Cash-flow driven investing

Show me the money

Adam Lane | Graham Moles | Jeremy Richards | Bridget Uku
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Andrew Harrison | Giles Payne

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Cash-flow driven investing: Show me the money

For defined benefit (DB) pension schemes the cash-flow forecast does not make good reading.

Research published last year by consultancy Mercer discovered that more than half (55%) of UK DB schemes were not generating enough cash to pay all their members' pensions. This was up from 42% 12 months earlier and the authors of the report believe that this is set to deteriorate further.

Of the schemes that generated a cash surplus last year, 85% will be cash-flow negative by 2027, Mercer believes. Those not earning enough cash from contributions or their investments may have to sell assets to meet their obligations.

But is this a concern for trustees? After all, being cash-flow negative comes with the territory for a mature final salary scheme and the ideal endpoint is to have no members and no assets, so selling assets is part of that journey. The trick is having enough cash to make sure that the last member receives their benefits in full before the last share or bond is sold.

The sell-off in developed market equities at the start of the year highlights why scheme managers could be having a tough time. Those forced to sell are likely to have done so after prices had fallen and will have to turn to the more liquid quality stocks in their portfolio to raise the cash needed. This could mean losing dividend-paying blue chips. Not an ideal situation for investment portfolios to be in.

Strategies to protect portfolios from not having enough liquidity to pay benefits and avoid having to sell at the wrong time in the cycle include keeping cash in the portfolio. This may not be popular with some so an alternative protection strategy could be to hedge with swaps.

Transfer values are another issue that trustees have to navigate, which just adds to the uncertainty that makes it difficult to know how much cash a scheme needs and when.

Insurance is another element that has increased in importance for pension schemes. This year more than one commentator has predicted a record year for risk transactions with insurers, a result of favourable pricing.

With cash-flow investing rising in prominence we crammed trustees, pension funds, asset managers, consultants and other advisers around a table to discuss some of the biggest issues with the strategy.

The debate starts on page 4.

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Graham Moles

"Clients are starting to think about putting strategies in place to move towards cash-flow matching or looking for other ways to generate cash-flows. For us it's not a silver bullet in terms of matching every single cash-flow perfectly because they're not certain."

Graham Moles, LGIM

More than half of DB pension schemes are either cash-flow negative or are close to it, according to Mercer. Is this what you are seeing?

Giles Payne: I've got one which is testing us at the moment. It is £12m a year negative, but as the contributions stop and the recovery plan finishes it will move to £40m to £50m negative in a couple of years' time. So generating cash to pay benefits is becoming more relevant. Then you've got the other issue that more and more people are looking to take transfer values, certainly higher transfer values. So that immediately creates a cash generation issue as well.

Adam Lane: That definitely resonates with Mercer's clients. Often when they first experience cash-flow negativity it's a good thing. That means contributions have switched off for the first time and then it's all about finding income to pay benefits. That's just testament to the good work the trustees have done to reach a fully-funded position in recent times, but the transfer value issue is a big one. That's what is causing a real challenge for trustees, particularly if it is ad-hoc and you don't know when it's coming and the numbers can be quite large.

Where does cash-flow matching sit on your scheme's agenda, Bridget?

Bridget Uku: We're still generating a lot of contributions and getting new entrants. Although we're getting transfers-out, we're also getting transfers-in, so it's not high up on our agenda. It's difficult to profile our cash-flows and the governance that would be required to run a cash-flow matching strategy, it is not something we would want to do, at the moment anyway.

But you might have to one day.

Uku: We are definitely cash-flow aware. We certainly use our cash-flows to determine asset liability studies. We're doing a lot of re-balancing at the moment, so there's a lot of cash moving around. Plus, we have one-off lump sum payments from the employer every so often, so it means that we are managing our cash-flows, but we're aware of it.

Andrew Harrison: If you're not well funded and your liabilities are still reasonably uncertain then matching cash-flows is not necessarily such a good idea. So it depends on the circumstances of each particular pension fund.

Graham Moles: The clients implementing fully cash-flow matching strategies are definitely towards the better funded stage. However, clients are starting to think about putting strategies in place to move towards cash-flow matching or looking for other ways to generate cash-flows. For us it's not a silver bullet in terms of matching every single cash-flow perfectly because they're not certain.

Payne: Everyone is saying that markets are fully valued and what you don't want is to sell assets after the markets have fallen. So by actually generating cash, even if it is for the next expected three, four, five years' liabilities, you are protecting yourself from having to sell assets at an inopportune time.

John Dewey: I tend not to use the word "matching". It implies a precision and a certainty that is sometimes unhelpful. Almost every pension scheme is somewhere on this journey towards maturity and cash-flow negativity. Nothing changes overnight on the day you become cash-flow negative, but what is clear is that you have those issues about a greater certainty of outcomes if you invest in an asset that can deliver

cash-flows rather than an equity-like exposure.

Also, this traditional view of growth versus matching overlooks a host of exciting assets that have dual characteristics. They maybe aren't the best at growth or at matching, but in aggregate can provide excellent outcomes for pension schemes.

Lane: Most DB schemes today don't have a cash-flow problem. They may have challenges around liquidity in the short-term, but the challenge they face is certainty of return. That's where some of these assets really come into their own. An equity portfolio gives you little certainty about the next 20 years, while a portfolio cleverly designed as an income-generating portfolio gives you the observable yield and the observable cash-flows. That's what delivers certainty.

David Weeks: Our member-nominated trustees will recognise this picture of maturity plus cash-flow negativity. Quite a lot of them were closed some time ago and have parent company sponsors who would like to get the whole thing off the balance sheet and close it down.

