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Decumulation - the usual suspects

Sequencing risk and other unhelpful side effects

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Have I got enough money to live on in the lifestyle that I want?

Probably the most often asked or at least thought about financial question of our age. Perhaps this isn't surprising since so many of us now rely on building up a pot of money to live off when we stop or reduce our time spent working.

In the past those working for large employers might have relied on the work's pension scheme which would promise a pension for life after retirement. That provision has diminished at the same time the demographic bulge of the baby boomers has reached retirement age. If that wasn't enough this market has been given a turbo boost through Pensions Freedoms of 2015.

Not surprisingly we have seen an increasing focus on the needs of clients in this situation. Much of the debate and discussion has focused on understanding the risks in managing a pot in retirement – the decumulation phase. We will look at a recap of these risks but we need to move the conversation on to what we do about these risks. More of that later.

Our list of the usual decumulation suspects

Suspect 1: Drawdown i.e. a significant fall in markets
This suspect is not habitual in his movements and therefore unpredictable. When he does strike it can be significant and able to cause a lot of damage to financial plans and to client confidence.

Suspect 2: Volatility drag
Our second suspect is a cousin of suspect 1 and her work is somewhat more subtle. We know she is at large from statistical analysis but is rarely glimpsed. However her effects are insidious and persistent.

Suspect 3: Sequencing risk
The notoriety of 'The Sequencer' has increased considerably over recent years. Commentators and the FCA have observed the ill effects of his work. Efforts to contain him have improved but they have so far been patchy in their success rate.

Suspect 4: Pound cost ravaging
The bad half of the family. The pound cost averager has been a friend to many over the year. Not so 'The Ravager' who works in opposition and does her work just at the worst time and her crimes have been highlighted and commented on by many. As markets fall more units are sold to match the income required.

Suspect 5: Inflation risk
Perhaps the most infamous of our suspects she has a long track record of damaging clients' wealth in the long run. Despite our better understanding we need to maintain our vigilance to avoid the pain she can cause.

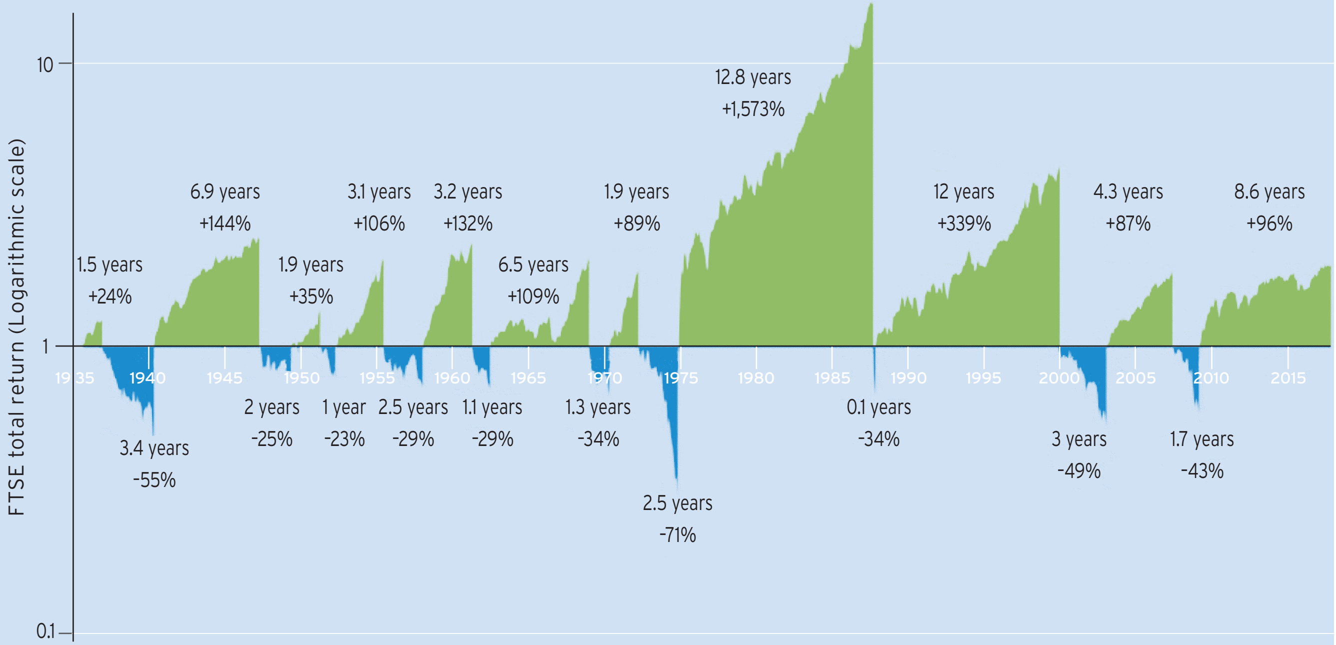
Suspect 6: Longevity risk
Our last suspect is a perhaps the only one we welcome. The result of suspect 6's work is that on average we will live longer than our forebears. The benefits of this on our lives comes with a price for investors.

