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DISCUSSION: DC AND PRIVATE MARKETS

Defined contribution is believed to be the future of the British pensions industry and their allocations to private market assets are growing. This trend warrants a timely discussion with a group of industry experts.

There was a time when defined contribution (DC) pension scheme portfolios were packed full of listed equities and bonds. Many still are, but their exposure to private market assets is growing.

Buying a stake in a young but growing private company, an industrial warehouse serving the digital economy, lending money directly to the borrower or building a wind farm to help transition the economy away from oil and gas can bring much to a portfolio.

Such assets offer diversity, protect against inflation and perhaps provide higher returns than their listed-market peers. But it's not all good news as they also reduce the liquidity of a portfolio.

So with a fine balance between risk and reward, how are trustees approaching alternative investments.

It starts with what members need, Aon's Joanna Sharples said. "There will be lots of challenges along the way, but fundamentally it has to be in a member's best interests, from a risk and return point of view, to invest in those assets," she added. "Fiduciary duty is at the heart of it."

USS has owned private market assets for almost 20 years, initially for its defined benefit members. But in 2020 it decided to include its DC section in the allocation. Over the course of the year its illiquid holdings went from zero to 20%, or around f_{600m} .

The DC retirement scheme for academics is now exposed to infrastructure, private equity, private debt and property. This year it added private equity co-investments to the portfolio. "We had to take our board and investment committee along the journey, which was challenging because at the time nobody else was doing this in the UK," Naomi Clark said. "The pandemic hit as we were doing that. It was a good test of our enhanced valuation process, and it worked well."

USS intends to increase its illiquid assets by the end of this year. "We believe in [private markets]," she said. "The risk-adjusted returns are fantastic, and it's a great diversifier within the portfolio."

Also looking to increase its exposure to alternatives is NatWest Cushon, with Veronica Humble explaining that a range of asset classes are being considered within its 15% target allocation to illiquid assets.

The regulator must be happy that DC trustees are so bullish on these markets. Indeed, Pavan Bhardwaj, who chairs the investment committee of a \pounds 3.54bn DC scheme and sits on another for a master trust, said money purchase schemes have to include an illiquids policy within their statement of investment principles. "It is forcing trustee boards to at least give it some thought and have a view on whether they are ready to take that step or consider it at a later stage."

The own trust scheme he sits on has the scale to do it in a "meaningful way", but there is no indication of when that will happen. The only certainty is that it is being considered by the trustees.

The master trust also has the scale to tackle this given that it manages \pounds 10bn of assets, and he would not be surprised if a meaningful allocation to illiquids was introduced within the



growth strategy. "Within the next year to 18 months, potentially all of the top 15 master trusts will offer a strategy which has some allocation to illiquids," Bhardwaj said.

The first step

BNP Paribas Asset Management, which manages a diversified private credit portfolio for Nest, focuses on credit, and for good reason.

If a typical default is around 10 basis points, a 10% allocation to private equity would force your default fund fees up, making it difficult to win new business, said BNP Paribas AM's Philip Dawes.

"A lot of people are dipping their toe in the water with credit, and over time will meet their Mansion House Compact allocations through switching to private equity."

Dawes added that the Mansion House Compact missed a trick given that private equity is the only way for many DC schemes to invest in emerging green technologies, but the volume is low. "We understand the direction of travel, but to get meaningful amounts of money into private markets, it's mainly through credit that it is going to happen," Dawes said.

For Jo Waldron at M&G Investments, while other alternative asset classes might offer higher returns, there are other benefits to investing in private credit. "Their floating rate nature is a great diversifier against public assets, which was proven in 2022 when they were nowhere near the negative double-digit returns we saw elsewhere."

On trend

Private credit is a trend Sharples is also seeing in DC. "For a lot of our clients, private assets are a whole new world, and they don't know much about it."

She added that investing in illiquids should not be like "chucking a child in the deep end" for their first swimming lesson. "Providers are on a journey, so starting with lower risk, contractual assets, like private credit, makes sense to get their members comfortable," Sharples said.

