainty is key. At that point, building a suitable portfolio and withdrawal strategy – perhaps encompassing some pre-identified strategies for dealing with poor market outcomes – is the next critical step. This is not a set and forget process. An insightful discussion on the progress of the withdrawal strategy is needed on an annual basis. Recognising and understanding the possible challenges ahead – and dealing with them before they become problematical is central to success. In most cases these events won't arise. But if they do, that is when a good adviser will earn his or her weight in gold.



### *Other notes and risk warnings*

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