LGPS Pooling: The Collective Good?

FEBRUARY 2016

CONTENTS

The Machinery of the Reforms

6

Costs and Charges

10

Investing in Infrastructure

14

The Political Backdrop of the Reforms

21

Conclusion

23

This White Paper seeks to bring clarity to issues currently shrouded in uncertainty. This lack of clarity is not surprising – the LGPS is being asked to do something it has never done before. We have therefore highlighted in this White Paper areas we think are currently misunderstood by some stakeholders, factors that pose potential problems going forward and areas where Government clarification would make the process easier.

FOREWORD

In 2014, the Government launched a consultation process on its far reaching proposals to reform the Local Government Pension Scheme (LGPS), one of the largest defined benefit schemes in the world with over four and a half million members. It is undeniable that pooling the 89 funds within the Local Government Pension Scheme (LGPS) into six larger pools will boost authorities’ purchasing power. Synergies and economies of scale will help local authorities access certain asset classes in a more cost-effective way and will boost LGPS investment in infrastructure.

But we are entering new territory and the scale of what is being proposed should not be underestimated. The Government has set a very fast timetable for the implementation of the reforms. This means thorough examination of the key challenges to success is required now so bigger problems down the line can be avoided.

This White Paper seeks to bring clarity to issues currently shrouded in uncertainty. This lack of clarity is not surprising – the LGPS is being asked to do something it has never done before. We have therefore highlighted in this White Paper areas we think are currently misunderstood by some stakeholders, factors that pose potential problems going forward and areas where Government clarification would make the process easier.

Schemes need clarity around the legal basis upon which the pooling vehicles will be established, how they are likely to operate and the extent to which there will be competition between them. We believe there is room for improvement of the tax transparent vehicle currently available in the UK.
Schemes also need clarity around the Government’s attitude to social housing and the influence of the Directive on Institutions for Occupational Retirement Provision (IORP II). It is also essential that the governance structure offered by an ACS TTF vehicle protects against national and local interference in the investment decision process, especially in the area of new investments in infrastructure.

While we support the drive for efficiency through economies of scale, we challenge the reforms’ attitude that a wholesale switch should be made from active to passive management. This investment philosophy confuses price with value. The better long-term returns that can be achieved through active management more than offset the extra cost.

We hope this White Paper contributes to the crucial debate currently under way that will determine the extent to which the pooling of the LGPS will be a success.

Paul Traynor, International Head of Pensions and Insurance Segments, BNY Mellon
EXECUTIVE SUMMARY

The pooling of the LGPS offers the potential for cost savings and efficiencies in many areas. However, transitioning from 89 schemes to six is massively complex.

The optimal vehicle for the pooling of the LGPS will be the Authorised Contractual Scheme (ACS), which will be run by an Operator. This ACS should be set up on a co-ownership basis—the limited partnership structure is unlikely to be suitable because it does not facilitate easy segmentation of assets. Individual local authority funds within the pool will be represented on the governance board of the pool, ensuring that engagement and accountability are maintained.

We are not convinced a joint governance structure is the way forward. It is not clear that the cost of setting up an ACS can be avoided by establishing a joint governance committee without a pooling vehicle. This approach runs contrary to the spirit of the reforms. Pools should welcome the protection from political interference that comes from interacting with an FCA-regulated entity.

We believe more can be done to improve the tax-efficiency of the tax-transparent fund (TTF) structure used by the ACS. Tax-efficient pooling vehicles domiciled in countries such as the Netherlands, Ireland and Luxembourg currently offer advantages for investment in infrastructure from which the UK can learn.

Existing LGPS expertise should not be lost. Some individuals within local authorities with particular areas of expertise in the management of pensions may transfer employment to become employees of the pools, where they will be able to develop and improve their skills through specialisation, facilitated by working on larger asset pools.

The current pooling agenda confuses cost and value. We are concerned that the Government is approaching this efficiency drive from a perspective that focuses too much on reducing cost and not enough on delivering excellent value for money. The better long-term returns from active management can more than offset the extra cost.

Active management facilitates stronger Environmental, Social and Governance (ESG) and Socially Responsible Investing (SRI) controls as active managers are able to get direct access to company boards and can interact with companies on their ESG and SRI strategies more directly.

Infrastructure investment is worth the risk – provided it is fully understood. Urbanisation, recovering economies, an ageing population in the west and a growing population in emerging economies, low interest rates and ageing infrastructure are all global themes that currently support the case for infrastructure investment by pension funds. Risks are significant and wide-ranging, but these can be managed.

Six LGPS infrastructure players is too many. Two or three infrastructure super pools, creating infrastructure portfolios in excess of £6bn would have sufficient scale to access a wide range of infrastructure opportunities. A single infrastructure super pool would give even greater scale, but would lack competition.
Government clarity on social housing policy and IORP II would assist infrastructure investment. Uncertainty relating to Government policy on social housing and on the solvency implications of IORP II are both potentially holding back infrastructure investment by pension funds.

The governance structure offered by an ACS TTF vehicle will protect against national and local interference in the investment decision process, especially in the area of new investments in infrastructure. It is unavoidable that any fund, in increasing its allocation to infrastructure and by complying with its fiduciary duties, will see an allocation to overseas infrastructure investment.

We also believe some local authority schemes should accept they may face cashflow problems in the medium to long term. Whatever the overall health of the LGPS’s funding, some outlier local authorities are on course to face significant challenges to their ability to pay retirees pensions in the medium to long term. The sooner these challenges are faced, the easier it will be to address them.
RECOMMENDATIONS

This White Paper makes a number of recommendations to both LGPSs establishing pools and to the Government on how the pooling process can best be achieved.

- LGPS pools should be established within an Authorised Contractual Scheme (ACS), run by an Operator and set up on a co-ownership basis,
- HM Revenue & Customs should take steps to improve the tax efficiency of UK TTFs to enable LGPS pool ACSs to invest in infrastructure and other asset classes more efficiently,
- Competition between pools should be retained so schemes can switch pool if performance is persistently poor,
- The Government should cease promoting a ‘passive investment is best’ agenda,
- Two or three infrastructure superpools should be created to give greater scale to investment in the sector,
- A proper governance structure should be established with respect to decision-making powers of LGPS pools to safeguard fiduciary duties of the trustee and prevent breaches of European Union competition laws and rules governing collective investments,
- The Government should clarify its policy on social housing and IORP II to give certainty to potential investors, and
- Some local authorities should acknowledge now the cashflow challenges they face in the medium-to long-term.
INTRODUCTION

Few would disagree that the mechanics of the Local Government Pension Scheme (LGPS) can be improved upon. LGPS officers and pension boards have for years demonstrated high levels of expertise in the sourcing and oversight of external investment management services. But it is clear that economies of scale can be achieved by combining the 89 schemes in England and Wales into larger pooled vehicles.