As people become more confident the risk and return profile will increase. "It is a journey and we will see bigger allocations and more interesting assets as we go through," she added. "But this will not happen overnight."

But how are DC schemes allocating to private credit going to fulfil the goal of the Mansion House Compact, which appears to encourage private equity investments in UK assets?

For Waldron, the trend for private credit is positive as companies need debt to scale. "It is not that private credit isn't helping from a productive finance perspective, on the contrary it is critical, but it is not part of the starting point because the equity piece is more easily thought about."

To back early stage businesses that need capital, there are alternatives to debt, but venture capital lacks the scale needed for DC schemes to make meaningful allocations.

"Is supply of capital the issue?" Bhardwaj asked. "Is that going to unlock a whole load of productive investment?

"If it isn't, big institutional investors with capital to deploy are

THE PANEL



Pavan Bhardwaj Trustee director & head of investment Independent Governance Group



Naomi Clark Head of investment product management USS Investment Management



Philip Dawes Head of distribution (UK & Ireland) BNP Paribas Asset Management



Veronica Humble Chief investment officer NatWest Cushon



Joanna Sharples Chief investment officer Aon DC Solutions



Jo Waldron Head of private markets solutions M&G Investments not going to move the needle. But if the supply of capital is a factor, then we could see more of a venture capital industry within the UK taking effect.

"So maybe venture capital as an asset class will grow once there is almost guaranteed capital on tap awaiting deployment," Bhardwaj said.

A lack of scale could deter some from the market. USS puts a huge amount of work into every investment it makes, which, when considering the average ticket size of a venture capital investment, could be an issue.

"It is the same amount of due diligence whether we are investing \pounds ibn or \pounds ioom. But if it is \pounds 20m, it becomes resource intensive and is a barrier to doing that on a wider scale," Clark said. On the issue of available capital, Dawes said a decade after a company he worked for launched the UK's first infrastructure debt fund, there is a dearth of such investments in the UK. "PFI/PPP has become a dirty word," he said. "The government doesn't want to use that as a mechanism and therefore projects are not coming through," he added.

Maybe venture capital as an asset class will grow once there is almost guaranteed capital on tap awaiting deployment.

Pavan Bhardwaj, Independent Governance Group

"If you want to get money into the real economy, whether it's DC or other forms of institutional capital, the government needs to make more investments available for people to buy. That is an issue."

So could asset managers help their clients access certain assets. It appears they are starting to understand the needs of asset owners.

Humble has seen a change here in the past few years. "There is now a contingent of asset managers who understand DC."

A few years ago, every conversation she had started with: "We don't need steady cashflows in the growth phase of DC. We need steady cashflows on the way in. Are you able to allocate this?" she said

"Now there is more understanding that there is value in those steady cashflows. So we are seeing some movement in price as well. But again, it is a little slow.

"If you look back five years, we have come a long way, but it is still at a fairly slow, steady pace," Humble added. "So it will be interesting to see what the government does, because they clearly don't have the patience to wait at the same level."

What's the cost?

Dawes is seeing a debate emerging around whether a fund of funds or a specialist multi-manager is the right structure to start building an illiquid portfolio. The other option is a diversified private markets manager who focuses on credit.

"If you have the scale like a USS or a large master trust, you could probably go down the specialist route," he said.

"But one of the challenges for people that perhaps don't have that scale, which is the lion's share of the market, is that if you allocate across a number of specialist managers, you haven't the purchasing power to get those fees down."

The multi manager and fund of funds approaches have a direct impact on fees. "That is why some segments of the market haven't moved into private markets. They are in paralysis. They don't quite know how to deal with this issue."

There are other issues around that model. "In order to ramp up and deploy capital quickly, you could make commitments to five managers, but you lose the ability to actively asset allocate across the underlying asset classes," he added. "That can add meaningful returns for clients, as we have discovered over the last five years.

"So you can turn sleeves on and off, which you can't if you make those static multi manager and specialist fund of fund allocations.

"Fees are an element of this. People can't design the structure that they want with their buy-rated list of managers, because they can't afford it," Dawes said.

"Half the market has moved. The half that hasn't, is stuck."