The suspects in more detail:

Drawdown risk is our prime suspect, because it is investors' greatest fear and the risk with the most dramatic effect on their lifestyle. It is easy to use volatility as a shorthand for market risk, but in fact it is long-term loss of value which presents the real danger to a financial plan. Too much emphasis on volatility is leading to sub optimal asset allocation to deliver the long-term returns that clients need.
The UK equity market has seen a major fall every eight years on average since 1935. The times between falls vary considerably, as do their causes, but for an investor who needs to use some of their capital a market fall at that time can have a major effect on their ability to achieve their objectives. We cannot reliably predict exactly when drawdown will strike, but we know that sooner or later it will.

For investors who do not need to take money out of their portfolio after a market fall, the impact of drawdown risk is lower. The portfolio can be left to recover in value. We need to be careful that the fall is not too much for the investor's risk appetite however, otherwise they may panic and sell at the wrong time. Even if we hold our nerve, recovery is not as straightforward as we might think. A 10% fall in price followed by a 10% rise in price does not return a portfolio to its starting value, but only to 99%. The effect is larger for greater drawdowns.

Major rises and falls in the UK equity market 1935-2017



Source: Bloomberg

Volatility drag resulting from a percentage fall followed by the same percentage rise

Fall	Rise	Volatility drag
10%	10%	-1%
20%	20%	-4%
30%	30%	-9%
40%	40%	-16%
50%	50%	-25%

Source: Thesis calculations

> "the thief is pound cost ravaging"

A portfolio that has experienced drawdowns will therefore lag behind where we might expect it to be based on simple addition of percentage returns. This apparent con artist is volatility drag. We need a bigger rise in value to return us to where we started. This effect is even more significant if we have to withdraw money from the portfolio after it has fallen. A 10% fall requires an 11% rise to return a portfolio to its starting point, but if a withdrawal of 5% of the portfolio's starting value is taken after the fall then we need an 18% rise to get back to the starting point.

Any withdrawal of a constant cash amount, or a constant percentage based on the portfolio's starting value, will affect the portfolio more if it has fallen in value. A greater number of units will need to be sold to generate the required amount of cash. This reduces the amount of capital that is left to grow when the market rises, lessening the likelihood that the portfolio will recover to its previous level. This thief is pound cost ravaging.

Investors tend to be more familiar with its more generous twin pound cost averaging, which is a helpful influence in the accumulation phase. A regular cash sum invested buys more units after a market fall, boosting returns when the market recovers. However in the decumulation phase pound cost ravaging can make a moderate drawdown into a serious threat to an investor's long-term objectives. If possible it is best to avoid taking withdrawals from a portfolio of risky assets after a significant fall, but many investors will not have that degree of flexibility.