BNY Mellon supports the Government’s voluntarist approach to pooling, backed up with mandatory powers available if necessary. The early signs are that discussions about collaboration are advancing at a rapid pace and use of these powers will hopefully ultimately prove unnecessary.

A valuable debate is underway as to how best to achieve this huge task. Many insightful proposals have been put forward. But conclusions being reached by some stakeholders are misguided.

We see significant risks in a mass switch from active to passive management at a time of volatile investment markets; we are concerned that the way pools are set up could stifle competition; we think improvements can be made to the structure of the tax transparent fund to facilitate efficient investment, particularly in the field of infrastructure; we believe Government could give more clarity around social housing policy and the impact of IORP II on funds’ solvency; and we believe robust protection should be maintained for decision-making around infrastructure projects.

We present this White Paper with a view to informing the debate on these key issues. We hope it adds to the conversation the sector is already fervently engaged in.

CHAPTER 1. THE MACHINERY OF THE REFORMS

The Government’s reforms to the Local Government Pension Scheme (LGPS) will enable the 89 local authority funds within it to collaborate in the procurement of investment services, creating economies of scale that will drive down costs, increase efficiency, give access to hitherto unreachable investments and facilitate specialisation by individuals operating within the sector.

The main players within the ACS

Mandating the 89 funds to be pooled into a single fund could arguably have increased efficiencies and cost savings but would require the merging of schemes, which in turn would require the merging of assets and liabilities. A single pool strategy would also have removed the potential for competition that the current proposal of six pools, all big enough to achieve significant economies of scale, brings.

Fostering improved access to investment in infrastructure will be better achieved by a smaller number of pools – two or three – that still have sufficient scale, while maintaining the competitive edge that would be lost if a single national
Infrastructure procurement vehicle were established. Having more than one infrastructure pool also protects against political interference in investment decision-making.

The pools will source investment management expertise on behalf of the schemes whose assets they control. Each pool will be able to offer a range of risk-based funds that it has sourced with the benefit of its larger scale. Individual local authority funds will still determine the investment strategy they need to adopt to meet the liabilities specific to their own scheme.

**THE POOLING VEHICLE**

Each pool will need an Authorised Contractual Scheme (ACS) run by an Operator. The Operator will be regulated by the FCA, and will be responsible for the management and administration of the fund and the appointment of service providers. Individual local authority funds within the pool will be represented on the governance board of the pool, ensuring that engagement and accountability are maintained.

The ACS is a pooled asset vehicle structured as a tax transparent fund (TTF). The ACS’s tax efficiencies, particularly with regard to recouping withholding taxes, no liability for stamp duty (except property – being addressed in Finance Bill 2016) and VAT exemptions, make it the best choice currently available in the UK for pools looking to bring together assets in a common vehicle to achieve economies of scale. The ACS is an alternative to open-ended companies and unit trusts.

**How the ACS is structured**

<table>
<thead>
<tr>
<th>Investors</th>
<th>Investments</th>
<th>TTF</th>
<th>Sub-funds</th>
<th>Accounts</th>
<th>TTF reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGPS 1</td>
<td>£1m</td>
<td></td>
<td>Global Eq 1</td>
<td>LGPS 1</td>
<td></td>
</tr>
<tr>
<td>LGPS 2</td>
<td>£2m</td>
<td>ACS</td>
<td>Global Eq 2</td>
<td>LGPS 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>£1m</td>
<td></td>
<td>UK 1</td>
<td>LGPS 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>UK 2</td>
<td>LGPS 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fixed 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Euro 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>US 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

While it offers real advantages, we think there are lessons that can be learned from other countries as to how the TTF could be better designed to facilitate easier, cheaper management of pension fund assets. The TTF could be made more widely recognised and be more efficient in its ability to reclaim taxes withheld in other countries.

**LESSONS FROM ABROAD**

Tax-efficient pooling vehicles domiciled in jurisdictions such as the Netherlands’ Fonds voor Gemene Rekening (FvGR), Ireland’s Common Contractual Fund (CCF) and Luxembourg’s Fonds Commun de Placement (FCP), benefit from established track records — something the UK’s TTF vehicle does not yet have. These overseas vehicles are tried and tested, benefiting from well-publicised decisions by tax authorities and courts already having taken place.

The ACS structure facilitates similar efficiencies to these funds, allowing for tax withheld to be reclaimed. However this can only be done with confidence where the ACS operator has obtained a professional opinion from a tax specialist to
confirm that the strategy is effective in relation to that particular territory. This process is further complicated by the fact that some rulings may be limited in time, or the relevant double taxation agreements updated periodically.

In January 2016 the Dutch government went further in its efforts to remove barriers to efficient administration of pensions, introducing a new vehicle specifically for pension funds. The new Algemeen Pensioenfonds (APF) vehicle allows pension funds to combine many different types of investment under the umbrella of a single legal entity. Investments from different companies can be held on a ring-fenced basis within a single tax-transparent vehicle, improving economies of scale.

Operators in the Netherlands therefore have less expense as they do not need to seek tax opinions or rulings in markets a TTF would have to in order to have transparency recognised. Furthermore it allows such a vehicle to benefit from recognition as a pension fund in markets where tax transparency via a TTF is not yet possible.

This extra cost and administrative burden is particularly significant in respect of infrastructure investments, where the range of tax issues will be especially complex. This complexity is a material deterrent to pension funds investing in infrastructure. HM Revenue & Customs’ stated policy aim of making the tax system as streamlined as possible suggests it should take steps to ensure double tax treaties are in place with all relevant jurisdictions so individual TTF operators do not have to replicate this expense themselves.

UK open-ended investment companies rarely invest in owned property directly, in part because they are not as flexible as those based in the Netherlands.

HMRC should do all it can to ensure pool TTFs are given as beneficial an environment as possible in which to flourish and become efficient, attractive pooled investment vehicles.

LEGAL OBLIGATIONS OF THE ACS
The ACS run by the Operator appointed by the LGPS pool will be an FCA-authorised body. The Operator manager will need to apply to the FCA for an authorisation order and must be an independent body corporate. A prospectus will be needed that complies with COLL, the collective investment schemes sourcebook. Such obligations will help to provide a robust governance structure with respect to investment decision-making.

CO-OWNERSHIP ACS IS THE WAY FORWARD
There are two types of ACS – the co-ownership scheme and the limited partnership. It is likely that the co-ownership structure will be suitable for LGPS pools. The co-ownership structure permits tax reclaims to be made at investor level rather than pool level, and it permits the establishment of a range of sub-funds within a single ACS. The partnership scheme structure is probably not suitable because it does not facilitate easy segmentation of assets.