The price is right

Sharples drew a distinction between own trust schemes and master trusts. She said decision making is easier in the own trust environment because it is just you and your members. But master trusts are working to gain market share, so there's a lot of consolidation going on.

"The challenge for master trusts is that a lot of their clients are buying on price," she said. "It is not unusual to get ruled out because you are the most expensive, and the bottom set go through to pitch."

The return might be 1% or 2% higher than the rest of the market, but people still pick up on the one or two extra basis points of fees. "That's the challenge. That needs the whole market to change. That is why people are going for second or third defaults," Sharples said.

Clark added that she gets frustrated when she sees what managers are charging for some products aimed at DC schemes. "I know the cost of doing this directly," she said. "My finance team tell me and it's not what they are charging. It needs to move on both sides."

Can a middle ground be found? "There has to be," Clark said. "We need to accept that just because it's DC doesn't mean it should be cheap. We are not running DB schemes for 10 basis points, so why are we running DC schemes for 10 basis points?"



Dawes also doesn't understand the fee levels people charge, but there is one charge that stands out for him. "I used to be on a trustee board and philosophically, I struggle with performance fees," he said. "I don't see why people charge them in the DC world."

But Humble is more open to the concept. "Fundamentally, this is alignment of interest for the underlying managers," she said. "We are not talking about old-style active management. We are talking about private markets and if there is a much lower standard fee, I'm quite open to that."

Clark's problem with performance fees in DC is inter-generational fairness. "You cannot control when people are going in and out of the fund. That is something, philosophically, I struggle with," she said. "It is challenging."

This is a timely discussion, as the regulator is working to push trustees away from just looking at cost and redefining value to look at net returns.

We are not running DB schemes for 10 basis points, so why are we running DC schemes for 10 basis points?

Naomi Clark, USS Investment Management

For Bhardwaj, it is not about looking at fees but being confident that private markets will generate better net returns for members. "If we are confident in the underlying investment rationale, fees are part of that, but it is only one side of the coin," he said.

The regulator's value-for-money consultation probably means all schemes will have a traffic light system. "This will force schemes, if they are not holding private markets, to be clear in justifying why they are not taking that approach." Time horizon is also important when looking at value and returns, which is another difference between DB and DC. "People are a little more short-termist with DC performance relative to DB," Clark said.

"We have been doing this for a long time and there have been good periods and bad periods," she added. "Since I look over 10 years ago, it has been a great story, but that is not always the case over five or two years."

That mindset has to change, Bhardwaj said. It is difficult comparing the returns of master trusts which have a J-curve effect with those which don't. "It is going to have a greater governance burden on trustees and providers," he said.

Waldron points to life insurance companies, which have been investing in private assets for decades, and the net of fees returns they make. "Having DC being different beggars' belief. It doesn't make any sense that people who are relying on these pots for retirement should have a lesser choice of investment options."

It is a point picked up by Humble. "It is basically saying you can only invest in one part of the market but not the other," she said. But if the purpose of saving for retirement is to beat inflation so pensioners have enough to live on, then a growing part of the financial universe is private, Waldron said. "It ties in with beating inflation, because otherwise you are only investing in a sub-set of the economy, and it is not the biggest sub-set at that," she added.

Premium markets

Aside from diversification, one of the benefits of private markets is the illiquidity premium investors can earn from holding such assets. But they need to tread carefully.

The issue is that the premium can "shrink by its nature", leaving a singular allocation to a single manager particularly vulnerable. "If the spread collapses, you are legally committed to it," Dawes said. "It is the old-school way of allocating to private markets which causes the problem. Hence why active asset allocation is important."

He added that in credit an illiquidity premium is offered in a variety of asset classes from social housing and corporate loans to infrastructure and commercial real estate.

Indeed, the portfolios BNP Paribas AM manage generate around 9%, one of which is an investment-grade portfolio. "Compare that with investment-grade corporate bonds, and it is doing pretty well. So the spreads are there," Dawes said.

"But one of the lessons we have learned is don't apply DB thinking to DC in the way you allocate to private markets. You need to be a bit more innovative."

