Cashflow isn't such a negative

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You can't attend a pensions conference these days without hearing the words 'cashflow negative' being given great emphasis. Cashflow negative refers to when a scheme has more outgoings than incomings.

It feels important intuitively and you will hear that if your scheme is cashflow negative you should be managing risk carefully and consider an investment strategy that delivers income to better match cashflows because your scheme will reduce in size over time.

This sounds all very reasonable, but is greatly puzzling. It is hard to argue that these considerations are not important. But why should carefully considering investment strategy, managing risk and considering strategies that better match cashflows be any more relevant for a cashflow negative scheme than a cashflow positive one?

In this brief paper we set out our take on why cashflow negative has become such a misguided focal point and what in our view are the real factors that pension schemes should be crystal clear on.

> The industry has got side tracked – being cashflow negative is largely irrelevant to risk decisions.

Preface

Where cashflow negative does matter – liquidity

It is worth establishing at the outset, we are focusing on risk in this paper, not liquidity. Cashflow requirements are extremely important for liquidity purposes. It is key that all schemes have sufficiently liquid assets that permit you to continue to manage the overall portfolio through thick and thin, whilst being able to pay benefits as they fall due.

However we argue this is a liquidity issue that can be managed by mapping out your liquidity requirements and investing in sufficiently liquid assets. This liquidity issue is often overdone though. Anecdotally, most pension schemes have liabilities that stretch out for many decades, backed by portfolios where **80-90%** of assets can be sold for cash within 3 months. Liquidity is not currently a major issue.

Why being cashflow negative is irrelevant to risk

There appears to be a belief that if you are cashflow negative this one piece of information conveys a significant amount of information about:

- **the financial health of a scheme**
- **your ability to take risk, and the**
- **relevance of cashflow matching and hedging in your investment strategy.**

Let's look at each in turn:

1. Cashflow negative and financial health of a scheme

Being cashflow negative tells you absolutely nothing about the financial health of a scheme.

To illustrate this coming from a different angle, the best funded and most financially healthy schemes will, by definition, be cashflow negative – paying pensions benefits with no deficit recovery contributions because they are well funded, and no ongoing accrual so the problem is not getting worse. As such being cashflow negative is not a symptom of a scheme in trouble.

It is what pension schemes were designed to do. The association between these factors has gained traction as many schemes that are in financial trouble, also happen to be cashflow negative.

2. Cashflow negative and your ability to take risk

Your ability to take risk is the combination of many factors such as covenant strength, current level of funding/deficit, scheme maturity (cashflow duration) etc.

There are some factors that influence a scheme's cashflow which also influence its ability to take risk, in particular scheme maturity, which we will come onto later in this paper. But net cashflow is itself affected by other unrelated factors such as future accrual and deficit payments.

- Future accrual for instance will make cashflows less negative, but could in itself be adding to financial pressures on a scheme
- Deficit contributions reflect that the scheme is not where it ideally wants to be financially, but deficit contributions make overall cashflow more positive.

Because net cashflow is muddied by these factors, knowing a scheme is cashflow negative conveys no useful information on risk tolerance. Indeed, it could be argued that being cashflow positive is a direct reflection of poor financial health for many schemes.

3. Cashflow negative and the importance of cashflow matching and hedging

Cashflow matching and hedging are important investment tools for all schemes to consider.

The purpose of cashflow matching and hedging is to reduce uncertainty of outcomes, and protect against changes in liability values associated with changes in interest rates and inflation.

This is important for cashflow negatives schemes. However, it is also important for cashflow positive schemes, who will often have a longer duration and therefore greater sensitivity to changes in interest rates and inflation. The nature of the risks is unique to scheme circumstances, but to focus on being cashflow positive or negative is misguided.

Is there any basis for the focus on being cashflow negative

There is some reasoning behind the focus on being cashflow negative, as being cashflow negative has implications for 'path-dependency'.