We therefore recommend that the Department for Local Government and Communities issues clarification to schemes as to which option is suitable. This will remove the cost of multiple organisations seeking professional clarification as to which type of scheme should be adopted.
A JOINT COMMITTEE WITHOUT A POOL WILL NOT WORK
It has been suggested that the cost of setting up an ACS could be avoided by establishing a joint governance committee without a pooling vehicle. We do not believe the efficiencies that are being sought can be realised without the pooling of the assets.

Under such a model individual funds in the pool remain owners of the assets, but identical legal contracts would be entered to between all the members and the managers selected by the pool committee, with the goal of replicating the effect of an ACS without actually creating one.

This approach would increase complexity and require considerable effort from a newly created group to ensure compliance with and adherence to the agreements is being maintained. There would also be ongoing costs in maintaining the legal agreements. Pools should instead welcome the protection from political interference that comes from interacting with an FCA-regulated entity.

COMPETITION BETWEEN POOLS
The Government’s decision to opt for six pools of at least £25bn in assets rather than a single pool will create competition between pools that will be beneficial to outcomes in terms of performance and cost. Successful pools, which attract high quality third party asset managers and which deliver efficient investment and administrative services, will become more attractive to local authorities seeking a pool with which to partner.

Individual local authorities may wish to place the entirety of their investments in the hands of the sub-funds of a single pool’s TTF. However they should retain the ability to be able to use sub-funds from other pool TTFs for different parts of their portfolio, for example where there are specialist managers available, if their investment strategy demands it.

Local authorities should also be permitted to engage in certain hedging activities outside of the pool, such as in relation to long-dated interest rate risk and longevity. Where they do this they will need to hold cash and assets to post as initial and variation margin, at the local authority level. Currency hedging should be dealt with within the pool at sub-fund level.

Schemes must retain the flexibility of being able to periodically review whether they wish to remove their holdings from a pool if they have serious concerns over performance.

EXISTING LGPS EXPERTISE
Some individuals within local authorities with particular areas of expertise in the management of pensions may transfer employment to become employees of the pools, where they will be able to develop and improve their skills through specialisation, facilitated by working on larger asset pools. These increasingly skilled and specialised professionals will help drive efficiencies, enabling them to bring increasing levels of management in-house.

However, many functions will not be brought in house. Local authority pension schemes are considerably more complicated to manage than DB schemes in run-off that are closed to future accrual. Local authority pension funds need the benefit of professional expertise to efficiently balance pension payments out as well as contributions in, properly profile risks, match liabilities and ensure their risk/return profile is optimal.
There is broad agreement that the current system of 89 local authority funds, each sourcing their own investment managers, can be improved upon, and that cost savings through can be made. A number of papers have examined the investment management and oversight costs of the LGPS, yet we believe the debate created by this scrutiny has failed to properly address the issue of whether the increased returns active management can deliver more than offset the extra cost incurred.

LOCAL AUTHORITY REPRESENTATIVES MUST NOT BECOME DISINTERMEDIATED FROM INFORMATION
Care must be taken to ensure that representatives of local authority schemes do not become too removed from interaction with the pool’s asset managers. It is essential they retain access to relevant information they would previously have been privy to. Local authority fund representation on the TTF governance board and effective communication between the TTF and other local authority trustees will be needed to ensure this does not happen.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) AND SOCIALLY RESPONSIBLE INVESTING (SRI) ISSUES
The Government has indicated it wants the current reforms to lead to improvements in the way local authority funds approach ESG and SRI considerations.

Merging assets into pools will lead to a homogenisation of approaches to ESG and SRI factors as local authorities move towards one-size-fits-all solutions. We anticipate this will present more challenges in the SRI field than in relation to ESG, as some local authorities may find the pool does not accept a specific SRI screen being applied across the entire range of sub-funds. However, this issue is manageable.

We believe each pool should be required to develop a compliance statement to the UK Stewardship Code.

LOCAL AUTHORITY PENSION REPRESENTATIVE TURNOVER
It is worth noting there are unique challenges with governance of LGPSs because of the democratic nature of the organisations they serve. This means there can be turnover of council-nominated representatives on local authority fund committees where there is a swing in legislative control following local elections, which in turn can lead to inexperienced members being given significant levels of responsibility. This issue is nothing new for local authority funds – it is a challenge that the ACS vehicles will also need to address in a similar fashion. However, as the new pools cover a larger, more populous geographic area, they are less likely to be subject to a large turnover of trustees at the same time.

CHAPTER 2. COSTS AND CHARGES
‘Reduced costs and excellent value for money’ are part of the criteria the Government has set against which to judge authorities’ pooling proposals. The Government is correct to identify excessive management costs as a key issue for the LGPS. The Government's pooling proposals will increase scale, upskill purchasing and oversight functions and give access to a broader range of investments at lower cost. However there are concerns that the Government is approaching this efficiency drive from a perspective that focuses too much on reducing cost and not enough on delivering excellent value for money.

Charges – a key objective of the reforms
There is broad agreement that the current system of 89 local authority funds, each sourcing their own investment managers, can be improved upon, and that cost savings through can be made. A number of papers have examined the investment management and oversight costs of the LGPS, yet we believe the debate created by this scrutiny has failed to properly address the issue of whether the increased returns active management can deliver more than offset the extra cost incurred.
Hymans Robertson’s 2013 report for the Government LGPS Structure Analysis\(^1\) estimated asset management costs across the LGPS in 2012 to total £790m, around 44bps of total assets, of which £745m was investment management costs and £45m oversight costs.

In its May 2014 consultation, Opportunities for collaboration, cost savings and efficiencies\(^2\) the Government set out a plan for saving up to £660m a year by using collective investment vehicles and making greater use of passive management for listed assets like bonds and equities.

Meanwhile a response to a Parliamentary Question in 2014 said: “Of the £660 million savings identified, the analysis showed that £420 million could be found by using passive, rather than active management of listed assets such as bonds and equities.”

A report by Centre for Policy Studies fellow Michael Johnson entitled The LGPS: Unsustainable\(^3\), highlights significant discrepancies between the management costs per member paid by local authorities. This report highlighted differentials between the charges being negotiated by different LGPSs.

The focus on the charges within the defined benefit LGPS comes as MiFID II brings increased transparency to regulated investment products. Auto-enrolment into predominantly defined contribution schemes is also leading to greater scrutiny of the costs within these schemes.

A joint DWP / FCA call for evidence, Transaction Costs Disclosure: Improving Transparency in Workplace Pensions\(^4\), published in March 2015, calls for a number of measures to be introduced to improve transparency around defined contribution arrangements.

Measures outlined in this call for evidence highlight the Government and FCA’s intention to improve transparency of costs and charges in pension schemes. This includes requiring trustees and Independent Governance Committees (IGCs) to report on transaction costs and administration charges.