Dawes uses US mid-market loans as an example of where the returns are good, but during Covid the market collapsed and there was no origination. "If you made a static commitment to that asset class then you sat on your hands for two years as you couldn't get any money in the ground.

"Being able to turn that sleeve off and move to something else is quite valuable," he added. "It could add up to 150 basis points of excess return to members."

Dawes then turned to people who say they are getting better returns from a specialist manager. "How is that possible?" he said. "They can't be generating more return, unless they are taking more risk or investing in non-core assets.

"If you bid on an infrastructure asset, for example, the lowest bid wins. If you are a specialist manager generating superior returns, then you have to be taking more risk or applying leverage."

It is the old-school way of allocating to private markets which causes the problem.

Philip Dawes, BNP Paribas Asset Management

This impacts how managers are assessed. "You are not comparing apples with apples if one is applying leverage or if one's taking more risk than the other."

Dawes likes infrastructure and commercial real estate as they offer contractual returns with low volatility. "That is not the same if I buy a utility bond, for example. Some people drop it in their infrastructure allocation, but it's a corporate bond, not infrastructure.

"You have to be careful when assessing managers. What are they buying? Is it infrastructure or something else? And can you compare A with B?"

Waldron said that the premium to be earned from investing in illiquid assets might be a complexity premium or an access premium, but it is "absolutely there".

Although she agreed that the premium can "wax and wane". Using the social housing example, when the government



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Investments

Capital at risk

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changes how much rent housing associations can charge, it changes the behaviour of that pocket. "The ability to invest across the private credit asset class, looking at what has good value at any given point in time, is valuable."

But for Clark active asset management is the answer to generating premium returns, but it is not just about the financial returns. Where USS owns large direct assets, like Heathrow Airport, it will take a board seat and invest in the assets. "There is good value creation to be had there in a way that you don't have with listed assets.

"We are returns led, but if we can take an active role in an asset and help, for example, Moto increasing their electric charging points, that is a positive benefit you don't have in public markets," she added.

Liquid illiquids

"The liquidity of the asset and the liquidity of the fund structure are two different things as well," Waldron said.

"DB schemes selling illiquids because they are having problems coming out of closed-ended fund structures, is not necessarily the same as the asset. Not all private assets are illiquid. There's a range of liquidity within these markets.

"DC schemes going into a series of closed-ended finds will have a different experience than going into structured funds designed for that purpose, which will utilise the fact that there are different levels of illiquidity," she added.

Dawes then pointed out the irony that although these are illiquid assets, if investors don't manage the capital calls, redemptions and FX hedging coherently, they become more liquid than some people would like. "Very quickly you can end up with a 20% cash drag on your portfolio because of the amount of cash that is being generated by the underlying asset," he said. "The irony is not in generating a liquidity buffer for DC investors, it is minimising and keeping it low. Otherwise you destroy the purpose of going into these assets, which is to farm and harvest the illiquidity premium. If you are not careful, you end up sitting on cash."

Sharples suggested that it is probably exacerbated by the contributions' schemes receive, which they have to find a home for. "There is quite a lot of liquidity around.

"The one scenario we are talking through is if you are a multiemployer scheme and a big employer pulls out, that is where you could get into difficulty if you have limits in terms of how much you could realise in any quarter," she said.

"Those will be relatively unusual structures, so it feels doable. That is something we probably haven't tackled yet as an industry," Sharples added.

No silver bullet

The conversation then turned towards access, which brought up the theme of long-term asset funds (LTAF), vehicles designed to allow life platforms to invest in private market assets.

"With so many DC schemes on these platforms, it is fantastic that there is now this solution," Clark said.

Bhardwaj described it as a good first step, but questioned if, as master trusts scale, they will be using LTAFs in 10 or 20 years' time. "I suspect a lot of them will go down the approach of holding their assets in custody, which will provide greater flexibility and oversight," he said. "For where we are now, LTAFs give trustees the protections they need."

Bhardwaj reminded the panel that one of the benefits is that investors are permitted to borrow up to 30% of the LTAF's net asset value to meet any redemptions.