It is not only the magnitude of a market fall that determines its impact on a decumulation portfolio. Just the order in which the returns occur can have a dramatic impact. Two decumulation portfolios with identical annual returns except for a single year of market falls will have a dramatically lower value after ten years if the fall takes place in year one rather as opposed to year ten.

Recovery required to return a portfolio to its starting point following a fall

Market fall	Recovery required	Recovery required if 5% withdrawn
10%	11%	18%
20%	25%	33%
30%	43%	54%
40%	67%	82%
50%	100%	122%
60%	150%	186%

Source: Thesis calculations

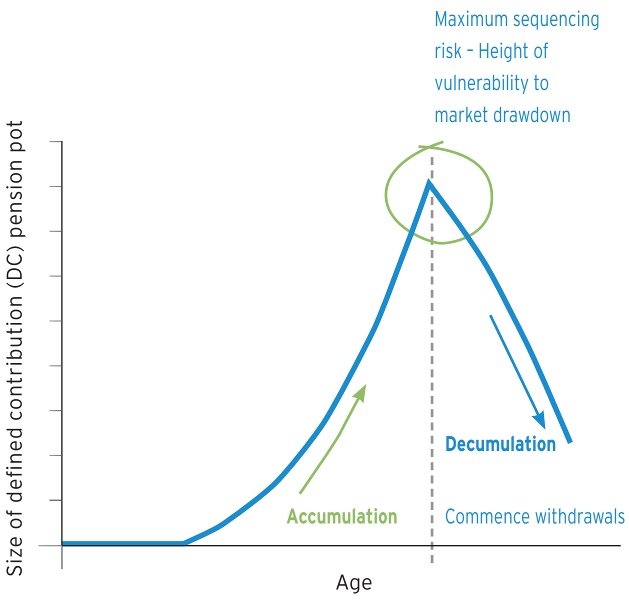
Two portfolios with a starting value of £500,000 and a £25,000 annual income payment, differing only in the sequence of returns

Year	Return	Value
0		£500,000
1	-30%	£325,000
2	4%	£313,000
3	4%	£300,520
4	4%	£287,541
5	4%	£274,042
6	4%	£260,004
7	4%	£245,404
8	4%	£230,220
9	4%	£214,429
10	4%	£198,006

Source: Thesis calculations

Year	Return	Value
0		£500,000
1	4%	£495,000
2	4%	£489,800
3	4%	£484,392
4	4%	£478,768
5	4%	£472,918
6	4%	£466,835
7	4%	£460,509
8	4%	£453,929
9	4%	£447,086
10	-30%	£287,960

Source: Thesis calculations

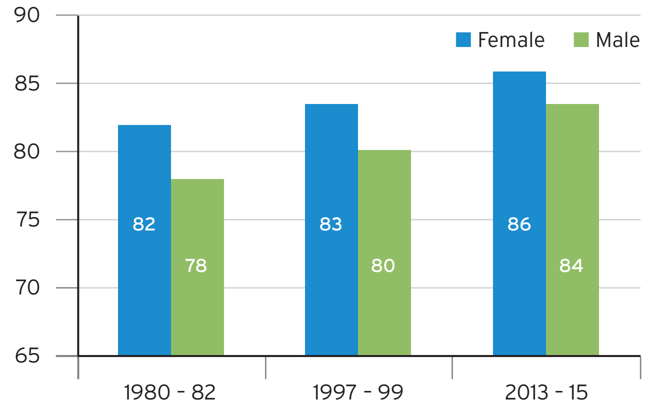


Source: Thesis calculations

Purchasing power of £100 with 2% annual inflation

Source: Thesis calculations

Life expectancy at age 65 – UK average for females and males



Source: ONS, 2014-based National Population Projections Lifetable template

The reduction in portfolio value is not just a bad thing in itself. It also limits the portfolio's ability to sustain the investor's required level of yield. In the examples on the previous page if the same rate of withdrawal continued then the portfolio which had the fall in year one would be exhausted after nineteen years, whereas the one which had its fall in year ten would last for twenty seven years.