Fortunately, path dependency is something pension schemes are quite used to, and does not itself present a particular challenge. All the while that schemes have been cashflow positive schemes have suffered disproportionately from outperformance followed by underperformance. Therefore, path dependency is something that all schemes should be mindful of, not just cashflow negative ones.

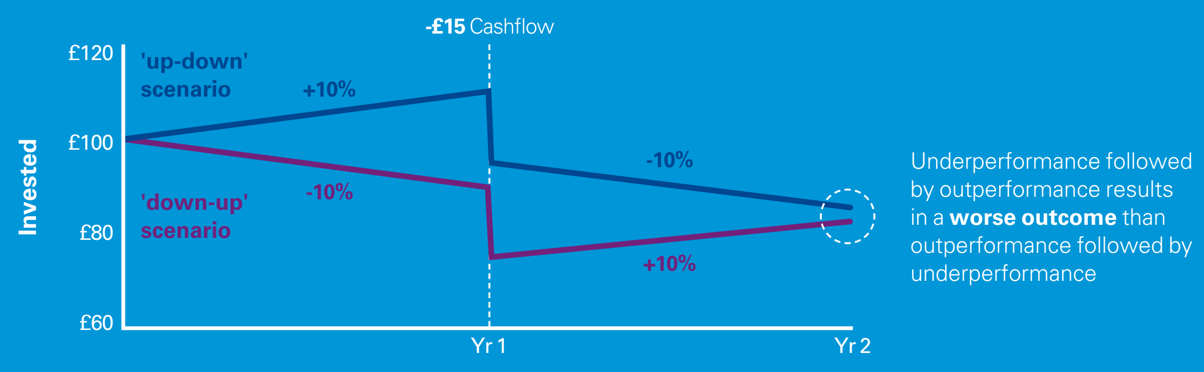
The ebbs and flows of 'path-dependency'

For cashflow negative schemes, underperformance followed by outperformance will result in a worse outcome than outperformance followed by underperformance.

The chart below shows how a £100 portfolio will perform over a 2 year period. The portfolio experiences either 10% outperformance or -10% underperformance in the first year after which a £15 cashflow leaves the portfolio, followed by a rebound in markets. The outcomes are different.

This phenomenon is nothing new to pension schemes. All the while that schemes have been cashflow positive the reverse of the above has also been true. I.e. a scheme that is growing in size experiencing outperformance followed by underperformance will have resulted in a worse outcome than underperformance followed by outperformance.

Therefore path dependency is no more important for cashflow negative schemes than cashflow positive ones. It simply impacts the scheme differently through time. Cashflow matching approaches can be used to reduce risk for schemes experiencing either positive or negative cashflows.



Can you plan for 'path-dependency'?

It is often claimed that because a scheme is cashflow negative there is only a short length of time for any near term underperformance to 'mean revert' and so being a 'forced seller' needs to be avoided through use of cashflow matching assets.

While schemes would obviously wish to avoid selling down assets at market lows in order to avoid the negative impacts of 'path-dependency', if you did actually have insight into the future direction of markets why would you limit yourself to simply choosing to meet cashflows by not disinvesting from risky assets? After all, you could exploit your market insight by maintaining a tactical overweight to risky assets elsewhere in your portfolio to much greater gain.

A relevant issue here is the mistaken belief that investors in general can predict future market returns, often based on simplistic rationale based on mean reversion. Holding a portion of your portfolio in investments that pay contractual income is not a solution to 'forced selling' because the impact of using income to pay benefits would be to holding onto your other risky assets for longer than you originally intended, and so you are running more risk than your intended strategy. If this risk is desirable it should be targeted explicitly, not incidentally.

Therefore the rationale that you should avoid selling growth assets at 'known market lows', and therefore implicitly running more risk – holding out for mean reversion – is flawed and poor grounds for decision making.

By contrast, deciding that you wish to run a that higher level of risk because your covenant supports it and it is in keeping with your longer term objectives would be a much more sound basis for the same decision.