Moles: When you are investing in longer term assets you are harnessing the benefits that a pension scheme has in being a long-term investor. There is a mind-set shift you've got to take in looking at longer-term risk metrics. Credit over one-year versus equities might not be as rewarding, but over 15-years it has a very different risk and return profile.

Lane: From a portfolio perspective, a traditional growth investor looks to maximise risk-adjusted returns, and that's great, but pension schemes should be looking at risk-adjusted returns times maturity. What we're talking about today is how to maximise that. Where you sit on the maturity spectrum is important. As schemes become more mature, liquidity becomes more important and the certainty of the cash-flow becomes more certain.

Jeremy Richards: Historically the scheme has been looked at as a whole thing, but taking it from a hardcore matching point of view you've got two different sets of liabilities with two rather different objectives. Your pensions and payments are a different beast to your deferreds, where you require liquidity but they may or may not crystallise into actual cash-flow liabilities. You could almost think of it like different investment strategies and different segments of the fund, because trying to cash-flow match deferreds is problematic and expensive.

Payne: Unless you are incredibly well-funded.

Uku: It is about maybe looking at a sub-set. Some LGPS schemes are looking at cash-flow matching for their pensioners. That is easier to define.

Cliff Speed: You're right about certainty of outcomes. Maturity is thinking about how much of your assets are going out the door annually. If it's 3% you're quite severely cash-flow negative, but you could probably deal with that with income. As soon as that starts rising you're in a situation where you're definitely realising assets and if you are realising an asset after a significant fall there's a leverage in the future return you will need if you have to do that. The more mature assets going out the door, the better you want to align those cash-flows with expected liabilities.

The difficulty is with deferreds because there is so much greater uncertainty in the cash-flow. So you are trying to balance being well-aligned with benefits going out and asset income, with sufficient liquidity to deal with those uncertain cash-flows. That's the evolution we see as schemes mature. Starting with a lot of actives is not really practical, but as you start to build that up, starting to make sure you've got cash-flow alignment for the pensioners makes a great deal of sense.

Lane: It's almost like pushing a ball up a hill. When you're immature the ball keeps rolling back to you, but there comes a point when the ball rolls over the hill and you're chasing it; unless you're in the right position at that time it is quite difficult. Cash outflows divided by the assets metric is important. As soon as that yield exceeds what you can comfortably generate with your portfolio you're in a world of pain. It's not now, but in five, 10, 15 years time all of a sudden you could approach that very rapidly and trustees should plan for that.

Moles: A lot of the talk around cash-flow matching a year or so ago was about schemes being able to grind out their returns over a longer period. That all sounds sensible, but the only caution that we talk to clients about is if they set a strategy which is going to pay cash-flows over the next 40 years they'd better be sure their covenants are going to be there.

What does being cash-flow aware mean?

Uku: We're paying pensioners mostly from contributions, but further down the road we're going to use our dividends, coupons and whatever else to pay the cash-flow. So we're de-risking at the moment. What we've done is take 10% out of equities to put into higher yielding assets, so we've put 5% into private debt. There you're churning out contractual cash-flows, looking for quality, secure, sustainable income to manage those cash-flows going forwards.

Payne: I'm seeing schemes that are even more cash-flow negative look at more buy-and-hold credit strategies. So it's not just getting the coupons out, but getting redemptions and the principle out at the same time. The benefit of that is you're pulling to par all the time; you're not actually selling at a distressed value at any particular point. You buy a bond and you know what your cash-flows coming out of that bond are going to be. One or two of my schemes are that mature that we're looking to put those strategies in place. This avoids the need to sell in fully valued markets.

Weeks: From the client perspective, it is not only what the advice is but who is giving it. Lay trustees don't claim to be experts but they listen to the experts. The vibes around this topic seem to be increasing, so inevitably the well-thinking client will pay attention to those trends and consider them carefully.

Moles: One of the things with being cash-flow aware is there are actually some lessons that, bizarrely, DB schemes have learnt from the DC world. Normally it's the other way round, but with income drawdown in DC a lot of the more advanced strategies can be applied to DB schemes. It's having a sensible waterfall in place of what to sell when market conditions are bad or having bonds that you could run-off if needed. That's what we think of being cash-flow aware; all of the assets generating cash-flow.

David Morton: There's also an important point around collateral here as well. There are a lot of schemes using leveraged liability matching LDI arrangements, but you can never be positive about when you might need some cash to top that up. In addition to the liability profile, you need to think about under what circumstances we might need more collateral and how much could that be? Have a plan. There's so much uncertainty that trying to nail it all down is nigh-on impossible, but understand the range of options that you could use.

Richards: You will probably find that all of those issues will move in the same direction when you get a problem. If your underlying assets become less liquid and you require more collateral then that's when you get into a vicious circle.

Morton: For some schemes there's probably a role to play for some cash in the portfolio. Typically people don't like cash in pension schemes because they see it as not doing anything, but if having a bit of cash lets you have a more balanced portfolio then it makes sense to keep some to the side. It perhaps allows you to take a little more risk when you would otherwise be a forced seller.

Moles: The alternative if you don't like cash would be an absolute return strategy, which you could use as a safety net.

Harrison: Just a slight word of caution there. I worry that when you do need collateral some of the perceived liquidity may not quite be there.

Lane: Be careful when you implement these things. We're living in a world of extremely low yields and there can be a disappointing outcome if you prioritise cash-flow over sentiment in terms of market conditions.

Speed: Remember, you're comparing assets available today. I don't have the pleasure of deciding to buy an asset in 2018 or the 2023 yields. Don't lock into things. Maybe there's an argument for actually generating excess cash-flows, one that provides liquidity for some of the uncertainty and one providing cash-flows for investment opportunities going forward.