Sequencing risk is at its most dangerous when the portfolio value is at its highest, around the point of retirement. This is the time when a market drawdown can have the greatest impact on the portfolio's long-term value.

Inflation is more subtle, but highly pernicious. Einstein reportedly stated that compound interest is the most powerful force in nature. The regular nibbles that inflation takes from the spending power of our wealth are similarly formidable.

Even if inflation is in line with the Monetary Policy Committee's target of 2% per annum, this accumulates over time to leave only two thirds of the starting value after 20 years and less than half after 40 years.

These figures account only for expected inflation. If inflation exceeds the MPC target, as it has done following the EU referendum, then the impact will be even larger.

What effect this has depends very much on spending patterns during retirement. Most people lead a more active life in the early years of retirement and do less as they reach more advanced ages. Declining spending power might therefore not be as much of an issue as we might think.

Here however our final suspect is lurking. Life expectancy is steadily rising, and the active portion of retirement is likely to continue to lengthen.

ONS figures show that an average man retiring at 65 in the UK in the early 1980s could expect to live for 13 years. By the middle of this decade that had increased to 19 years.

The life expectancy data is even more stark when we look at a couple. For a heterosexual couple both aged 65 in 2018, half of couples would expect to see at least one spouse living to 93, a quarter will see one spouse living to 98, and one in ten will see one spouse living to 102.

Greater longevity is something to be welcomed, but brings a significant challenge for investors in decumulation. A drawdown portfolio could well need to last for forty years. There is a real risk of investors outliving their portfolio.

“Cashflow planning has become more mature and effective”

The market response – where is the innovation?

So we know the causes of decumulation pain, let's look at managing them.

One way of looking at this is to look at products and services separately. Both are very important to clients.

The Cicero report 'Retirement Income: The Price of Freedom' highlighted the top three rated features wanted by clients; access to capital, flexibility of income level, preservation of funds for family/ dependents. With this backdrop it is hardly surprising that the numbers of annuities purchased has fallen dramatically over recent years.

Products:

Annuities – these can still be useful and still look attractive for older ages as mortality pooling kicks in. It is akin to locking up all the suspects and throwing away the key and with no parole. For clients this is the ultimate peace of mind and still suitable for some. We won't spend too much time on the pros and cons of annuities as this is well documented.

Third way products – these offer a middle way with some guarantees with some of the flexibility other solutions have. The cost of letting our suspects still have some room to roam is high. They have proved to be expensive, take up has been limited as is the supply of options from providers.

Pension drawdown – an increasingly popular choice but by itself it doesn't deal with the damage our usual suspects can cause. This ultra liberal approach without any accompanying risk management occupies the thoughts of advisers and providers alike.

Clever funds – over recent years we have seen a range of more complex funds launched to deal with the risks associated with decumulation. Risk targeted, absolute return, smart this and that. Unfortunately when our suspects are not at large, during the recent bull market, many clients have felt they have lost out on the growth they might otherwise have had.

Services:

Services make up how products are delivered to clients. Beyond the above they include all sorts of wrappers and solutions that don't always involve the purchase of a retail investment product. A good example is advising a client to spend their money, often valued by the client and no direct product costs for doing so.

Those that are chiefly involved in actually delivering services to clients are advisers, whether they are independent, restricted, vertically integrated or horizontally inebriated. What we see from advisers is that they have been quietly going about their work to devise strategies to manage risks for clients. They know our suspects and many have long experience of their handy work at first hand, having managed client affairs for much of their careers.

Let's take a look at some observable trends

Cashflow – we have seen the use of cashflow become popular. This helps to illustrate scenarios, affordability of lifestyle and find out what the financial number is to achieve an objective. However, inappropriate use can mean we miss the impact of some of our suspects – in particular suspects 1,2,3 and 4. This happens when we assume investment returns are linear whereas we know they are not. Some advisers will say that you cannot possibly consider doing any financial planning without a cashflow plan. This view has become more prevalent and at the same time use of cashflow planning has become more mature and effective – we know its value and its limitations. From seeing cashflow in action with clients first hand it is certainly an excellent way to engage clients and show them why financial planning is important to their lives.