**Time for a broader debate on pension charges – price is not the same as value**

We welcome the aforementioned moves towards greater transparency, and believe they would have led to some improvements in LGPS cost efficiency even without the current pooling project.

But we believe the Government’s interpretation of the debate around charges generally, and of the 2013 Hymans report in particular, is misguided in that it confuses value with price. It is self-evident that a wholesale switch to cheaper passives for listed equities and bonds away from more expensive active investments will reduce costs in pure management terms. However this overlooks the impact on performance that active management can deliver.

Active management is not required across the entirety of the LGPS’s listed equity and bond holdings. Passives are an efficient way to access beta in investment markets as part of a balanced portfolio, although expert oversight will still be needed on an ongoing basis to establish and maintain the proportion of a portfolio that should be allocated to passives. Diversified growth and absolute return funds manage to do precisely this – buying in passives for part of a portfolio as well as seeking out alpha through active management.

Even the holding of relatively straightforward assets such as gilts needs to be managed with a high level of expertise. Expertise is needed to manage inflows, outflows, current and future liabilities and interest rate, inflation, currency, longevity and credit risks.
It should be noted that while the Government’s May 2014 consultation, *Opportunities for collaboration, cost savings and efficiencies* referenced Hymans Robertson’s 2013 report in terms of the firm’s statement that cost savings could be made within the LGPS by switching from active to passive management, Hymans Robertson has also been significantly involved in a more recent report that takes the opposite view.

The January 2016 summary report of the Joint Working Group of Local Authorities, *Findings of Project POOL*[^3], which was prepared by local authority officers from 24 funds participating in the group, and which was written with the support of Hymans Robertson, makes the point that the extra cost of active management can be more than offset by the extra performance delivered by a quality active manager.

That report says: “The eventual cost savings are significant and should be pursued, but this should not be done in a way that puts investment performance at risk. A successful outcome is one which achieves cost savings and potential for enhanced performance through the pool governance arrangements; aggregate outperformance by active equity managers of only 0.25 per cent would add more than £150m of value annually in addition to the fee savings above.”

**ACTIVE MANAGEMENT IS WORTH THE EXTRA COST**

The last decade has shown how volatile investment markets can be and the future looks no less uncertain. The idea of moving pension funds into passives and hoping for the best is dangerous. Now is not the time for a wholesale move to passive investments.

For long-term investments such as pension funds, active managers that lessen the impact of downturns in markets can offer more long-term value than those that seek to beat the index in rising markets. Active managers tend to do better in moderately up markets or down markets and tend to underperform in strongly up markets.

When markets fall by a certain percentage, they need to increase by a greater percentage to get back to where they were. For example, to make up for a 50 per cent fall in value, an asset has to rise in value by 100 per cent.

By minimising falls, active managers are able to achieve outperformance, when compared to passive funds.

---

[^3]: Hymans Robertson (2016), *Findings of Project POOL*. For illustrative purposes only.
The above graph compares the rolling three-year performance of the median active manager in the eVestment U.S. Large Cap universe and Global Large Cap universe with the Russell 1000 Index and MSCI World Index, respectively. The relationship between market absolute return and the ability for active managers to outperform the equity market is striking.

Consistent results can be observed in global markets (see graph), where the median Global Large Cap Equity manager outperformed the MSCI World Index, in all annualised rolling three-year periods, when the absolute performance for the Index was less than 12.2 per cent.

The definition of active management has changed considerably since the evolution of factor investing, sometimes referred to as “smart beta”. Active used to mean an active manager against a market related index. However the factor investing debate has also exposed deeply embedded biases within the industry standard benchmarks. For example, the capital weighted benchmarks tend to be tilted towards growth and momentum type constituents. Furthermore, the capital asset pricing theory does not support the notion that capital-weight is the optimal or unique solution for the market portfolio. Therefore there is a case to be made that even passive benchmarks involve some active decisions even though these are embedded in the sponsor or consultant decision rather than a portfolio manager decision.

Increasing active management is more accurately defined by the source of return within the portfolio and the fiduciary decision or delegation around the allocation to a particular portfolio strategy. If the return sources are more dependent on factors, market, style or otherwise, and are not diversifiable then that is more of a passive style. If the return sources are more dependent on stock picking, the portfolio manager, stock selection and diversifiable then that is more an active style. If the decision is taken by the fiduciary and or the advisers to the fiduciary then that is closer to a passive, strategic asset allocation style. On the other hand, in an active portfolio strategy the fiduciary delegates some decision making to an active manager who then builds a process around the active mandate. The passive mandate has a more direct link to the fiduciary decision and thereby the ultimate outcome whereas the active mandate involves some delegation to professionals who would exercise some fiduciary care in managing active positions.

Sponsors should not overpay for active management, nor should they pay active fees for market or factor based returns. However, selecting a cap-weighted benchmark is an active decision that tilts towards well-known market factors such as growth and momentum. Sponsors should tread carefully as these are not easy decisions and raise many sensible questions.
The FCA’s drive towards transparency in fund management charges will highlight fund managers who operate funds with a high rate of portfolio turnover. There is nothing wrong with a high rate of portfolio turnover, provided it translates through to better performance. Conversely, if a manager could foresee potential falls in the value of a stock, it would be counter-intuitive for it to not be able to sell that stock because an artificial limit of acceptable portfolio turnover had been reached.

PORTFOLIO TURNOVER
One of the clichés in today's market is that costs are the only certainty. A low portfolio turnover is desirable to reduce transaction costs and overall fees generally.

The FCA’s drive towards transparency in fund management charges will highlight fund managers who operate funds with a high rate of portfolio turnover. There is nothing wrong with a high rate of portfolio turnover, provided it translates through to better performance. Conversely, if a manager could foresee potential falls in the value of a stock, it would be counter-intuitive for it to not be able to sell that stock because an artificial limit of acceptable portfolio turnover had been reached.

It is the case that portfolio turnover can however be used to fund research not covered within a fund’s AMC. Where asset managers transact with brokers on a basis of bundled commission arrangements, transaction costs can be increased to pay for research in a way that will not appear in the AMC. Smaller asset managers, and those without large in-house research teams can increase portfolio turnover through bundled commission arrangements to pay for research they are not able to fund in-house or buy in from their profit and loss.

Like anything, portfolio turnover needs to be measured and managed. Typically, but not always, larger firms will have more sophisticated processes to access the market and to measure the overall costs incurred. Larger firms will have a greater crossing network to reduce overall transaction costs, sometimes up to 10 per cent of the turnover can be crossed.

Larger asset managers will also often use bundled commission arrangements infrequently. We expect the practice of paying for research out of bundled research costs to reduce as transparency measures are improved. We also expect those managers that have been relying on the portfolio turnover to fund research to find their margins squeezed as transparency measures develop.