Weeks: Until recently our members said this is a solution which only a bigger scheme can look at, whereas now there seems to be more products available to enable that to move down the size of scheme scale. It's the way the market is developing as well as what the needs are that feed into the pot.

Payne: There are some interesting investments around at the moment, more amortising-type investments which will take you through the peak in cash-flow. Things like private finance initiatives which have a 20-to-25 year lifespan, but effectively you're left with no value at the end, but the value comes out over the whole period. And if we're facing a peak in cash-flows over that period they are actually very good invest-

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ments to hold in that type of environment. So it's not just saying, "Bonds produce income,", it's looking at all the assets you have in your portfolio and trying to understand what cash they will derive over a longer period.

Lane: This is one of the challenges with cash-flow matching. The most exciting opportunities, the ones that are mostly idiosyncratic, are actually small in nature and can't be mass-marketed. You can find assets which generate what would be called equity-like returns but in a low-risk type cash-flow fashion. It requires a bit of a gold hunt to find these assets and sometimes that lends itself to the larger schemes, so it's just hard for small schemes to access it, but the challenge for the industry is to respond to that and try and provide access to some of the more esoteric assets.

Dewey: The big change in the past year or two has been the access for schemes of all shapes and sizes. This tallies with the idea of why it's not matching. While you can't get the same degree of precision, you can overcome the real governance challenge, which is: how can I get access to more idiosyncratic loans rather than listed assets?

Why has accessing the market improved in the past year?

Dewey: Demand. It felt that there was a real explosion in cash-flow driven investing last year. Everyone was talking about it, which was enlightening for me, having ploughed a lonely furrow for a long time. It felt like there was a real acknowledgement that this was a useful tool for schemes and providers have responded. We are seeing a lot more of a trickle down from larger schemes.

Payne: It's quite interesting that, if we go back a while, investment management providers thought: "This is a good investment idea, can I market it to pension schemes?" Whereas that has been turned on its head now, which is saying: "What are the challenges facing pension schemes? How can we meet those challenges?"

Speed: If we are looking at cash-flow aligned assets they generally have a different investment management governance requirement than traditional assets. There is a lot of due diligence up front and then it's left upon a care and maintenance basis. If it does what it says upon the tin there's room to do that. So it begs the questions: what is the payment schedule which is suitable for that? And, is the industry set up

John Dewey

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John Dewey, Aviva

to provide value for that?

Lane: We're seeing large investors start to do the due diligence themselves. So they're bringing expertise early to do that half yard, but then it just sits in the custody account and needs some care and maintenance. That's a real challenge for anything other than multi-billion pound schemes in having the in-house resource to be able to do that.

Harrison: Even with some of the larger schemes, I'm not entirely sure they would feel comfortable saying we should be real estate or mezzanine or student loans or ground rent. They would say, "Actually, we need some secure long-dated cash-flows, we need direct or indirect inflation linkage. You guys build me a portfolio that does that with a sensible mix of credit risk and make that efficient when you build it but keep it efficient through time."

Dewey: That care and maintenance can be a misnomer. For public assets that's probably largely true; you are buying something off the shelf, there's a limited extent to which you can influence outcomes. As soon as you move into the private asset world you are creating the asset. So the outcome from that asset is a function of the legal terms you personally negotiate, and in the unfortunate event that something starts to go wrong, how you deal with that, how quickly you can step in and the expertise you can bring. This can create significantly higher recoveries and lower defaults.

Speed: There are a few situations there that you have identified. There's the initial due diligence and creating the assets, which is absolutely crucial. There is that hopefully rare situation where things do not pan out and then early intervention can make a big difference in the recovery of that asset, but hopefully the vast majority of the time is that piece between where there should be a low level of intervention.

Richards: It depends how much risk you're taking on the asset. If it's a government-related cash-flow that you've locked into, you can expect that to run-off without too many problems; if you're investing in something higher risk where you have covenants, well covenants get breached but in those kind of assets often you rectify without anything too horrible happening, there can actually be quite a lot of ongoing maintenance required.

Uku: Certainly in private debt there will be a lot of ongoing maintenance.

Richards: And private debt isn't monolithic. Private debt has all the AAA down to CCC, just the same as public debt, just not listed.

Peter Martin: In my experience of private debt, there's the initial underwriting and the origination of the loans, but the ongoing diligence and the monitoring of those loans is much more than most people would expect. These days if you do direct lending there's an awful lot of money laundering and other issues to think about. If you delegate that to a fund manager you have to make sure that they have that infrastructure in place. A number of people I've spoken to in the past couple of years have said that people don't seem to be aware of this on the fund management side in terms of the money laundering and those types of issues, it's more about reputational risk. I'm not saying it's not a good idea; you just have to be aware of it.

Weeks: From a trustee point of view we're aware of the need to monitor. A typical trust will operate on a quarterly board meeting cycle, so it needs a monitoring arrangement with advisers which fits in with that for the trustees to look at. The second thing is that there's an increasingly important, much more aware of different types of risks and risk management.

Martin: And these things change. Somebody last year said there were lots of changes to the money laundering regulations, which you had to take account of. I'm just saying that's just something to be aware of. It's a good idea in these days of low yields. You just have to think outside the box in order to get the income that you require.

Dewey: You really find this out during the volatile tougher times, and, as we all know, we've been in a period of historic low volatility and clearly that may not last forever.

Uku: It has been a benign credit environment as well.

Lane: When you're dealing with yields that are relatively low, fees matter. So how do trustees demonstrate value for money because some of these alternative assets can look expensive, and the proportionate return you're getting back net of those fees can be substantially inhibited. It's a question of how do you access that net of all costs. That's a real challenge.