Take the 'natural income only'

Clients want a predictable income and natural income doesn't deliver this. It also limits the potential long term upside that equity investment might otherwise deliver.

For larger portfolios natural income may be an option, but while interest rates are low, the likely yield on a moderate risk portfolio of 2-3% is unlikely to satisfy most decumulation investors' requirements. Furthermore, dividend levels are not guaranteed and may be cut in a recession. A portfolio can be tilted towards higher-yielding assets to increase the natural income, but this also tilts the risk and return profile of the portfolio. To achieve a desired level of natural income it may be necessary to take more risk.

In recent years there has been a trend for income-seeking investors to become "yield refugees", pushed out of their usual comfort zone in search of income. Investors who would usually be comfortable holding government bonds are pushed into corporate bonds, corporate bondholders into high yield bonds, and high yield bondholders into bond proxy equities. Aside from pushing the values of these asset classes to high levels, this leaves a large number of investors holdings these asset classes who are not used to their potential losses and who may panic and sell if prices fall, exacerbating market movements.

Fundamentally though, putting an income constraint on a portfolio means rejecting a number of useful investment opportunities. The US equity market does not have a strong dividend culture for example, however in recent years its overall returns have been greater than the higher yielding UK market. Portfolios can be made more efficient in risk return terms by including these low yielding assets but taking a total-return approach, where some of the desired income level is generated by harvesting gains.

Reliance on fund managers

There are many good fund managers and funds and they largely do what it says on the tin. The difficulty is that a strategy in a fund is slow to change and by its nature is 'one size fits all', which means all investors, irrespective of their needs and time horizon, get the same journey. A given fund can deal with perhaps one or two of our suspects but cannot hope to deal with them all, there are just too many dimensions. A fund can dampen down volatility but that comes at a price, often in fund charges and sacrificing long term growth.

Advisers are faced with a dilemma then:
- Delivering consistent client outcomes
- Ensuring recommendations to each client are personal and suitable now and on-going

We can see that using a set range of funds for clients by itself is not enough without a further layer of service to make them work for each client.

Safe withdrawal rate

Financial pages have not been short on comment about safe withdrawal rates i.e. a rate of withdrawal that a portfolio can withstand and still maintain its value in real terms. The simplicity of declaring a rate as safe is appealing but not likely to mean it is in reality appropriate for all clients and is based on historical data which is not necessarily a good predicator of what is to come. Investment markets and clients' lives are unlikely to be so predictable that a safe rate now cannot be relied upon for the rest of a client's life.
The track record of suspects 1 and 2 is unpredictable. This can have a significant impact on an assumed safe withdrawal rate.

The 'pots' approach

A growing trend is for advisers to take on more of the work themselves and manage investments in retirement in separate pots. Simplistically this is a long term pot which has a high level of risky assets to deliver growth (dealing with suspects 5 & 6) and a shorter term pot which can be relied upon to deliver the cash to meet regular withdrawals (dealing with suspects 1,2,3 and 4). Some advisers have more pots than others but the principle is the same.

"the pots approach in particular seemed to offer the best prospects"

The pots approach looks attractive for clients but it can also be very time consuming to administer and introduces implementation risks for the client, an adviser and the IFA firm which can be significant:

- How much and how long do you leave money in short term pots, what is the optimum time and amount?
- How much is needed in equities for the long run to manage suspects 5 and 6
- Am I consistent with all clients i.e. is there a clear approach which all advisers follow, if not then client outcomes cannot be consistent
- If I am delivering consistency there are implementation risks – how do I make changes for clients needing the same thing at the same time with an advisory model i.e. I need client permissions each time which is time heavy and cumbersome
- I will need to make big asset allocation decisions e.g. when to move from equities to lower risk assets. Do I want to have that responsibility and if I do how do I implement it quickly, consistently and fairly for all clients?