There is now a contingent of asset managers who understand DC.

Veronica Humble, NatWest Cushon

"It gives trustees the toolkits they need to ameliorate some of the concerns around liquidity," he said. "But there is an inherent inefficiency built in because you have to hold the chunk of your liquidity within the LTAF, whereas you already have an abundance of liquid assets outside of the LTAF.

"It is not an optimal solution, but for where we are now, it's good enough," Bhardwaj added.

Dawes is more cynical about such vehicles. "It is not a silver bullet, that's for sure."

What frustrates him is that if it's an LTAF, people will buy it regardless of what's under the bonnet.

Investors need to pay attention to what underlying assets are being purchased, what the strategic asset location of the fund is and how they are dealing with the illiquidity. "An LTAF is an



LTAF until you get huge dispersion of performance across them. So it is not a silver bullet," Dawes said.

Sharples gets irritated when people ask her when they are going to invest in an LTAF. "It is almost like it is the new asset class, but it's not. But it is a good first step in that it has got us going, has pushed us off the line."

NatWest Cushon seeded the first LTAF, which was for Schroders, with Humble saying that such vehicles have unlocked everyone's appetite. "Fundamentally, illiquid assets are not that difficult. You don't have day-to-day trading. That's not bad. It sits there. You only do something with them a few times a year.

"We are moving into LTAFs fitting into standard systems," she added. "I'm wondering to what degree we will get more innovation around that now everyone realises LTAFs are not a silver bullet and they will want a bit more tinkering within it."

Sustainable assets

Many private markets are real assets and are therefore vulnerable to the physical risks of climate change, such as flooding. Reports claim that implementing ESG principles into private companies can be challenging as they are not required to make the same disclosures as their listed peers. While some of the social impacts of private assets might be obvious, such as building affordable housing, when it comes to making a positive environmental impact the lack of consistent and comparative data is often cited as a problem.

But the reality is quite different, according to Clark, especially if the assets are directly owned. "You have more control, more access and the ability to implement your own policies and views," she said. "For us, it is one of the significant benefits of investing in private markets assets." ESG is not a new concept in private market strategies. For years it has been one of the risk factors USS' managers consider when making investment decisions due to the huge ESG risk physical assets carry. Indeed, USS has responsible investment specialists sitting within its private markers deal team.

There are regulations designed to help investors collect information about a corporate or asset's ESG performance. But Waldron finds that they are too focused on risk and a lot of the reporting is quite prescriptive, likening it to trying to fit a "square peg in a round hole".

"The superpower of private markets is not risk mitigation; it is positive sustainable action," she said. "It is about being able to make a difference, either environmentally or socially.

"They are doing good things. It they are not just protecting against bad things. That is where private markets are probably more interesting," she added.

The challenge for master trusts is that a lot of their clients are buying on price.

Joanna Sharples, Aon DC Solutions

Recycling technology and reworking buildings to make them more environmentally friendly are some of the investments sitting in M&G Investment's portfolios.

"They are not about data and reporting," Waldron said. "They are about making a difference that aligns to the end members, because it is their world we are investing in."

So it appears that positive environmental and social impacts could be more achievable if holding private assets directly. "The requirements placed upon funds to meet SDR or SFDR regulations can be restrictive," Waldron said. To prove this, Dawes gave an example of when BNP Paribas AM was approached by a corporate which wanted to be aligned to the energy transition. The sustainable development goals they wanted to focus on concerned the ocean, freshwater, renewables, industrials and electric vehicles.

BNP Paribas AM then built a portfolio after considering 60 sub themes within those sustainable development goals. Part of the mandate was to identify how best to access these themes. "Obviously, you can get some of them through listed markets, but if you want to do carbon capture through listed equities you have to buy Exxon Mobil, which doesn't feel right.

"You have to go through VC and private equity to access some of these things," he added.

The net-zero portfolio BNP Paribas AM built for the corporate was 40% illiquid. "That is where we landed, which follows the 60-40 role you see echoed across the DC market.