Richards: We've been running hard cash-flow match portfolios for a long time. Buy-and-hold is a dynamic process. You buy an asset but if you find a better one that provides either the same cash-flow with less

risk or more cash you then you buy that one.

Morton: That's the challenge for managers. To my mind that makes sense but the benefits of turning the portfolio over have to be compared to the costs involved.

Martin: The expression I would use is it's not 'buy-and-hold' it's 'try and maintain'.

Harrison: Many different managers have their pet names for it. An old colleague of mine, who has managed insurance assets for many years, likes to call it 'buy and nurture'.

Martin: You've got to monitor those market conditions. Is there something better out there? I've seen examples whereby things that were bought five years ago have done exceptionally well, but those assets have become too dry and you could do better elsewhere. There is a turnover even in buy and maintain, so it's not set and forget. The market conditions change and you're constantly looking, not for the next challenge, but for that extra pick-up. Those things do come but you just have to adopt the more complex. I'm not sure if there's an illiquidity premium these days, but I'm convinced there's a complexity premium, that there is stuff which is not normal to most trustees, but is out there and you've got to think slightly out of the box.

One of the things that I have been thinking about long-term is how you source income from the non-normal credit sources: aviation finance, litigation finance, music royalties and theatre receipts.

Harrison: I would call it a complexity of access premium.

Martin: I wouldn't say that the days of investing in investment grade credit are gone, but you have to think further afield. Obviously a lot of people are doing that so there's a trickledown effect. Has there been a sudden explosion of what we call CDI investments? I would say not because people like myself have been shouting from the rooftops about CDI and cash-flow driven investment for the last five to 10 years. I spoke to a lot of financial advisers at the time to try and encourage them to produce the products which we're seeing now, so a lot of work has been done in the background.

Harrison: How do you find assets that can give you the right outcomes in a difficult market and what are the levers you can pull? We can talk about a liquidity premium or complexity premium, but what is that? It's just a balancing item. Markets are driven by supply and demand; you want to find things that are hard

for other people to access so you've got a competitive advantage. We invest in 24,000 individual domestic solar panels on people's rooftops for less than £10,000 each. What can you do with that? If you build a portfolio of 24,000 of them it becomes quite an interesting asset.

Richards: They're quite hard for a small scheme to access the new stuff in particular. The best way to access it is to maintain a presence in the market, but to get continuity of access you need scale.

Moles: If you're a scheme which has a covenant that is a bit weaker, there's a likelihood that you might have to wind up the scheme at some point in the future. The last thing you want to be doing is buying a huge amount of illiquid assets that insurance companies won't buy.

Payne: It's about understanding illiquidity. If it's a good asset, people will want it. It's just you may not be able to sell it the next day, you might have to wait two, three, six months or a year.

Harrison: So hand-in-hand with investment strategy, 10 years ago liquidity budgeting was not really a thing; now it's an absolute requirement for any scheme as part of their investment strategy work.

Richards: Which assets and which liabilities you're going to be matching comes back to the fact that you don't match liabilities that are not that well-defined or can be transferred out.

Uku: From my perspective, with cash-flow investments it doesn't matter what assets you have, it's always better not to have to sell and to fund those cash payments from the income you're receiving.

Speed: Selling should be an option. If you've got another asset that can enhance your portfolio through quality or return, do so, but that should be an option which you have, not a requirement. That's why pension funds can have an advantage, playing to the things which fall outside of Solvency II matching adjustment. There should be a big opportunity there, but I'm not sure that has been brought well enough


Bridget Uku

to market as yet.

How are transfers affecting cash-flow matching strategies?

Morton: It's certainly causing some schemes quite a problem. One of the clients I advise had about 15% of their assets transferred out and they are not that small a scheme so it has affected them hard. The reason is that they've got a number of senior individuals with large benefits who chose to go at the same time, from deferred, I might say, rather than from the company.

Weeks: What we are finding is there are some big multiples at the moment which are causing people to look seriously about wanting to do transfers. A few cases can make a significant difference to a small-ish fund, and yes, it can have a big impact and that's fuelling a lot of the desire that we have been talking about.

Payne: I've heard of one scheme paying £150m a month. Okay it's one of the larger schemes in the country, but paying out £150m a month is a significant issue. Trustees do quite a wide range of things, including liability matching, so we are looking to reduce liabilities. Transfer values paid out at the right level are good for the funding of the scheme. So, you need to be thinking ahead and say: "We know at the moment the transfer value is very attractive, therefore if we had some spare cash and we don't want to be fully invested, we want to have a buffer." It goes back to this liquidity waterfall, just saying: "Look, we know that we need some assets here which are less volatile but liquid." We don't build a portfolio with just one objective in mind, we look at the whole range of possible things to try and make sure we are properly protected.

Morton: You can do a bit in anticipation of that. When the administrators issue transfer values they go on the record for quarterly or even monthly meetings for cash-flow management. We get told: "This is the outstanding, this is how much could be going," and most of the time we've got a cash buffer to deal with that.

Payne: You build in an allowance for it and you know it's going to be lumpy so you don't worry if you're building up cash at times because you think something is round the corner, and if it falls outside of your expectations then you reconsider it, but you need that buffer.

Dewey: Like everything it's a trade-off. If you believe a less liquid cash-flow driven investment approach is not suitable for your scheme, then sacrifice some yield and maintain a public credit portfolio. However, if you are an immature local government pension scheme then you are in a completely different situation, since you may have a longer time horizon and much larger tolerance for illiquidity. It requires an analytical review of where you are on these different measures.

Payne: I've got one client which has agreed to increase contributions if we get more than we expect from transfer values. Okay, not all clients can do that, but it becomes a stress to the scheme's investment strategy if you get more than you are expecting and they understand that and they will put more cash in to help produce that buffer. It's actually good from their point of view to be able to pay out transfer values but maintain a sensible investment strategy.