The illusion of mean reversion

Whilst a backward looking time series of performance will show clear mean reversion over the full time period it is worth reminding yourself that you only know what the mean is with hindsight. This is illustrated in the chart below showing equity performance since 1970.

We have broken the time series into two halves. During the first half you would not know what the mean of the full period. As such this partial period mean lacks valuable information about the future. If the mean of the first period is projected forward in this instance it creates an optimistic expectation on future performance compared to that which materialised.

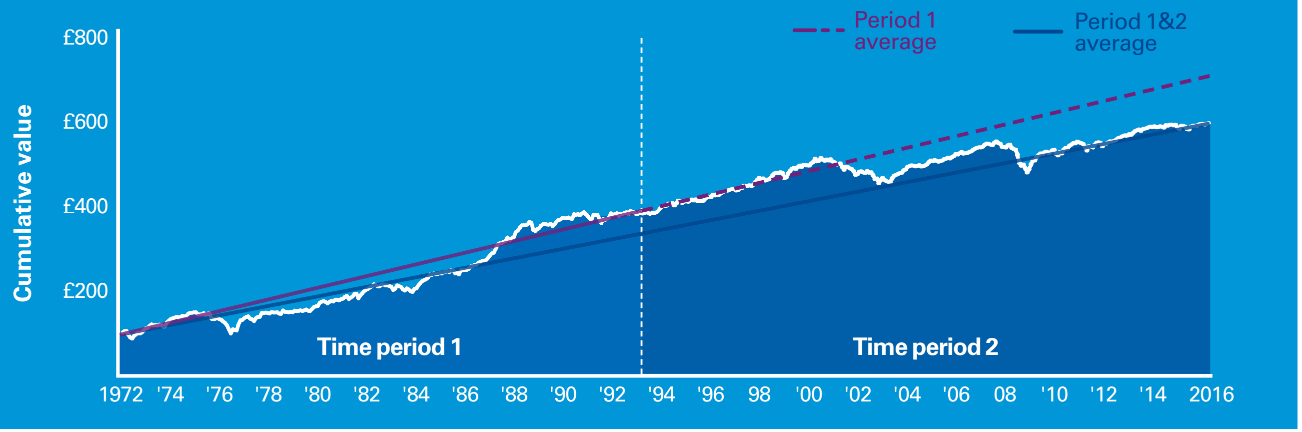
Academic studies have consistently failed to identify reliable stable signals for future outperformance in equity markets from past performance. If it was as easy as looking at whether recent performance is below trend then everyone would trade on this information and it would cease to be effective.

Given we are talking about an industry wide issue, we need to look at this through an industry wide lens. The astute observer will acknowledge that on average the investment community does not know when a market low has occurred until after the event. In other words, Trustees and their advisers in the main have been extremely poor at calling markets.

Simplistic mean reversion in terms of returns converging towards the trend is not a valid basis on which to run risk for 'just one more roll of the dice'.

Therefore path dependency is no more important for cashflow negative schemes than cashflow positive ones. It simply impacts the scheme differently through time. Cashflow matching approaches can be used to reduce risk for schemes experiencing either positive or negative cashflows.

Cumulative Return (MSCI World $)



Is there any basis for the current concern around schemes being cashflow negative?

The genuine issue most people mean when they describe an issue of being 'cashflow negative' is actually shortening scheme maturity. Typically a cashflow negative scheme will have a high proportion of pensioners i.e. a shorter duration, so there is a link between the two, albeit not a perfect one for the reasons set out earlier. Increasing scheme maturity is inevitable and occurs gradually over time and is not a cliff edge.

However, scheme maturity does have relevant and important implications for the risk tolerance of a scheme as we go on to explain.

In interests of clarity we will now refer to these short duration schemes as 'mature schemes'.

> For a mature scheme, more risk would need to be taken over the remaining life of the scheme to close a given fall in funding. This is the key issue.

Are mature schemes more susceptible to risk?