"Not only do you get more control over these assets, but you can also be more hands on, you can write KPIs into the contractual terms when you are lending to people in the credit space," Dawes said. "It also gives you access to things you can't find anywhere else."

The superpower of private markets is not risk mitigation; it is positive sustainable action.

Jo Waldron, M&G Investments

Putting the other side of the argument, Bhardwaj said that when he and his fellow trustees are compiling climate reports and TCFD statements, they almost discount any private market allocation because they know they are not going to get anything back from the manager in terms of carbon intensity reporting. Replying to a chorus of claims that he is using the wrong manager, Bhardwaj said this is not about a specific manager. "Maybe trustees or their consultants aren't pushing hard enough," he added. "If there is going to be a democratisation of private markets that needs to change."

The road ahead

The roundtable was brought to a close by a look at the future of DC allocations to private markets.

Dawes would not be surprised to see increased exposure to private equity. He also predicts lower fees to invest in alternative assets and that there will be greater ESG alignment. An improvement in another area is also expected.

"The provision of data isn't ideal in private markets. It's better than it was, but that will also improve," Dawes said. "There is a geographical element to that as well, which also impacts fees." Dawes then touched on diversified private markets portfolios, specifically people calling them the new diversified growth fund. "They are waiting for them to fail, but these are different beasts," he said. "They are contractual returns. You are not relying on the skill of the manager to asset allocate. You are relying on their ability to originate quality assets."

He added that when people allocate to private markets they will look at the strategic asset allocation and what it is designed to do, not that it is an LTAF. "They need to look under the bonnet, look at what the manager is going to be buying on their behalf," Dawes added. "I've seen it time and time again, people over promise and under deliver on spreads."

Another issue is that because spreads are cyclical, managers raise too much capital and will then loosen their credit terms. "That is not in the interest of members."

Dawes added that when going into private markets, be clear about what you are investing in, and decide on your definition of infrastructure, for example, and stick to it. "Don't let it creep. Don't let it move just because you have dry powder burning a hole in your pocket.

"I would love to see private markets more readily available but with a focus on quality, as opposed to just getting money in the ground for the sake of it," Dawes said.

Bhardwaj agreed, pointing to the potential risk of 12 master trusts all looking to deploy capital at or around the same time. Then there is the need to select a top quartile manager, due to the vast dispersion of returns. "Well, we can't all access top quartile managers.

"There are going to be players that have managers which outperform and underperform. It is important that this shouldn't be a big bang approach. It needs to be done in a measured way and in a way that is sensitive to price."

In other areas, Bhardwaj expects to see a gradual move away from life wrappers to custody, which will take time due to a lack of the right expertise with master trusts.

He also anticipates a move away from multi-asset LTAFs and towards holding individual sleeves, which again will take time. Sharples had the final word in our discussion by raising a good point that there is a lot of focus on master trusts, but not much talk about contract-based schemes, which are half of the DC market.

"I get worried that some of the legacy members are underserved. They get swept under the carpet, and there are quite a lot of them.

"I would like to see private assets coming to benefit them, not just the master trusts," she added. "It should go across the board. That is what I would like to see. I just hope it happens."





TESTING THE WATER FOR INVESTMENT

On a planet where 71% of the surface is covered by water, it seems unlikely that water security should be a concern. Yet, with only 1% of that water being of drinkable quality and accessible, the safety of our water supply has become a critical issue.

A more robust water supply chain will require infrastructure upgrades and advancements in how water is treated. Such developments will increase opportunities and evolution for investors who know where to look.

Improving access

Water scarcity is a threat to our welfare across many fronts. Primarily it is essential to life, through direct consumption and its integral role in the production of food. Poor water quality can also cause diseases such as cholera. It is also an important economic driver, with many industries reliant on high water volumes. The World Bank estimates that by 2050, water scarcity could cost some regions 6% of gross domestic product.

Access to water is essential for maintaining water security – yet this is threatened by population growth and climate change, as well as being hampered by poor governance and inadequate infrastructure. Although this challenge is most acute in Sub-Saharan Africa, where half of the population lacks access to safe drinking water , water shortages also impact wealthier nations. In the US, parts of California frequently face droughts and Phoenix in Arizona habitually experiences supply shortages. To ensure everyone has access to safe, healthy and reliable water, the world's water systems must be upgraded. This will involve a significant increase in investment and will create investment opportunities among companies implementing smart irrigation systems, pipe companies, monitoring water quality, treatment and tracking usage and leaks.

