

J05 Pension Income Options 2020/21

Part 4: Providing a sustainable income

The milestones for this part are to:

- Understand what is meant by the fund's natural income and its limitations
- Know the definition of sustainable income
- The risks in using capital withdrawals to provide a sustainable income
- How the probability of fund exhaustion can be calculated
- Understand the difference between static and dynamic withdrawal strategy
- Understand the investment principles including different rebalancing strategies
- Understand how to use non pension assets as part of the investment strategy
- Know how to produce a tax efficient income
- Know the key points that should be discussed at the annual review

Once individuals have decided or been advised to take benefits flexibly, they must decide how to use the fund to provide an income. If they bought a lifetime annuity the income would be guaranteed for life but now there is a risk that the fund may be exhausted whilst they are alive. An adviser must help them to:

- Devise a strategy that minimises the risk of running out of money
- Decide where the fund should be invested

It might be possible to use the fund's **natural income**, that is the interest and dividends produced from the fund. It is not though a perfect solution.

- Whilst the fund will not be denuded by capital withdrawals it could fall due to investment returns
- Alternatively, the fund could grow due to good returns
- Income will vary and will fall if dividends are suspended or cut.
- The income may be insufficient to provide what the client needs.

If the natural income cannot provide the required income, then withdrawals of capital must be made which could result in the client running out of money. The issue facing an adviser is to establish what percentage of the fund can be withdrawn each year without it being exhausted whilst the client is still alive. This is the **safe withdrawal rate (SWR)** and is defined as:

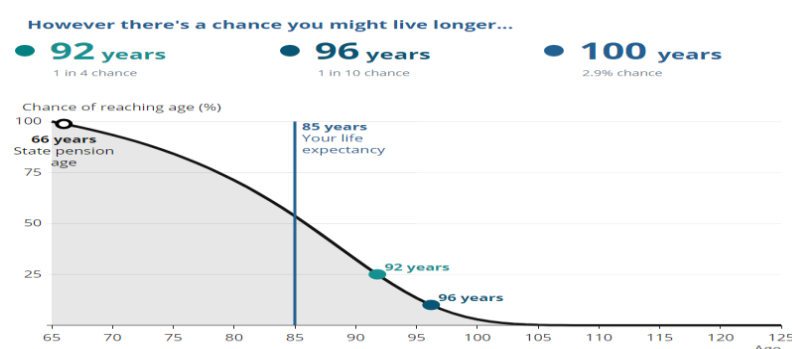
The percentage of the initial investment that can be withdrawn each year over a period of 30 years taking into account inflation, that does not lead to complete portfolio failure. This is defined as a 95% probability or more of total depletion of the fund

Taking capital to supplement the natural income exposes the member to several extra risks:

- Longevity risk
- Investment risk
- Sequencing risk
- Volatility drag
- Inflation risk

Longevity Risk

This is the risk of living too long.



This chart from the Office of National Statistics shows that a male aged 60 could expect to live until 85. If a strategy is used that assumes the client will need to provide an income for 25 years, this will fail if they live longer. As the

chart shows there is a 1 in 4 chance of living to 92 and a one in chance of living to 96. A strategy should assume a longer life expectancy than normal and possibly be projected to 100.

ONS figures are based on whole population statistics so life expectancy will be worse for someone in poor health with underlying conditions than one in good health.

Investment risk

Unless the intention is to run down the transferred fund over a short period the fund will have to be invested in a mix of assets. If the funds do not perform as well as expected it may be exhausted before the client dies. Moreover, if withdrawals are being made from assets or funds that are falling in value this can lead to **Pound Cost Ravaging**. This occurs if income is drawn at a higher rate than the growth of the fund. There are two constituents of Pound Cost Ravaging: **Sequencing risk** and **Volatility Drag**.

Sequencing Risk

To understand this, we need to look at the principles of **cash flow analysis**.

This is designed to show a client the likely pattern of income and expenditure over at least the next 10 years. It can also show the value of the remaining fund at the end of this period.

Its main inputs are:

- Income needs/outgoings in retirement.
- Expected income to be received each year for at least the next 10 years
- The pattern of required income in retirement
- Capital requirements and when these will fall due
- Outstanding liabilities
- Possible downsizing to release capital
- Any planned lifetime gifts
- Health/life expectancy
- Attitude to risk and capacity for loss

Certain assumptions will have to be made in producing the model. The key ones are:

- Planned level of withdrawals
- Inflation rate.
- Expected rate of return on investments.
- Possible life expectancy

Any plan will be subject to unforeseen events and these should be modelled if these “**stress events**” were to occur.