Lane: In one relatively extreme scenario, I have seen a case where a client said: "We need income so we have cash-flow matched, but we hadn't managed the surprises." So rather than hold physical equities and a bit of cash, they hold cash and then express the equity exposures synthetically. In that case they are pretty robust to almost all scenarios but we recognise that there are trade-offs and a degree of complexity that not all trustee boards will be comfortable taking. There are lots of ways you can cut the cake.

"If your underlying assets become less liquid and you require more collateral then that's when you get into a vicious circle."

Jeremy Richards, M&G

Jeremy Richards

Cliff Speed

Moles: A cash-flow driven financing approach means that your assets are hedging future liabilities. Transfer values are driven by the gilt plus rate, so if you've got an asset class that is broadly tracking that you are going to be hedging that basis better than you would if you just had equities. Those strategies can help as long as you can get out of them and that's the key thing.

Lane: Yes. I am theoretically with CETV. You should just be able to extract the cash-flows, that's the practice, that's horribly technical and you would never do it but in theory that could be made to work. I just want to make one other point which affects this as well, which we haven't really given any thought to: the large transfers that can have a disproportionate impact on the overall level of longevity. It needs to be carefully thought about how these interact with strategy and that's the hard problem we need to tackle. We kind of assumed that the actuaries got it right.

Moles: To me it comes back to if you have an approach that looks at the longer term, such as a metric looking at probability of paying all the benefits, you can't capture longevity in a value of risk in a one-year metric.

Lane: That's a really important point. It's often misconstrued that people think longevity is a short-term risk. By definition it extends your investment time horizon and gives you a little more flexibility. It just needs some careful thought about what this really means.

Morton: Looking at the probability of paying pensions is a better metric and you can build the longevity side of things into that. It's a more appropriate timescale for that type of risk.

Martin: Transfers are something to pre-plan for as part of your liquidity profile, but for a number of the bigger schemes I have come across it's not as big an issue as it has sometimes been made out to be in the press. It's more about the level of spurious accuracy. Life is uncertain; you can't predict transfers, although you should be aware that there are a bunch of people who will be thinking of taking their £500,000 and taking their transfer value, so you should anticipate that. A number of LDI managers which I have spoken to say that people are forgetting that these transfers will impact the LDI mandate. You can get more leverage, but there are consequences to that so it's not just where you derive the money to pay the transfers, it's consequence of your overall holistic management of the portfolio and the LDI risk behind that.

Speed: Mortality, longevity and transfer values become more and more extreme as you go down into the smaller schemes. You're not going to see it affect the LDI for a large scheme; it's going to be lost in grounding. As you come down to the smaller schemes it does become more prevalent and that is basically another expression of illiquidity management.

Morton: The ultimate liability matching asset is to insure part of the population. We are seeing a number of schemes looking at some or all of their pensioner population, because depending on where you are in the market and how healthy your data is, the cost of insuring it can be favourable relative to the cost of doing this gilt-type portfolio. That insurance policy is just another investment which schemes can make.

Speed: Comparing it to a gilt portfolio is the wrong metric for a buy-in. Not only have you got the assets you could be holding, but historically insurance companies accept cash and gilts; the key collateral which you're using to do LDI. Effectively, I can hedge all my interest rate inflation risk with 50%, 40% of what it costs with a gilt portfolio, but I am having to pay over 100% of that portfolio to an insurer. That makes no economic sense and so the idea of just a flat gilt portfolio is the wrong metric.

Payne: It just depends how well you are funded. Ultimately if we get to a position where people are well-funded you don't need LDI, because they don't need that leverage.

Lane: That's the difference between a buy-in and a buy-out. If you want a buy-out you just want it off your hands, but a buy-in is essentially an illiquid expensive asset and that's the challenge.

Payne: I'm seeing some real issues at the moment with two of my clients on the basis of accounting treatment if you do a buy-out verses a buy-in. We're going to see more buy-ins, migrating slowly but surely to buy-outs, but just because of the accounting treatment there's a real perverse incentive not to buy-out at the moment, certainly for international companies.

Lane: One evolution we're seeing is a quasi-approach, where companies set up their own insurance company to manage their pension schemes, so there is a middle ground as well.

How does being well-funded affect your cash-flows?

Uku: We are really well-funded, so we are thinking that the employer might not put in as much of a contribution after the next annual valuation, so we have to think about that reduction in contributions and planning around that.

Weeks: The risk for us in the future is to make sure the market doesn't turn to excess and overreach itself in any particular direction.

Martin: In terms of the product proliferation required, there's an awful lot of chatter regarding fixed income generation. There's a great deal to be done on inflation assets, inflation proofing and there's a lack of assets behind that. There's a great deal of work to be done by the asset management industry sourcing that in a cost-effective fashion which is palatable.

Payne: At the moment we are paying vast amounts of money to get anything near inflation hedging. If you're putting £110 away to get £100 later that's not an investment, is it?

Richards: The insurance industry is heavily incentivised to find those matching assets, but once they find them they are incredibly illiquid.

Martin: Speaking to some CIOs at larger pension funds, if you can't buy it you manufacture it. You buy property and you convert it to a certain form so you can have an inflation-proof income. There's more of that going on.

Lane: Cash-flow matching is extremely powerful, but cash-flow matching that is inflation-linked has an inherent uncertainty, potentially with foreign assets with unknown payments can be quite tricky. These can be managed by holding cash or hedging it with swaps. So don't just look at the raw number, look at the raw number after fees and take a sensible approach to portfolio construction. I guess that is the mantra.