Upgrading infrastructure

The first step in improving the security of water access is to renew and replace ageing water and wastewater infrastructure. In 2020, the UN estimated that an additional \$260bn (\pounds 200bn) would need to be spent on water-related infrastructure each year to realise its Sustainable Development Goals by 2030. Much of this spending will serve the developing world, where rapid urban growth often outpaces infrastructure, leaving millions without basic water and sanitation services. However, water infrastructure in the developed world was largely built in the late 19th and early 20th centuries and desperately requires an upgrade. Leakage and burst water mains are estimated to lose 27,000 mega-litres of treated water in the US each day – enough to fill more than 9,000 Olympic-sized swimming pools.

Aside from government investment – the 2021 US Bipartisan Infrastructure Law has assigned \$55bn (£42.3bn) to improve water-related infrastructure – a high proportion of funds for these upgrades will come from the consumer through higher water bills. But in a world where households are already facing higher energy and food costs, the rising cost of water will present a further financial challenge.

The need to upgrade ageing infrastructure as well as to build new water supply facilities is creating long-term investment opportunities throughout the industry's value chain – from the utility companies managing water supply infrastructure to the suppliers of products and services that enable water savings and efficiency.

Improving water quality

Alongside water stress, the quality of water is becoming an increasingly important topic. Safe, clean water should be taken for granted but this isn't always the case. In 2022, at least 1.7 billion people globally used drinking water sources that were contaminated with faeces. Once again, the deteriorating quality of water is not solely a problem for developing nations, freshwater sources worldwide are increasingly being polluted by a series of contaminants.

Some of the decline in water quality can be attributed to extreme weather events – droughts and floods are harmful to water quality; but man-made pollutants are also finding their way into our waterways. These contaminations range from agricultural and urban pollutants to micro-plastics, metals, hormones and pharmaceuticals. In particular, per- and polyfluoroalkyl substances, commonly known as "forever chemicals", are increasingly being found in drinking water and are harmful to human health.

As a result, water quality standards are becoming increasingly stringent around the world. In the US, the Clean Water Act regulates the discharge of pollutants into waterways and the Safe Drinking Water Act ensures the quality of drinking water. The EU's Drinking Water Directive, which came into effect in 2021, seeks to reinforce water standards and tackle emerging pollutants at source.

Compliance with tighter regulations will involve vast investment, supporting companies offering water purification, treatment, testing and recycling solutions.

Thirsty new industries

Water shortages are not just a challenge for our well-being; industry has long been a significant consumer of water and new water-intensive industries are adding to demand.

The link between energy generation and water has been around for a long time, with water being a major component for coalfired power generation plants. However, cleaner forms of energy generation and transportation are also indirectly linked to high industrial water consumption. Lithium is a key element in wind, solar and geothermal energy systems, as well as in the production of electric cars, but extracting and refining lithium is water intensive. It takes about 1.5 million litres of water to make about a tonne of lithium. To put this into context, a Tesla car contains about 60 kilograms of lithium, so one tonne equates to just 16 cars.

Similarly, carbon capture and sequestration is considered an important technology to reduce carbon emissions and remove CO₂ from the atmosphere. However, these technologies typically involve significant water consumption during their

energy-intensive capture process. And within the technology sector, the manufacturing of semi-conductor chips is highly water-intensive, while the shift from air to liquid cooling systems in data centres – integral for AI and related technologies – is placing a further strain on supply. For example, in 2022, Microsoft's annual water consumption was nearly 1.7 billion gallons. Innovative water management solutions can play a role in addressing the efficiency and sustainability challenges associated with water-intensive processes – businesses are increasingly trending towards closed-loop systems that re-use and recycle water in industrial settings.