- Future returns are lower than expected
- More income is required than expected
- Sudden fall in value of the assets
- Large unplanned capital requirement
- Inflation is greater than expected
- Living longer than expected

A cash flow model assumes the same investment return throughout the projected period but in practice returns will vary from year to year. The probability of the fund being exhausted will be different depending on whether the early years produce good or poor returns.

This is **Sequencing Risk** which can be defined as the possibility of poor returns occurring in the early years of drawdown leading to a greater possibility of fund exhaustion. This in turn is compounded by volatility drag.

The following tables shows a fund of £400,000 where £16,000 (4%) is withdrawn at the start of each year and this increases by 4% each year. The average growth rate is 3.3% for all three tables.

Table 1

This reflects the cash flow model where a 3.3% return is achieved each year. The fund at the end of 10 years is **£321,505.96**

Age at start of year	Growth	Fund value start of year	Withdrawals	Growth/ loss	Fund value end of year
60	3.30%	400,000.00	16000	12672	396,672.00
61	3.30%	396,672.00	16640	13090.176	393,122.18
62	3.30%	393,122.18	18304	12973.032	387,791.21
63	3.30%	387,791.21	19036	12797.11	381,552.32
64	3.30%	381,552.32	19797	12591.226	374,346.54
65	3.30%	374,346.54	20589	12353.436	366,110.98
66	3.30%	366,110.98	21413	12081.662	356,779.64
67	3.30%	356,779.64	22269	11773.728	346,284.37
68	3.30%	346,284.37	23160	11427.384	334,551.75
69	3.30%	334,551.75	24086	11040.208	321,505.96

Table 2

Here the returns in the first 5 years were positive and the latter years were poor. The fund value at the end was **£339,235.10**

Age at start of year	Growth	Fund value start of year	Withdrawals	Growth/ loss	Fund value end of year
60	5%	400,000.00	16000	19,200.00	403,200.00
61	18%	403,200.00	16640	69,580.80	456,140.80
62	13%	456,140.80	18304	56,918.78	494,755.58
63	4%	494,755.58	19036	19,028.78	494,748.37
64	2%	494,748.37	19797	9,499.03	484,450.39
65	6%	484,450.39	20589	27,831.68	491,693.08
66	12%	491,693.08	21413	56,433.61	526,713.69
67	-9%	526,713.69	22269	-45,400.02	459,044.67
68	-8%	459,044.67	23160	-34,870.77	401,013.89
69	-10%	401,013.89	24086	-37,692.79	339,235.10

In **Table 3** the returns are the same as table 2 but they occur in reverse order with the poor returns coming in the early years The final value is £244,579.02

Age at start of year	Growth	Fund value start of year	Withdrawals	Growth/ loss	Fund value end of year
60	-10%	400,000.00	16000	-38,400.00	345,600.00
61	-8%	345,600.00	16640	-26,316.80	302,643.20
62	-9%	302,643.20	18304	-25,590.53	258,748.67
63	12%	258,748.67	19036	28,765.52	268,478.19
64	6%	268,478.19	19797	14,920.87	263,602.06
65	2%	263,602.06	20589	4,860.26	247,873.33
66	4%	247,873.33	21413	9,058.41	235,518.74
67	13%	235,518.74	22269	27,722.47	240,972.20
68	18%	240,972.20	23160	39,206.20	257,018.40
69	5%	257,018.40	24086	11,646.62	244,579.02

Volatility drag

If the value of an asset falls by 15% it will require a growth of 17.65% to get back the original figure. This is simple mathematics, the rate of growth required to recover a loss is always greater than the original loss.

Inflation risk.

In devising a strategy a rate of inflation will be assumed. If inflation is higher than this then withdrawals will have to be increased and the probability of the fund being exhausted will be increased.

What are the odds?

Taking an arbitrary withdrawal figure is unlikely to convince the regulator that that is going to be appropriate. There must be evidence that there was some discussion on the risk and probability of the income being sustainable.

This would be simple if the client's date of death were known but thankfully that is not the case. A cash flow model can be used to go through different scenarios, changing the

withdrawal rate, the investment return etc, but it doesn't help the client understand the probability of the fund lasting their lifetime.