Cash flow-driven investing: a new approach for more predictable income

John Dewey, head of investment strategy, global investment solutions, Aviva Investors

While liability-driven investment (LDI) and growth approaches will remain a key part of the toolkit for defined benefit (DB) pension schemes, there is a strong case to be made for incorporating cash flow-driven investing (CDI) into their strategies.

CDI can deliver the predictable returns of LDI strategies but at higher yields, while diversifying portfolios and drawing on a wide range of return premia.

Traditionally, market returns from growth assets - such as equities, property or diversified multi-asset portfolios – have been used to do the heavy lifting of generating long-term returns. But experience has shown that simplistic diversification across listed markets can fail to deliver protection when it is needed most: when volatility is high, asset prices are falling and correlations rise.

At the same time, there is more emphasis on path dependency: the possibility that several years of poor returns might deplete assets, so that meeting long-term funding targets becomes unviable.

Kicking the usual bucket approach

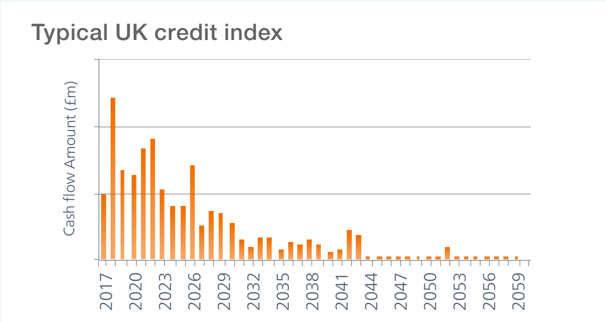
Rather than following a conventional approach, which broadly splits assets into growth or matching categories (hedging liabilities in line with movements in interest rates and inflation), pension schemes should consider assets that provide reliable income at a premium above bonds and swaps. These may not fit naturally into either of the traditional buckets.

Investment strategies focused on such assets, generally termed CDI, do not all provide a perfect match for liabilities, but can offer an attractive middle ground, depending on individual requirements.

Income-producing diversified growth: A multi-asset portfolio of listed assets tailored to pay out regular income is one way to meet the cash-flow demands faced by maturing pension schemes.

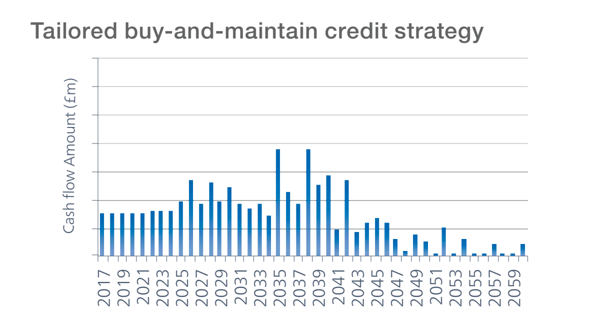
Annuity style credit: Credit portfolios can be constructed to meet specific cash-flow needs and held to maturity. With customised buy-and-maintain approaches, interest rate, inflation and cash-flow exposure can be tailored to the liability profile.

Tailored buy-and-maintain credit strategies: better aligned with long-term liabilities



The nature of cash flows will change each time the index is rebalanced

Source: Aviva Investors
(For illustrative purposes only)



Greater certainty over future cash flows, providing a better match for long-term liabilities

Source: Aviva Investors
(For illustrative purposes only)

Private assets: Private assets (infrastructure debt, real estate debt, private corporate credit and other structured finance transactions) with transparent cash-flow characteristics can provide higher yields through illiquidity premia and diversified return premia.

Optimal assets have bond-like characteristics, but offer better yields with less risk. Unlevered infrastructure is particularly attractive, since it can offer regulated returns that deliver annual income of over 7%, without leverage.

Finding solutions that fit

Determining the balance between growth, LDI and CDI needs a detailed understanding of a scheme's objectives and cash-flow requirements. If a scheme has a medium-to-long-term time horizon, and a tolerance for less liquid assets, private assets merit exploration. Conversely, if a scheme is well funded and targeting a buy-in or buy-out in the short to medium term, it will typically need a robust mark-to-market hedge and the balance should remain towards LDI.

Next steps

As cash-flow negativity is becoming more prevalent, pension schemes need to put cash-flow at the heart of their asset and liability management strategies. Once a scheme truly understands how its commitments will change, it can test multiple scenarios to understand how portfolios will perform in different market environments.

An evolution to CDI represents a natural step for a large number of maturing schemes, and should contribute to more effective investment strategies in the years ahead.

AVIVA INVESTORS

Raising cash-flow awareness: Effective cash-flow management for DB pension schemes

As defined benefit (DB) pension schemes mature and become cash-flow negative, cash-flow management becomes increasingly important. Schemes may be better off focusing on being cash-flow aware than being cash-flow matched.

Executive summary

– Schemes, particularly under-funded ones, may be better off focusing on being cash-flow aware than being cash-flow matched
– Being cash-flow aware means seeking to use not only the cash-flows from bonds, but also the natural cash-flows from other types of investment such as real assets and equities
– Cash-flow awareness does not replace cash-flow matching. In the short-to-medium term it usually makes sense to at least broadly match benefit payments
– Trustees should also prepare for unexpected cash-flows such as transfers out. This involves taking pre-emptive steps to boost liquidity

What is causing the cash-flow issue?

Defined benefit (DB) pension schemes are maturing. According to Mercer[1], more than half of UK DB pension schemes are cash-flow negative or soon will be, with 85% of cash-flow positive schemes expected to turn cash-flow negative within 10 years. Cash-flow negative schemes are paying more out in benefits than they are receiving in contributions.

At the same time, there are other pressures that mean precisely matching all benefits is not necessarily possible or ideal.