Clients also seem to understand and like the pots approach. According to the Cicero Research report on 'Retirement Income: The Price of Freedom' clients are attracted to multiple pots with 79% happy to see their retirement strategy in multiple pots.

Investigation

Our investigation into all this resulted in a decision to analyse in more detail the pots approach in particular as this seemed to offer the best prospects for managing the risks identified. How does this work and how can it be optimised to keep all of our suspects in check?

Our initial design was a systematic implementation of the two pots approach over the investor's full decumulation journey. A certain number years of income would be set aside in a portfolio of defensive assets, with the rest of the capital invested in a portfolio of growth assets. At the end of each period if the growth assets had gone up in value then income would be taken from the growth pot, but if the growth pot had fallen in value the income would be taken from the defensive pot. Once the growth pot had recovered to a level above its previous high water mark the defensive assets were then topped up.

We used a Monte Carlo simulation to test this approach over 10,000 randomly generated 30-year periods of asset returns. The simulation showed promising results using the standard tools that we would use during the accumulation phase. Drawdowns were softened, and the combined portfolio had a higher Sharpe ratio than the growth assets alone. There was a very significant drawback for decumulation investors however. The combined portfolio tended to run out of money sooner than the growth assets alone.

This highlights that investment in the decumulation phase is different from the more familiar accumulation phase. The risks are different and so the tools we use need to be different too. A portfolio with better risk-adjusted returns, but which tends to not last as long is likely not to be a good solution for retirement income.

So why does the continuous two pot solution not deliver? The answer is that to sustain a portfolio over the course of a long retirement and defend against longevity and inflation risk we need to have sufficient exposure to growth assets and real-returning assets. The drag of holding too much in defensive assets over the long term tends to reduce the portfolio's ability to generate the returns it needs to sustain itself for the long run.

Of course holding too much in growth assets will increase volatility and the likelihood of major drawdowns. This has to be at a level that the investor is comfortable with. Over the long run the maximum expected return would come from a portfolio fully invested in equities, but how many investors would be content with that level of risk?

We concluded that what is required is a solution that recognises that in the long run clients need to hold a suitable weighting to growth assets, but which helps to address the very real threat of sequencing risk in the early years of decumulation. Holding defensive assets for up to 5 years provides a good balance, but the precise length of time will vary according to the individual's own attitude to risk.

Our preferred solution, which we call the Managed Income Service, follows a predetermined asset allocation glide path, with some of the defensive assets being sold each quarter to pay income, with any excess reinvested into the growth assets. This means that the growth assets can fall without the need to sell them to generate income. The defensive assets are used to pay income, leaving the growth assets to recover.

This also helps to address sequencing risk, as a fall in the growth assets will see a larger amount rebalanced out of defensive assets, turning pound cost ravaging on its head and reintroducing the benefits of pound cost averaging.

If risky assets go up then such a solution will underperform a portfolio invested entirely in risky assets, but this is effectively like an insurance premium. Most people buy fire insurance despite the fact that they hope their house will not burn down and the probability of a fire is low, but it is an acceptable price to pay to guard against a risk which could have a significant impact on their lifestyle.

The pots approach is in effect a method of providing some fire insurance in case the worst happens in the short term and leaving enough in riskier assets to ensure clients do not outlive their wealth.

The challenge then is to mechanise the delivery of a service so that advisers can service more clients and clients can gain greater comfort that their wealth in retirement will last.

Our next paper will feature thoughts from around the industry on building a Centralised Retirement Proposition. With 72% of advisers reporting they need a more robust centralised retirement planning process (source: Cicero report 'The Price of Freedom'), there is more work to be done to manage an ever growing number of clients relying on their investments to sustain them in retirement.

> *“the challenge then is to mechanise the delivery of a service”*

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