What needs to be established is the probability of the income being sustainable for:

- Different rates of withdrawal
- The client's age on death (i.e. the term of withdrawal)

If the rate of withdrawal is 5% and this is required for 5 years then there is clearly a 100% probability of the income being sustainable. But what if the client lived for 20 or 30 years? If the probability of not running out of money reduced to 90% is that still acceptable? What about 65%?

This probability can be calculated by using **stochastic modelling** or a **Monte Carlo simulation**.

Stochastic modelling

This uses an algorithm to run thousands of simulations. This unlike a cash flow model it can introduce a series of random events. The main output is to produce a series of probabilities for a combination of the percentage withdrawal rate and expected life span,

Here's an example of the output from Royal London.

		Nominal Income %								
		2	2.5	3	3.5	4	4.5	5	5.5	6
Term (Years)	15	100%	100%	100%	100%	100%	100%	98%	92%	80%
	20	100%	100%	100%	99%	96%	86%	69%	46%	24%
	25	100%	100%	99%	92%	78%	55%	29%	14%	5%
	30	100%	99%	93%	77%	55%	28%	13%	5%	1%
	35	100%	96%	84%	60%	33%	16%	7%	2%	0%

All values calculated using a 1% AMC and using GOVERNED RETIREMENT INCOME PORTFOLIO 3

Highly Sustainable	85%-100%
Reasonably Sustainable	75% - 84.9%
Moderately Sustainable	50% - 74.9%
Not Sustainable	0 - 49.5%

The assessment of the degree of sustainability is the company's own and should not be taken as definitive. In any case it would be up to the adviser to explain the concept of probability to the client and get agreement on what was acceptable.

Having established a safe withdrawal rate the adviser needs to decide whether this should be **static or dynamic**

Static withdrawal: the 4% rule

This was postulated by William Bengen, backed up by academic research that shows historically a withdrawal of **4% of the original fund value** each year should never exhaust the fund no matter how long the individual lives. This can be increased each year by inflation.

An individual has a SIPP with a fund of £700,000. In the first year £28,000 is withdrawn. In the second year a withdrawal of £28,000 plus inflation is made. Assuming a rate of 2.5% this would be £28,700.

This last figure could be more than 4% of the fund value if it has fallen in value but the rule should still hold good.

Withdrawing 4% or whatever figured is called a **static withdrawal strategy**. This has some drawbacks:

- It assumes the amount of income (adjusted for inflation) will be the same throughout retirement but in practice spending tends to be higher in the early years and this tends to reduce in later life.
- The withdrawal rate does not take account of current market conditions

The alternative is to use a **dynamic withdrawal strategy** where the percentage withdrawn varies each year depending on the fund's performance. In simple terms when performance has been good you can enjoy yourself. In times of poor performance withdrawals are reduced

Dynamic withdrawal

There are a number of different models but the **Guyton-Klinger** one is the best known This starts with a percentage withdrawal but then applies four additional rules.

Number 1: The withdrawal rule.

If the fund has not increased, then the withdrawal cannot be increased for inflation. In addition the maximum increase that can be made for inflation is 6%

Numbers 2 & 3: The capital preservation rule and prosperity rule

These act as a cap and collar to the amount that can be withdrawn.

Under these rules the maximum percentage withdrawal cannot be more than 20% of the original percentage or lower than the original amount less 20%. With an initial 5% withdrawal the maximum withdrawal is 6% of the fund value and the minimum is 4%

In the following table a 5% withdrawal from a fund of £500,000 was selected giving a first year's income of £25,000. At the end of the year the fund has grown so the income for the next year can be increased by the rate of inflation to, say £26,000. This is 4.33% of the current amount so this is allowed. If the percentage was lower than 4% the amount withdrawn would have to be increased by 10%. This is known as the **prosperity rule**

Year	Amount of fund	Withdrawal	Percentage
1	£500,000	£25,000	5%
Fund growth	£600,000	£26,000	4.33%

However in the next table the fund has fallen to £400,000 so next year's income cannot be increased in line with inflation. A £25,000 withdrawal would be 6.25% of £400,000 so being more than 6% (5% + 20%) it must be reduced.

Fund loss	£400,000	£25,000	6.25%
-----------	----------	---------	-------

The proposed withdrawal of £25,000 must be reduced by 10% to £22,500. This is the **Capital Preservation Rule**.