These include: *Underfunding* (assets lower than liabilities), *longevity risk* (the risk that scheme members live longer than expected) and *sponsor/covenant risk* (the risk that the sponsor becomes insolvent).

What can schemes do to manage their cash-flows better?

The most important aspect of managing cash-flows is getting the broad asset allocation right – trustees should not lose sight of the big picture. We recommend examining the long-term distribution of outcomes the scheme might face using a model that takes into account the scheme's circumstances, including how cash-flow negative the scheme is. Success is either paying all pensions as they fall due or paying as high a percentage of those pensions as possible.

Trustees can choose the investment strategy with the most attractive profile of future outcomes and decide how much to allocate across broad asset classes. However, this is not the whole story – assets should also be structured in a cash-flow aware way subject to this broad split.

We suggest the following additional steps:

1) Prepare for expected cash-flows

a) Target cash-flows in the short-to-medium term

We recommend structuring assets so that a high proportion of cash-flows are met by natural cash-flow generation from assets for approximately the first 10 years.

b) Turn on the taps – use all natural cash-flows

Bonds and some real assets generate contractual cash-flows. These can help reduce scheme risk even if the cash-flow match is imperfect. Although they are not contractual, dividends from equities can also be aligned with pension payments.

1) Mercer European Asset Allocation Survey 2017

c) Use an appropriate growth strategy to meet long-term cash-flows

There is a variety of different approaches available to trustees targeting a more cash-flow aware growth strategy. These include income-generating multi-asset funds and equity strategies that focus on selecting companies with sustainable dividends that grow with inflation.

2) Prepare for unexpected cash-flows

a) Pre-emptively increase liquidity

There are various potential ways of increasing liquidity in a pension scheme without compromising its risk-return profile:

– *Increase flexibility and efficiency of leverage:* LDI offers leveraged exposure to rates/inflation and therefore frees up cash
– *Consider tailoring growth asset exposure:* adopt a cash-flow aware strategy and avoid excessive allocations to illiquid assets
– *Consider using uncorrelated funds* or market neutral funds with a low expected maximum draw-down as a safety net

b) If asset sales are needed, allow for costs and any active views

Most schemes currently use up cash and then increase leverage in their LDI portfolio to meet unexpected cash-flows. If this is not sufficient or leverage levels are already high, they may also make use of cash-flows available from growth strategies.

Once these avenues are exhausted, it is likely that the scheme may need to sell assets, possibly in stressed conditions. Schemes should sell assets that move the scheme towards the most attractive asset allocation today (allowing for any carefully researched active views) but bearing in mind transaction costs.

3) Be proportionate

A simple plan or priority order may sometimes be appropriate, especially if schemes have a limited governance budget. For example, some trustees might consider selling relatively liquid growth assets first, followed by LDI and leaving the sale of illiquid assets as a last resort. Others might prefer to reduce their hedge ratio before selling growth assets.

Legal & General
INVESTMENT MANAGEMENT

Double Trouble

Pension funds are struggling with inadequate cash-flows and rising deficits. *Charlotte Moore* takes a look at how to manage the situation.

The risk burden on UK pension schemes keeps increasing. As well as narrowing the funding gap and managing interest-rate and inflation risk, schemes have to deal with negative cash-flows. Balancing these competing demands can be tricky.

Negative cash-flows reflect the maturity of most UK pension schemes. With many closed to new members and to future accrual, the ratio of retired members to the active or deferred population is increasing. That means schemes will soon have to pay more in benefits than they will receive in contributions.

Benefit payments outstripping contributions is a relatively recent phenomenon: over the past decade the majority of schemes have been cash-flow positive.

Gatemore managing director Mark Hodgson says: "Schemes have had significant contributions from sponsoring employers to help reduce deficits." In addition, decreasing bond yields have led to an absence of margin calls for cash from liability-driven investment (LDI) providers.

But as contributions reduce and further calls on capital become possible, there is a greater likelihood that pension schemes will become cash-flow negative.

This is a particular problem for pension schemes as they can ill afford to hold significant sums of cash. Legal & General Investment Management head of UK bespoke solutions Anna Troup says: "This can create a liquidity problem as they might lack the funds to pay benefits and expenses."

Lacking the available cash, schemes may need to liquidate assets in order to meet those liabilities. But there is a danger this could unbalance the scheme's investment strategy or increase other risks.

If a scheme found, for example, that it lacked the cash needed to meet its obligations; it might decide to sell a portion of its equity portfolio. However, disposing of growth assets might make it harder for that scheme to close its funding gap.

"And the scheme might be a forced seller of assets at a low price, which no investor wants," Hodgson says.

Rather than selling down its equity portfolio, it could instead decide to sell a portion of its bond fund to protect its growth assets. Hodgson says: "But most schemes are reluctant to sell these as they are holding them to match future liabilities. So understanding liquidity is imperative."

"The most pernicious combination is an unexpected, immediate cash-flow requirement, a large deficit, a lack of liquid assets and a falling financial market."

Anna Troup, Legal & General Investment Management

Troup adds: "The most pernicious combination is an unexpected, immediate cash-flow requirement, a large deficit, a lack of liquid assets and a falling financial market." In those circumstances, the schemes are locking in a reduction in their asset base and so increasing the other risks facing the scheme, she adds.

In other words, the scheme cannot consider these demands in isolation – they need to be balanced against the other risks the fund needs to manage.

"Trustees need to look at the scheme holistically," Troup says.

Nor is it helpful to dwell on the past. "If changes need to be made, the trustee must think of it as the first day of the rest of the scheme's life," adds Troup. That helps a trustee to always make explicit risk decisions rather than being forced into taking implicit risk decisions.