There is an important aspect that all schemes should take into account when determining how much risk and return to pursue – and that is 'What do we do if it goes wrong?'

There are usually 2 options:

1. More money from the sponsor is the sole basis upon which pension schemes take risk. This is the sponsor covenant and determines how much risk a scheme can afford to take in the first place.

2. More investment return is a potential avenue that can be pursed to defer and potentially avoid sponsor contributions. For a scheme with a short liability duration the impact of a given fall in funding is much greater, in terms of pressure on required return. This is not intuitive, but is explained below.

A shorter time horizon, means the additional return is shared across fewer years. Which means for a given fall in the funding level, more risk needs to be taken to close a the resulting deficit compared to a similar scheme with a less mature profile. **We look at an example of this phenomenon on the following page.**

Looking at the issue in terms of 'required return' may lead you to draw very different conclusions to the conventional wisdom that a cashflow negative scheme needs to avoid selling growth assets in a down market. Our approach recognises that mature schemes will require more return (and risk) to make good a given deficit.

Therefore, for a given covenant with affordability to pay a certain amount of annual contributions, a more mature scheme could represent a more immediate cash drain on the sponsor, where a step up in required return exceeds the risk tolerance.

This rationale is substantially more robust given it does not assume that markets are mean reverting nor does it assume that being cashflow negative equates to knowing the scheme's cashflow maturity or risk tolerance. Ultimately the risk tolerance then comes down to covenant strength.

Impact of time horizon on risk

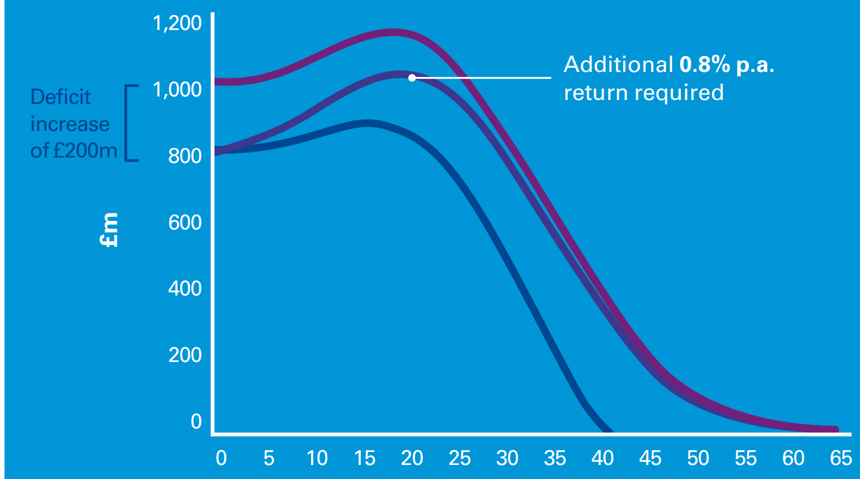
Example: Where shorter maturity leads to more risk being required

We illustrate below two similar £1,000m schemes, both fully funded but then suffer a £200m deficit emerging:

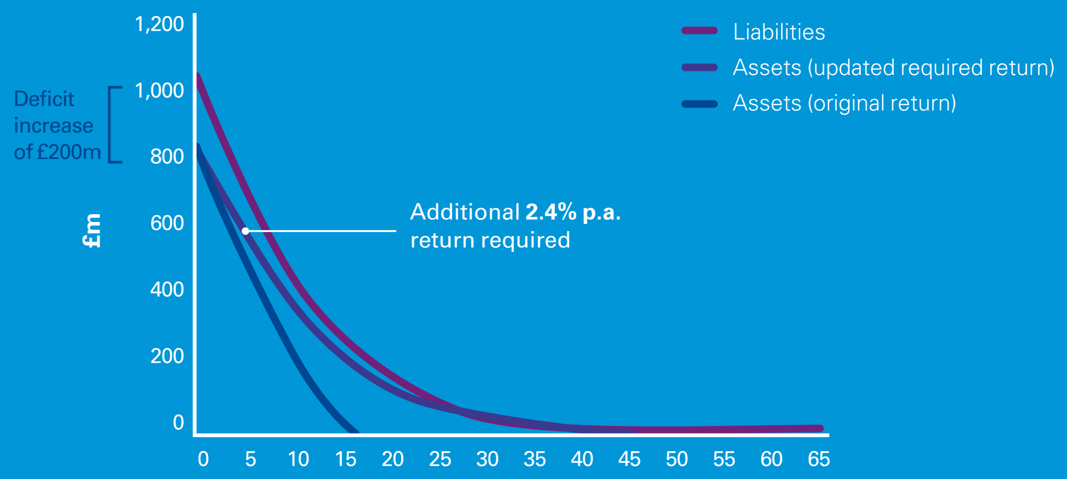
- **Mature scheme with 10 years duration: the extra return required so it can meet all its obligations is 2.4% p.a.**
- **An immature scheme with 30 years duration: the extra return required is only 0.8% p.a.**

The mature scheme needs to target more than three times as much additional expected return to close the same size deficit. This increase in required return means more risk to close the same deficit or additional cash support from the sponsor.

Immature scheme

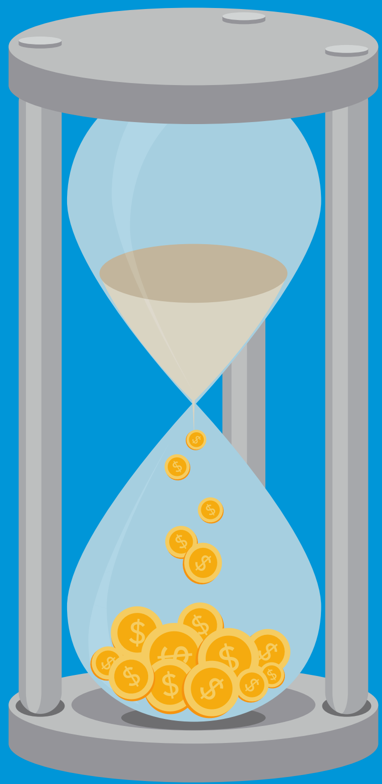


Mature scheme



Summary

The conventional wisdom that schemes need to adopt cashflow matching strategies (such as Cashflow Driven Investment) to address the specific issue of being cashflow negative, or can avoid being forced sellers by relying on mean-reversion is flawed in a number of respects:



Being cashflow negative is largely irrelevant to anything other than liquidity requirements. There are a number of factors that contribute to whether or not a scheme is cashflow negative which are unrelated to the financial health of the scheme/sponsor.

Covenant strength should ultimately determine your risk tolerance. The sponsor should be sufficiently strong to support the economic impact of plausible deterioration in funding position.

Maturity matters, not whether or not you are cashflow negative. If you have a short maturity leading you to be cashflow negative, rises in deficit will have a greater impact on the required return if contributions are unchanged. But your risk tolerance is still based on your sponsor covenant.

Increasing scheme maturity is inevitable and occurs gradually over time. Turning from cashflow positive to cashflow negative is incidental and does not represent a 'cliff edge' in your strategy.

The conventional wisdom of avoiding selling at market lows for cashflow negative schemes is flawed as market lows cannot be consistently predicted. Simplistic historic mean reversion creates an illusion of predictability as it ignores the fact that the mean cannot be identified until after the event. Schemes should avoid a strategy that 'avoid selling growth assets in a down market' where this implies running a level of risk that is inappropriately high in hope of a market rebound.

In a nutshell, pension schemes need to consider their risk tolerance and investment strategy with great care, irrespective of whether or not they are cashflow negative.

Simeon Willis
Director
T: +44 (0) 791 755 5701
E: simeon.willis@kpmg.co.uk

Callum Duffy
Consultant
T: +44 (0) 20 769 4301
E: callum.duffy@kpmg.co.uk

kpmg.com/uk

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