Fund loss	£400,000	£22,500	5.625%
-----------	----------	---------	--------

The portfolio management rule

Withdrawals should be taken from the asset or fund that has had the best growth. Any excess amount should be moved into a cash account.

Investing and managing the fund.

Assuming the client's intention isn't to exhaust the fund over a period of time, a drawdown fund has to do two things:

- To provide a source for all future withdrawals
- To provide growth to replenish the withdrawals

Up till now where the transferred fund should be invested has not been considered. As in any investment planning the greater the risk the greater the potential gain (or loss) The adviser therefore must establish that the invested assets match the client's attitude to risk.

For the non-cash assets the normal investment criteria will apply. Assets will normally be in pooled funds, negatively correlated with a mix of income and growth funds.

The classic asset split for a drawdown fund is:

- Cash
- Bonds
- Equities

The purpose of cash is to hold the first or two year's planned withdrawals and pay the charges whilst Bonds and Equities can provide the growth. Gilts and Bonds can also hedge annuity risk. Gilt and annuity rates are positively correlated but if Gilt yields fall the price increases so the additional value should protect the client if they chose to buy an annuity later on

The way the fund is invested and managed can also reduce the risk of fund exhaustion. The main techniques are:

- Cash buffer
- Static, declining or decreasing equity glide path
- Bucket or earmarked strategy
- Using non pension assets

Cash buffer

Holding at least one year's planned withdrawals in cash allows the remaining fund to grow and not be reduced by further withdrawals.

After taking a PCLS Tom designates the remaining £600,000 as a FAD. He plans to take £24,000 in his first year and transfers this into a cash fund.

This leaves £576,000 which is split between different equity and bond funds. A return of around 4.1% would replenish his fund to £600,000.

This exercise can be repeated each year.

This also helps to mitigate sequencing risk as withdrawals aren't being taken from assets that are falling in value.

Equity Glide paths

Following **Modern Portfolio Theory**, the asset split should be determined before selecting individual funds or assets. A possible split might be:

Cash 10%

Bonds 30%

Equities 60%

At the end of the year this would then be rebalanced to bring the split back to its original form. This is called a **static equity glide path**.

The opposite approach is the **declining equity glide path**. In the US this is built on the “100 minus age rule” a person starting to take benefits at 60 should have 40% in equities (100 less 40) and every year the percentage of the fund held in equities should be reduced by 1%

The alternative is to use an **increasing equity glide path** which reverses the process by having a greater amount of equities as you get older. This sounds counterintuitive as risk is usually reduced as someone gets older. The rationale is that it helps mitigate sequencing risk as early withdrawals are taken from Bonds so if equities fall in value they have time to recover

Following the fourth rule of the Guyton Klinger model, withdrawals of income or transfers to a cash fund should come from assets or funds that have grown.

Bucket /Planned strategy

This divides the retirement fund into several different “buckets” with transfers between each being carefully structured

The first bucket contains cash and liquid assets to cover the first few years of retirement (possibly up to five years) The other buckets contain riskier assets which can be used to replenish the first bucket when they have performed well

Using other assets

One factor that might indicate taking benefits flexibly is appropriate is when the client had significant non-pension assets. These should form part of the client’s retirement strategy which gives the option of taking withdrawals from the pension or non-pension

There is a case for keeping the fund uncrystallised or not taking any withdrawals because:

- It allows further potential growth which reduces the risk of the fund running out.
- Any remaining FAD fund will be free of IHT on the death of the holder.
- If the member dies before 75, all benefits available to dependant/successor will be tax free.
- If there has been a fall in the fund value, taking withdrawals from non-pension assets will allow the pension fund time to recover.

There are also positive benefits for using non-pension assets ahead of the FAD fund.

- An ISA provides a tax-free income whereas pension income in the hands of the member is taxable.
- Using an ISA to fund a capital sum is also tax free.
- An ISA will be part of the deceased's estate so it could make sense to run these holdings down.
- Using income from a non-ISA collective is taxable but use could be made of £2,000 dividend allowance and £1,000/£500 PSA.
- Capital sums produced by disposing of non-ISA collectives can be tax free if using the CGT exemption.

Using other assets is an example of a **blended strategy**, that is using different assets and income to produce the required income.