PLANNING AHEAD

The amount of risk a scheme can afford to take will depend on the strength of sponsor covenant.

If a scheme decides, for example, not to sell some of its growth assets to fund the liquidity requirements when markets are falling, the trustees need to be sure that's the decision they want to take.

Troup says: "Deciding to hold on to the growth assets when they are losing value should be an explicit decision which is dependent on the strength of the covenant."

To avoid being bounced into taking implicit risk decisions, it helps for the scheme to have a plan. The first step in that plan is mapping out future cash-flows – both income from assets and liabilities and likely expenses.

Aon partner Lucy Barron says trustees need to consider how much cash is being generated from existing assets and if that will either match or fall short of the scheme's likely cash-flow requirements.

It is not just about mapping out the likely liability payments to pay the members' benefits - it's about considering the circumstances when the scheme might need more liquidity. "If interest-rates rise then a scheme with LDI might also need extra cash to top the required collateral pool," Barron says.

Once these cash-flows have been determined, trustees can see how they can use the scheme as it is today to increase liquidity. Troup says: "It might be possible to increase the amount of leverage used in the liability-driven investment strategy." For example, a scheme could use more interest-rate swaps or gilt repos to free up cash.

Another option could be schemes using synthetic equity or credit, in the form of equity options or credit default swaps.

"But for some schemes these synthetic opportunities may be limited as they will already have maximised their leverage," says Troup.

If increasing leverage is not an option, then tailoring the growth assets might be. "For example, a scheme might decide to focus on dividend equity strategies or multi-asset funds, which generate income," Troup says.

Alternatively the scheme could have market-neutral absolute return funds. These should only see their valuations fall by a relatively small amount if there is a market correction.

"These could be liquidated quickly if cash was needed," Troup says. But these decisions need to be made in the context of the risk management framework. "The modelling needs to include the covenant risk to enable a scheme to determine how much risk it can afford to take," Troup says.

This is an important consideration because the average scheme sponsor has a BB+ credit rating. Troup says: "Over a 20-year period, around a third of those companies would default when the average scheme would still have more than half of their liabilities left to pay."

In other words, covenant risk is a real issue which must be included in the overall asset allocation decisions. "There is a danger that if schemes do not include this risk in their decisions, they could create real problems in the future," Troup says.

But even if schemes do plan out their cash-flows and try to avoid being bounced into implicit decisions, there is a danger that pursuing a purely cash-flow matching strategy will cause them to neglect their other goals.

P-Solve co-head Ajeet Manjrekar says: "That's not to say this isn't a risk but it is not necessarily the key priority of a scheme today, given the state of DB funding levels."

Another asset manager warned *portfolio institutional* that there can been too much of a focus on cash-flow. "While it is important, the risk and return elements of the rest of the portfolio are crucial."

RELEVANT FACTORS

Cash-flow is only one of a number of important considerations. Aon's Lucy Barron says: "A scheme's return requirement; the level of risk it can take in its investment strategy; the strength of the covenant and the maturity of the scheme are all relevant factors."

There is a danger schemes will focus too closely on cash-flow negativity rather than the overall target of closing their funding gap.

Manjrekar says: "Most schemes are using LDI and some leverage in combination with return-seeking assets to generate the returns needed to close the gap."

If a scheme takes part of those assets to match cash-flows, there are fewer assets left over to reduce the funding gap. Manjrekar says: "If a scheme decides to allocate 20% of its assets into a cash-flow matching solution then there are only 80% of the assets left to close the funding gap and match the interest-rate risk."

A focus on cash-flow matching assets could result in a scheme making a trade-off between reducing the return the assets will make, thus lengthening the time to close the funding gap; or, the scheme decides not to maintain the same level of LDI and introduces greater funding level volatility.

Schemes should be prioritising their future. "Schemes need to think about what their priorities are given where the scheme is today relative to its long-term funding goal," Manjrekar says.

The problem is that schemes do not think about those long-term goals in the right way.

"Too often they frame their position relative to technical provisions rather than a longer-term funding measure," Manjrekar says.

If a scheme has targeted a buy-out as its ultimate goal it should actively work towards that target in tandem with the covenant sponsor to achieve it, he adds. "That enables the scheme to understand the risks it faces and the level of return it needs to generate."

Then the scheme should take a closer look at its assets to determine what liquidity it has. Manjrekar says: "Most schemes already have enough liquidity in their investments along with a tolerance to take some illiquidity to generate extra returns."

It is also important to consider current market conditions. Manjrekar says: "For example, corporate bonds would address some of your cash-flow requirements but credit spreads are at all-time lows, so we question whether investors are getting paid enough for the risk."

Those types of returns will not enable a scheme to effectively close its funding gap and meet its longer term cash-flows, he adds.

Another asset manager who *portfolio institutional* spoke to agrees: "If a scheme focuses just on an asset's ability to generate cash-flow, it could end up investing in assets which do not meet its other goals."

The only schemes which should be considering a full cash-flow matching strategy are well-funded, mature schemes.

Barron says: "Cash-flow matching strategies are most suitable for schemes which only need to generate returns of gilts plus one or two percentage points and where they are targeting self-sufficiency."

But even those schemes will not want to buy over-valued, under-returning assets just so they can match cash-flow.

"If corporate bonds do not look good value, then schemes could also consider investing in cash-generating alternative assets," Barron says.

"Schemes need to think about what their priorities are given where the scheme is today relative to its long-term funding goal."

Ajeet Manjrekar, P-Solve

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May 2018 – Factor investing
June 2018 – Responsible investing
September 2018 – Diversified growth funds
October 2018 – Fixed income
November 2018 – Property
December/January 2019 – Multi asset or Alternative credit

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