Conclusion

The safety and quality of the world's water supply are of paramount importance. The need to enhance infrastructure, improve access and quality – and meet growing demand – alongside the ratcheting of regulation, provide long-term growth drivers for businesses operating in the water sector.

Which is good news for investors. And the opportunity in this sector is surprisingly diverse and resilient, encompassing defensive and cyclical businesses and spanning geographies, sectors and different end markets.

At BNP Paribas, the in-depth understanding of the water industry and its technologies sets the Water strategy team apart. This means that across the rapidly growing water value chain, our experts' diverse perspectives are able to uncover the areas of opportunity that others may miss and avoid those companies that fail to meet their environmental responsibilities.



For professional investors.

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EUROPEAN ABS: A COMPELLING TOOL FOR DC DEFAULT STRATEGIES

Asset-backed securities are often a misunderstood asset class, despite having many compelling characteristics including a potential return premium and a defensive capital structure. These, in our view, make them wellsuited as a tool for inclusion in defined contribution (DC) default strategies.

Asset-backed securities (ABS) are bonds secured against a collective pool of underlying assets.

Investors who are unfamiliar with ABS often have pre-conceptions about the asset class and approach with caution. Many will still have vivid memories of the global financial crisis (GFC), during which US sub-prime assets were at the centre of the turmoil.

However, there are key structural differences between US and European ABS, which have led to a markedly different experience for investors in those markets.

Despite the UK's defined benefit pension schemes taking advantage of the opportunity in European ABS during the past decade, the asset class is under-represented in DC pension portfolios today.

ABS strategies vary widely and cater to different preferences and risk appetites. However, we believe several core characteristics can make the asset class attractive for inclusion as part of a diversified fixed-income allocation.

Key reasons for DC schemes to consider ABS:

- ABS generally offer a return premium over equivalent-rated corporate bonds, supporting the growth of savings over time.
- Their floating rate structure can help protect savings in inflationary environments.
- DC schemes could create more resilient default fund structures by diversifying fixed income risk with ABS.
- It is typically a defensive asset class that can protect members' savings during volatile periods in markets.

How ABS could help grow DC savings

European ABS offer a pickup in yield versus equivalently rated corporate bonds across rating bands, meaning there is potential for investors in the asset class to earn a return premium and help grow DC savings. The higher returns potentially available in European ABS are due to structural factors and in our view, are not a reflection of higher credit risk. ABS have usually delivered a persistent return premium over equivalently rated corporate bonds over time. The differential is primarily explained by:

1. Complexity premium

ABS is a specialist asset class which requires extensive and detailed knowledge. Assets therefore trade with additional spread to account for this 'complexity premium'.

2. Behavioural biases and misconceptions

Investors' anchoring to negative experiences in the US subprime market has created a persistent valuation anomaly in European ABS markets, which have demonstrated high levels of structural resilience, large liquid trading volumes and a return premium over equivalently rated corporate risk.

3. Harsh capital treatment for certain investor types

Capital charges to hold ABS for banks and insurance companies are far higher than for other corporate, covered or government bonds, which moderates demand for the asset class. Pension funds and other investor types operate under different regulatory frameworks, which do not impose the same stringent capital requirements for ABS holdings.

4. Regulatory hurdles in ABS investment

ABS fund managers are required to fulfil extensive due diligence and stress testing requirements. These regulatory hurdles create barriers to entry, limiting the ability of new investors to penetrate the market.

The spectrum of ABS spans from AAA through to mezzanine and subordinate tranches, which can perform distinct roles in a default fund. We view senior asset-backed securities (AAA) as an accessible first step into ABS for those investors seeking a yield-enhancing alternative to long-term cash holdings (given the higher liquidity) in the latter stages of an accumulation phase journey (or through into retirement solutions).

Alternatively, investment-grade securities (AA/A) can complement existing holdings, by delivering a yield premium and improving diversification in a portfolio of fixed income assets. *Read the full paper at mandg.com/institutional.*



Important information The value of investments will fluctuate, which will cause prices to fall as well as rise and investors may not get back the original amount they invested. Past performance is not a guide to future performance. The views expressed in this document should not be taken as a recommendation, advice or forecast.

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