AN ACTIVE APPROACH TO ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) AND SOCIALLY RESPONSIBLE INVESTING (SRI) ISSUES
The second of the Government’s criteria for the assessment of authorities’ pooling proposals relates to strong governance and decision-making. Active management gives local authorities greater power to exercise their duties and meet their policy objectives with regard to ESG and SRI issues than passive management does. Active managers are able to get direct access to company boards and can interact with companies on their ESG and SRI strategies more directly, thereby achieving greater levels of engagement and influence over the practices adopted by the companies in which they invest. Such level of interaction are not available to authorities when they invest through passive funds.

CHAPTER 3. INVESTING IN INFRASTRUCTURE
Infrastructure investment is critical to the nation’s economy, fuelling jobs and growth. Levels of investment by pension funds in general and the LGPS in particular are low by international norms. But the LGPS cannot be seen as an easy way to plug the nation’s infrastructure funding gap.

Since the 1980s investment in infrastructure has faltered. The OECD estimates that annual infrastructure investment of 3.5 per cent of GDP is necessary in developed economies. Currently, public sector infrastructure investment totals around 1.5 per cent of GDP, and Budget 2015 plans suggest that this will fall to 1.4 per cent of GDP by 2019/20. If the OECD target is to be met, around £45 billion
Current challenges will have to be found, either from additional government investment, or from the private sector, or a combination of both, according to a recent House of Commons Briefing Paper. The Government has a clear challenge in increasing infrastructure investment.

Currently around 1 per cent of the LGPS is invested in infrastructure. This compares with historic levels of between 8 and 15 per cent in countries such as Australia and Canada. It is understandable therefore that the Government sees local authority pension funds as a large potential source of infrastructure funding.

The Government has taken several steps towards promoting infrastructure investment in the UK. It has backed the Pension and Lifetime Savings Association's (formerly the National Association of Pension Funds) Pension Infrastructure Platform. And in October 2015 Chancellor George Osborne announced that the 89 existing pension funds within the LGPS are to be pooled into six larger entities, in part so their combined strength can help drive infrastructure investment.

The Chancellor has also announced the establishment of the independent National Infrastructure Commission, chaired by Lord Adonis, to look at long-term infrastructure needs and to provide impartial advice to ministers and Parliament.

The Chancellor has also announced that city regions with elected mayors will be able to levy an infrastructure premium of up to 2 per cent on business rates in order to fund infrastructure investment.

**THE INFRASTRUCTURE OPPORTUNITY**

Infrastructure investment is complex, relatively costly to manage and carries a range of unique risks not present in other asset classes. Construction risk, political risk and reputational risk are just some of the many challenges that come with infrastructure investment.

But there are a number of megatrends that make infrastructure investment an attractive proposition at the current time. Urbanisation, recovering economies, an ageing population in the West and a growing population in emerging economies, low interest rates and ageing infrastructure are all global themes that currently support the case for infrastructure investment by pension funds and others.

For many insurers, infrastructure is a macro hedge against their other assets. Negatively correlated to securities, infrastructure can offer both diversification benefits and the potential for long-term income returns. These features should also make infrastructure attractive to pension funds, including LGPS pools.

**WHAT IS THE RIGHT LEVEL OF INFRASTRUCTURE INVESTMENT FOR PENSION FUNDS?**

The current level of infrastructure investment of around 1 per cent achieved by LGPS funds is clearly low. We think the current package of reforms, coupled with further improvements to make the TTF more pension fund-friendly, as well as a greater commitment from the Government to package infrastructure investments in a format that is suitable for pension funds, will lead to increased levels of infrastructure investment. We believe it would be sensible to limit a fund's investment in infrastructure to a maximum of 15 per cent.

**CURRENT OBSTACLES TO INFRASTRUCTURE INVESTMENT**

Pension fund infrastructure investment in the UK is in a chicken-and-egg situation. Infrastructure investment levels are low, so the investment consultants upon which trustees rely have little data with which to demonstrate a track record of successful infrastructure investment in UK pensions.
Pension fund infrastructure investment in the UK is in a chicken-and-egg situation. Infrastructure investment levels are low, so the investment consultants upon which trustees rely have little data with which to demonstrate a track record of successful infrastructure investment in UK pensions.

Trustees and their advisers cite a lack of suitable investment opportunities delivering the types of risk and return that LGPSs are looking for in the timescales required. The small size of individual funds has historically meant infrastructure has been effectively unattainable for many.

These factors mean that with some notable exceptions, expertise in infrastructure within the LGPS is limited. This gives rise to a greater opportunity as scale and experience make such investments more commonplace.

**LACK OF SCALE**
The Government is correct to identify lack of scale as one of the key factors holding back infrastructure investment in the LGPS.

LGPS pools of £25bn or more allocating around 10 per cent of their assets – upwards of £2.5bn each – to infrastructure would obviously give more scale than LGPS funds currently enjoy. However, two or three infrastructure super pools, creating infrastructure portfolios in excess of £6bn would create even more synergies, allowing them to access a wider range of infrastructure opportunities, and enabling them to achieve greater diversification across the portfolio. A single infrastructure super pool would give even greater scale, but we do not believe the investment opportunities and diversification benefits would be significantly improved. The benefits of stimulating competition between multiple infrastructure super pools would outweigh this, leading to better investment outcomes overall.

**POLITICAL RISK**
Many infrastructure projects are based on some form of concession from either local or national government. This creates potential conflicts of interest and a significant risk that a change in government, or even a change in political mood, can lead to actions by the body (giving the concession) to change them to the extent to which the investment is no longer desirable. There have been cases of investors finding themselves in the difficult position of having to issue legal proceedings against national governments for what they see as breaches of agreed terms on concession rates.

However, these risks are worthwhile provided they are properly managed. Diversification across a range of infrastructure projects is a key part of this risk management, and the scale that the LGPS infrastructure pools will have should facilitate this.

**TAX AND LEGAL COMPLEXITIES**
Tax and legal issues are a particularly acute issue for infrastructure investments, which often involve many layers of local and national taxes and reliefs. As mentioned above, while we believe the ACS is the right vehicle for LGPS infrastructure pools, we think improvements could be made.

**PR CONCERNS ARE A BIG BRAKE ON INFRASTRUCTURE INVESTMENT**
Adverse publicity is a significant risk for pension funds investing in infrastructure and acts as a brake on such investment. The media profile of an infrastructure project that fails to meet its targets can be big and long lasting. This is not a challenge that is unique to the LGPS. Schemes, infrastructure pools and their advisers should be encouraged to see beyond these challenges to the valuable diversification benefits offered by infrastructure investments.
EU REGULATION COULD IN FUTURE DAMPEN DEMAND
While some European Union initiatives, such as the European Long-term Investment Fund framework and the Infrastructure Investment Plan seek to promote infrastructure investment, there are also forces that can work against such investments.