The state pension could be the foundation of a retirement plan. A couple could receive around £16,000 to £18,000 in guaranteed index linked lifetime income. This is only paid at 66 so there will probably be a gap between stopping work and receiving this.

The state pension could cover an individual or couple's essential spending and if it can be shown that this is the case or there are other sources of income a lower withdrawal rate could be taken so there would be less likelihood that the fund would be exhausted

Taking drawdown income tax efficiently

If the client takes the maximum PCLS from the fund then all other withdrawals will be taxed as non-savings income. One possible benefit of flexible benefits is that someone close to hitting the next tax band can control the amount they take to avoid going into that band.

The PCLS can also be used to provide a tax free income if it isn't needed for any capital expenditure. The most obvious way would be to take the maximum and use that to fund the first years income. This can be modified by doing partial crystallisations.

Frank has a SIPP with an uncrystallised fund of 600,000. He wants a net income of £20,000 in the first year so could crystallise £80,000 releasing a PCLS of £20,000. The remaining £60,000 is designated a FAD account but he takes no withdrawals.

This could be repeated each year until all the fund has been crystallised. A further benefit would be that until a withdrawal is made from the FAD fund, there has been no BCE so he would not be subject to the Money Purchase Annual Allowance.

Using phased retirement

Rather than crystallising the entire fund, phased withdrawals can be made which uses the PCLS to provide part of the income.

With all crystallisation methods 25% of the crystallised amount is tax free either as a PCLS or simply 25% of the amount of a UPFLS. If this is not needed for capital, a tax efficient income can be produced by taking phased income. It's a favourite question in J05 and you will be asked how much needs to be crystallised to produce a set amount of net income.

There are different methods but generally the easiest is to calculate how much income crystallising £1,000 will produce. In all the following examples the target is £20,000 for a higher rate tax payer. The final answers have been rounded but in the exam you should work it out to two decimal places.

Lifetime Annuity

You will be given the annuity rate which we'll say is £65 per £1,000. Crystallising £1,000 gives £250 tax free cash and the remaining £750 would buy a lifetime annuity. At £65 per £1,000 this would produce £48.75 gross income but 40% tax is due so this is reduced to £29.25. Therefore £1,000 produces £279.25 net income.

Next divide the target income of £20,000 by £279.25 and multiply by 1,000 which will give you £71,620. The following year the tax free element would have been used up but the income from the annuity, £3,491 would remain.

FAD and UPFLS

If FAD is being used then designating £1,000 would give £250 tax free and £750 which would be taxed at 40% giving £450 and a total of £700. To produce £20,000 net income you would have to crystallise £28,571. You could of course also designate £80,000 into FAD taking the £20,000 as tax free income.

The calculation using UPFLS is the same and you would need to crystallise £28,571 since £7,142 would be tax free and the remainder subject to tax.

Capped Drawdown

The question would give you the GAD rate which we'll say is £65 per £1,000.

For each £1,000 £250 can be taken as tax free cash with the remaining £750 producing £48.75 as 100% of GAD. However, 150% can be taken which increases this to £73.12. Applying 40% tax reduces this to £43.87, a total of £293.87. Applying the same method as used previously crystallising £68,057 would produce £20,000 net income. £51,042 of this would have initially have been designated as a capped drawdown and £4,976 withdrawn leaving £46,066 in the drawdown account.

Annual Reviews

One major benefit of taking an annuity is that no further work is required and no other costs are incurred. All drawdown methods will require further administration and reviews all of which will cost money so we have to be certain the client is willing to pay for this.

These annual reviews should cover the following points:

- Income and capital required in the coming year.
- Fund performance/amount in the fund now compared to 12 months ago.
- Whether fund investments need to be rebalanced
- Any new funds to be designated
- Current annuity rates.
- Any changes in the client's circumstances
- Changes in tax or legislation
- Changes in nomination for death benefits
- Availability of new products.

That concludes this part so you should now:

- Understand what is meant by the fund's natural income and its limitations
- Know the definition of sustainable income
- The risks in using capital withdrawals to provide a sustainable income
- How the probability of fund exhaustion can be calculated
- Understand the difference between static and dynamic withdrawal strategy
- Understand the investment principles including different rebalancing strategies
- Understand how to use non pension assets as part of the investment strategy
- Know how to produce a tax efficient income
- Know the key points that should be discussed at the annual review