Policymakers looking to foster a benevolent climate for infrastructure investment by pension funds should note that the Directive on Institutions for Occupational Retirement Provision (IORP II) could act as a brake on such investment. If IORP II follows Solvency II’s example, there is a risk that bodies making sound infrastructure investments offering equity-like returns could be required to hold large amounts of regulatory capital, making such investments prohibitively expensive.

Pools looking to invest in infrastructure would welcome a clear indication from the Government that investments do not fall foul of increased solvency requirements as a result of IORP II.

INFRASTRUCTURE POOLS SHOULD HAVE THE POSSIBILITY OF HAVING COMPLETE OWNERSHIP OF PROJECTS AS WELL AS STAKES IN PROJECTS
Where LGPS funds and other UK pension funds have invested in infrastructure they have typically done so on the basis that they have taken a packaged return that forms part of an established project, rather than take ownership of the entire project.

This approach is understandable. Construction risk and other major risks abound across the entirety of infrastructure projects. However, ownership or joint-ownership of the entirety of a project offers greater potential returns, from land acquisition, through construction to collection of annual income. A joint-ownership approach, partnering with an organisation with expertise in a particular industry or sector, is one way for LGPS pools to gain exposure to all stages of the upside of an infrastructure project.

It is notable that some insurance companies are now starting to take on the construction, reputation and other risks of complete infrastructure project investment. Infrastructure pools should adopt a similar approach.
Specific conflicts of interest are present if an LGPS fund invests in assets that are made available to individuals living or businesses operating within the local authority. A local authority could find itself both seeking to provide low cost social housing or promote business development within its territory, while at the same time seek to maximise income from social housing or business tenants in property it owns in whole or part, or in which it has an interest. This conflict is manageable but care must be taken to ensure accurate valuations of market rates are obtained and adhered to.

SOCIAL HOUSING, COMMERCIAL AND RESIDENTIAL PROPERTY – CONFLICTS OF INTEREST

Specific conflicts of interest are present if an LGPS fund invests in assets that are made available to individuals living or businesses operating within the local authority. A local authority could find itself both seeking to provide low cost social housing or promote business development within its territory, while at the same time seek to maximise income from social housing or business tenants in property it owns in whole or part, or in which it has an interest. This conflict is manageable but care must be taken to ensure accurate valuations of market rates are obtained and adhered to.

CHANGES TO GOVERNMENT POLICY ON SOCIAL HOUSING

Certain UK Government policy changes are making social housing investments by pension funds less attractive.

In July 2015, as part of the Government’s Summer Budget, a 1 per cent annual reduction in social housing rents was announced for four years from April 2016. While other policy changes announced since then have offsetting positive effects, analysts expect the net financial impact to be negative.

The November 2015 Spending Review supports home ownership rather than rented social housing. Capital funding for housing associations will double, but this is conditional on them building shared ownership properties, increasing housing association’s exposure to the potentially volatile UK housing market. In future there will be a stronger business case for focusing on shared ownership and outright sales rather than rental properties. An extension of the cap on housing benefit will also constrain housing association revenues.

In October 2015 English housing associations were recategorised as part of the public sector for national accounting purposes, adding their debt to that of the public sector. While this move has been credit risk positive for housing associations, it has been suggested that the Government may reverse this position. This uncertainty over the strength of the covenants offered by housing associations is negatively impacting investment in social housing.

LGPS INFRASTRUCTURE DECISIONS NEED PROPER GOVERNANCE OVERSIGHT

A proper governance structure should be established with respect to decision-making powers of LGPS pools to safeguard fiduciary duties of the trustee and prevent breaches of European Union competition laws and rules governing collective investments.

At the Conservative Party conference in October 2015 the Chancellor announced that the new British Wealth Funds “will follow international norms for investment, meaning larger sums being invested in infrastructure.” The Chancellor told the conference that the new British Wealth Funds “will save hundreds of millions in costs, and crucially they’ll invest billions in the infrastructure of their regions”.

Nudging or mandating UK pension assets to invest in UK infrastructure projects, creating jobs for UK citizens and creating economic stimulus within the UK, sounds like a laudable aspiration for a government. But it brings with it huge amounts of risk both for the members of the LGPS and for the council taxpayers who will have to foot the bill in the event that investments go wrong.
Finding suitable infrastructure investments for pension funds is hugely complex. Introducing political considerations into the process risks diverting capital towards inefficient projects.

It would also be contrary to the operation of an effective free market for state incentives for infrastructure projects to be offered solely to LGPS pools or other governmental funds, rather than be made available to all organisations, whether they are public or private, that are seeking to invest in infrastructure.

The Chancellor is right to drive consolidation of funds to give them the scale, expertise and with time the experience to be able to play in infrastructure markets that have previously been out of reach for LGPS funds.

By pooling funds into British Wealth Funds greater investment in infrastructure will be achieved, through a combination of scale, expertise and experience. But the Government must not expect that infrastructure investment to prioritise investments in the UK over those in other countries if those overseas investments are more attractive to the fund or pool. To prohibit an investment in an asset class because of its geographical location is contrary to the concept of marginal efficiency of capital.

Furthermore, infrastructure funds reduce their risk by investing globally. We are not aware of any UK-only infrastructure funds. For a pension fund to concentrate its investments in the infrastructure of a single country would create an inefficient concentration of risk.

The Government has to accept that it is likely that some of the new infrastructure investment generated by the reforms to the LGPS will be placed overseas.

Most infrastructure projects are based on some form of concession from the government. There is a potential conflict and risk there – that the government is the one determining the extent to which the investment can be profitable.

We call on the Government to make a clear and firm commitment that there will be no political interference in decisions over LGPS infrastructure investments.

LEGAL HURDLES TO POLITICAL INTERFERENCE IN LGPS DECISION-MAKING

The duties of LGPS pension committee members and managers are carried out either in the capacity of trustee or with fiduciary duties similar to those of trustees. These individuals are obliged to act in line with the scheme’s deed and rules. LGPS schemes’ current rules do not require them to prioritise investment in UK infrastructure. Fiduciary duties place a legal obligation on LGPS representatives to act in the best interests of the scheme beneficiaries, and to act prudently and responsibly. These legal obligations mean each infrastructure investment has to be dealt with on its merits and on the extent to which that investment is suitable for helping the scheme meet its liabilities. A local authority representative would therefore have no alternative but to opt for an infrastructure investment opportunity overseas instead of one based in the UK if it thought the overseas investment better matches the investment objectives of the scheme. This is even the case where UK infrastructure investment opportunity will generate jobs and economic stimulus in the UK, possibly even within the local authority.
The extent of fiduciary duties has long been a contentious issue, both in terms of the extent to which ethical considerations should be taken into account, and in the extent to which wider interests such as local investment in infrastructure should be considered.

In April 2014 the Local Government Association (LGA) published a legal opinion on the duties of authorities administering schemes by Nigel Giffin QC. This said: “Even where it is permissible to have regard to wider considerations when choosing between investments, it still cannot be legitimate for the administering authority to place its own wider interests (whether those of the authority itself, or those of its own area or inhabitants) above those of the other scheme employers, assuming that the administering authority is not itself the sole employer. This is simply an application of the principle that at the core of a fiduciary relationship is a duty of loyalty. The fiduciary cannot, when acting as such, prefer his own interests to those of the party to whom the fiduciary duty is owed, and cannot use his position for his own profit (or not without informed consent). I have no doubt that the same result follows from public law principles of improper purpose and irrelevant considerations.

What this means in practical terms is that the administering authority, when acting as such, must be blind to its own wider interests insofar as they may diverge from or conflict with those of the other parties interested in the fund. So it would not be permissible to invest in, say, a social housing project in the administering authority’s own area, rather than one in the area of another employing authority within the fund, because of that location.

In managing an LGPS fund, the administering authority has both fiduciary duties and public law duties (which are in practice likely to come to much the same thing). The administering authority’s power of investment must be exercised for investment purposes, and not for any wider purposes. Investment decisions must therefore be directed towards achieving a wide variety of suitable investments, and to what is best for the financial position of the fund (balancing risk and return in the normal way).”

The Law Commission report into fiduciary duties published in June 2014 covered similar ground: “While the pursuit of a financial return should be the predominant concern of pension trustees, the law is sufficiently flexible to allow other, subordinate, concerns to be taken into account. We conclude that the law permits trustees to make investment decisions that are based on non-financial factors, provided that: they have good reason to think that scheme members share the concern; and; there is no risk of significant financial detriment to the fund.”

Both the LGA legal opinion and the Law Commission report emphasise the need for fiduciaries to make investment decisions on the basis of financial returns and only take into account non-financial factors when there is no risk of significant financial detriment.
CHAPTER 4. THE POLITICAL BACKDROP OF THE REFORMS

Pooling the LGPS into six pooled entities was always going to be a process with a political dimension. The bringing together of the funds of 89 democratically elected bodies into super funds will inevitably bring challenges. We support the voluntarist approach, backed up with compulsion if necessary, that the Government has adopted, and the early signs are positive, with a large number of schemes are already engaging in finding bodies with which to partner. However, this process brings all parties into new territory – and there are many hurdles that will have to be overcome.

FINDING A POOL TO PARTNER WITH

The signs are that local authorities have good lines of communication open, not only with schemes in the same region but also with other schemes where there is some common interest. For some time now there have been examples of local authorities coming together to work in partnership, and this process has accelerated since the 2015 Autumn Statement. Some of these partnerships are based on geographical proximity while others are between authorities from different parts of the country that share a common vision. But there is also a group of authorities, typically smaller ones, biding their time and waiting to see how discussions evolve. While many of these will come to agreements with pools, there is a risk that some authorities may need to be compelled to do so. It is not clear on what basis they will then enter into agreements with a pool.

We also see potential problems with the accuracy of the data on schemes’ funding, which schemes will take into account when they seek to find partners. Local authorities are using different discount rates, making meaningful comparisons difficult. It is uncertain that longevity tables being used are the most accurate available on the market. The Government should mandate a uniform approach to discount rates to facilitate the partnering process.

MERGING ASSETS

We envisage the Operator appointed by the pool offering a range of different sub-funds, which local authorities will be able to use as building blocks for the construction of their portfolios. Individual local authorities will retain control over and responsibility for setting the asset allocation strategy for their portfolio – the pool will perform the function of sourcing the different types of investments needed to construct the portfolio. The local authority will retain beneficial ownership of its assets invested in a sub-fund.

Choice of pool will therefore depend on the extent to which there is commonality of investment purpose amongst investing LGPSs. If each scheme insists on having particular fund mandates set up that are only of use to itself then pooling and its projected benefits will be extremely difficult to achieve. There will therefore need to be some give and take by the investors to make it work, and an acceptance that there will be some loss of choice, that will be offset by economies of scale.

There will be particular challenges when investors are looking to buy into or sell out of a fund that has a high proportion of illiquid assets. However, these are not insurmountable.
These factors all combine to mean the LGPS faces headwinds in the coming years. Against this backdrop, there is a sense that reforms implemented following Lord Hutton’s review have pushed difficult decisions down the line rather than address them once and for all. Accrual rates have actually increased and grandfathering rules mean it will be 10 years from the reforms before some of the cost-saving measures take effect.

There will also need to be negotiations over how initial start-up costs are shared out amongst participants.

Local authority schemes will have a different relationship with their directly appointed custodian as assets are moved away from that direct relationship into the ACS. A level of control will be taken away from them as a result even if they take an active interest in the activities of the pool Operator. Pools will therefore need to be set up in a way that ensures LGPSs benefit from the same levels of reporting they do today.

RISKS TO SCHEMES AND FUTURE LIABILITIES
There has been much public debate as to the likely outcome of the triennial valuation of the LGPS, which is due to take place in March 2016, the outcome of which will not be known until October 2016. It would be wrong to speculate here on the outcome of that valuation. But it is apparent that whatever the overall health of LGPS funding levels is – its last valuation shows it as broadly cashflow neutral – there are some outlier local authorities within the LGPS that will face significant challenges in meeting the pension payments that are due in the medium to long term.

These pressures come from a number of sources – shrinking workforces; a low interest rate environment; the unrealistic extension of debt repayment plans; increased longevity; potentially sluggish returns in the post-quantitative easing world; the end of contracting out rebates worth £700m a year from April 2016 and the cost cap mechanism, that enables the Secretary of State for Communities and Local Government to intervene if local authority employer costs in respect of future deficits rise above a certain level.

These factors all combine to mean the LGPS faces headwinds in the coming years. Against this backdrop, there is a sense that reforms implemented following Lord Hutton’s review have pushed difficult decisions down the line rather than address them once and for all. Accrual rates have actually increased and grandfathering rules mean it will be 10 years from the reforms before some of the cost-saving measures take effect.

It is by no means certain that the worst funded local authorities will find itself in the position of not being able to pay pensions in the medium to long term, but it is certainly possible. In such a situation many people expect that the Government would step in to guarantee payments. However, if such an eventuality increases in likelihood we may see politicians seeking to revisit the terms of accrual of the LGPS.
CONCLUSION
Clear thinking is needed if the journey towards the pooling of the 89 schemes within the LGPS is to set off on the right path.

The Government can help the LGPS achieve its goals by offering support in a number of key areas – improvement of the tax transparent vehicle; clarity around its attitude to social housing, the impact of IORP II and the security of the decision-making process for infrastructure; clarification of its view of the most efficient and effective legal structure for the establishment of pools and the structuring of infrastructure investments that pools will find attractive.

Stakeholders need to give proper consideration to the evidence that supports the value that active management brings to key constituents of a pension fund's portfolio.

And schemes themselves should acknowledge the extent to which they could have funding challenges in the medium to long term.

These are exciting times for the LGPS and the 89 schemes within it. But they are also uncertain times. As a long-term partner to many of the participants in this market we hope this historic undertaking can be moved forward in an efficient and effective way. We trust this White Paper contributes to the essential debate the LGPS is currently engaging in.

REFERENCES
6 researchbriefings.files.parliament.uk/documents/SN06594/SN06594.pdf
7 http://www.ft.com/cms/s/0/8034df10-1784-11e1-b157-00144feabcdc0.html
8 Moodys Housing Associations England – Outlook Dec 2015
9 http://www.lgpsboard.org/images/PDF/Publications/QCOpinionApril2014

BNY Mellon is a global investments company dedicated to helping its clients manage and service their financial assets throughout the investment lifecycle. Whether providing financial services for institutions, corporations or individual investors, BNY Mellon delivers informed investment management and investment services in 35 countries and more than 100 markets. As of Dec. 31, 2015, BNY Mellon had $28.9 trillion in assets under custody and/or administration, and $1.6 trillion in assets under management. BNY Mellon can act as a single point of contact for clients looking to create, trade, hold, manage, service, distribute or restructure investments. BNY Mellon is the corporate brand of The Bank of New York Mellon Corporation (NYSE: BK). Additional information is available on www.bnymellon.com. Follow us on Twitter @BNYMellon or visit our newsroom at www.bnymellon.com/newsroom for the latest company news.
BNY Mellon is the corporate brand of The Bank of New York Mellon Corporation and may be used as a generic term to reference the corporation as a whole and/or its various subsidiaries generally. This material and any products and services may be issued or provided under various brand names in various countries by duly authorized and regulated subsidiaries, affiliates, and joint ventures of BNY Mellon, which may include any of the following. The Bank of New York Mellon, at 225 Liberty St, NY, NY USA, 10286, a banking corporation organized pursuant to the laws of the State of New York, and operating in England through its branch at One Canada Square, London E14 5AL, UK, registered in England and Wales with numbers FC005522 and BR000818. The Bank of New York Mellon is supervised and regulated by the New York State Department of Financial Services and the US Federal Reserve and authorized by the Prudential Regulation Authority. The Bank of New York Mellon, London Branch is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. The Bank of New York Mellon SA/NV, a Belgian public limited liability company, with company number 0806.743.159, whose registered office is at 46 Rue Montoyerstraat, B-1000 Brussels, Belgium, authorized and regulated as a significant credit institution by the European Central Bank (ECB), under the prudential supervision of the National Bank of Belgium (NBB) and under the supervision of the Belgian Financial Services and Markets Authority (FSMA) for conduct of business rules, and a subsidiary of The Bank of New York Mellon. The Bank of New York Mellon SA/NV operates in England through its branch at 160 Queen Victoria Street, London EC4V 4LA, UK, registered in England and Wales with numbers FC029379 and BR014361. The Bank of New York Mellon SA/NV (London Branch) is authorized by the ECB and subject to limited regulation by the Financial Conduct Authority and the Prudential Regulation Authority. Details about the extent of our regulation by the Financial Conduct Authority and Prudential Regulation Authority are available from us on request. The Bank of New York Mellon SA/NV operating in Ireland through its branch at 4th Floor Hanover Building, Windmill Lane, Dublin 2, Ireland trading as The Bank of New York Mellon SA/NV, Dublin Branch, is authorised by the ECB and is registered with the Companies Registration Office in Ireland No. 907126 & with VAT No. IE 9578054E. The Bank of New York Mellon, DIFC Branch on behalf of The Bank of New York Mellon, The Bank of New York Mellon, DIFC Branch is regulated by the Dubai Financial Services Authority. The Bank of New York Mellon, Singapore Branch, subject to regulation by the Monetary Authority of Singapore. The Bank of New York Mellon, Hong Kong Branch, subject to regulation by the Hong Kong Monetary Authority and the Securities & Futures Commission of Hong Kong. If this material is distributed in Japan, it is distributed by The Bank of New York Mellon Securities Company Japan Ltd, as intermediary for The Bank of New York Mellon. Not all products and services are offered in all countries.

The Bank of New York Mellon, Singapore Branch is subject to regulation by the Monetary Authority of Singapore. The Bank of New York Mellon, Hong Kong Branch is subject to regulation by the Hong Kong Monetary Authority and the Securities & Futures Commission of Hong Kong. The information contained in this brochure is for use by wholesale clients only and is not to be relied upon by retail clients. Products and services are provided in various countries by subsidiaries, affiliates, and joint ventures of The Bank of New York Mellon Corporation, including The Bank of New York Mellon, and in some instances by third party providers. Each is authorized and regulated as required within each jurisdiction. This document and information contained herein is for general information and reference purposes only and does not constitute legal, tax, accounting or other professional advice nor is it an offer or solicitation of securities or services or an endorsement thereof in any jurisdiction or in any circumstance that is otherwise unlawful or not authorized.

Any statements and opinions expressed are as at the date of publication, are subject to change as economic and market conditions dictate, and do not necessarily represent the views of BNY Mellon. The information contained without taking into account the investment objective, financial situation or needs of any particular person, BNY Mellon is not responsible for any subsequent investment advice given based on the information supplied. This is not investment research or a research recommendation for regulatory purposes as it does not constitute substantive research or analysis. To the extent that this material contains statements about future performance, such statements are forward looking and are subject to a number of risks and uncertainties. BNY Mellon makes no representation as to the information's accuracy and completeness and accepts no liability for loss arising from use of this material. If nothing is indicated to the contrary, all figures are unaudited.

Any indication of past performance is not a guide to future performance. The value of investments can fall as well as rise, so investors may get back less than originally invested. This information may not be distributed or used for the purpose of offers or solicitations in any jurisdiction or in any circumstances in which such offers or solicitations are unlawful or not authorized, or where there would be, by virtue of such distribution, new or additional registration requirements. Persons into whose possession this information comes are required to inform themselves about and to observe any restrictions that apply to the distribution of this information in their jurisdiction.

Trademarks and logos belong to their respective owners.

This material may not be reproduced or disseminated in any form without the prior written permission of BNY Mellon.

© 2016 The Bank of New York Mellon Corporation. All rights reserved.