

# ***The Northern Pool***

## Advising the Northern Pool on Operational Structures

28 June 2016



# 1. Executive summary

This report has been prepared for the Northern Pool, made up of the Greater Manchester Pension Fund ('GMPF'), the West Yorkshire Pension Fund ('WYPF') and the Merseyside Pension Fund ('MPF'). This report is prepared to assist the Pool in its consideration of certain alternative operating models that the Northern Pool could use as part of their response to DCLG's Local Government Pension Scheme Pooling initiative.

Our analysis covers three possible operating models for the Northern Pool, as we have previously explored at a higher level:

1. **Own ACS operator:**
2. **AIFM without ACS**
3. **Joint committee**

We have split our analysis up into three separate phases, as set out in our proposal document dated 23<sup>rd</sup> May 2016:

*Phase 1 – Operational cost differentials*

*Phase 2 – Asset transition and tax*

*Phase 3 – Operational & Asset Holding Structures*

In summary, the estimated cost differentials between the three structures on a set up and ongoing basis are set out in the tables below.

Structure	1. ACS Operator with ACS Fund	2. AIFM with no ACS	3. Joint Committee
Set up costs	£6.0m - £10.2m	£1.8m	£1.2m
Incremental ongoing costs	£2.05m p.a.	£0.7m p.a.	£0.2m p.a.

Key – Red = highest cost, Green = lowest cost

Time	Outset	After 5 years	After 10 years
Cumulative cost difference between 1. and 2.*	£4.2m - £8.4m	£10.95m - £15.15m	£17.7m - £21.9m

\*Note – the cost difference assumes that the ACS Fund is able to benefit from c£1.5m pa in withholding tax efficiency on French dividends. If this is not the case in practice, the cost differential could be £15m wider after 10 years i.e £32.7m - £36.9m.

It should be noted that the above sets out the differentials between the structures, not a bottom up assessment of costs. We recommend the detailed financial model to support the business case and regulatory application is prepared as part of the next phase

## Set up costs

Set up cost for the ACS Operator with ACS Fund are expected to be significantly higher than for the other structural options, primarily due to:

1. A greater level of legal, financial, tax and regulatory advice required in order to set up the vehicle
2. Significant transactional taxes due to a change in legal ownership

This means that there is a significant investment required to set up an ACS, when compared with the other options. The AIFM without ACS would be cheaper to set up and would also be a regulated entity. It is assumed

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that this entity and the AIFM with ACS would deal with alternative assets in the same way outside of an ACS structure and as such there should be no cost differentials there.

### ***Ongoing costs***

The ACS is also expected to be the most expensive structure to run, as it will require more regulated staff, there is a higher cost of compliance and the custodian would have to provide additional services, such as depositary and fund administration, which have significant annual costs associated with them.

There is therefore a c£1.35m difference in annual costs between the ACS and the AIFM without ACS, meaning that the cumulative cost differential between the 2 operational structures will widen over time. This differential could increase further if the ACS is not able to take advantage of withholding tax efficiency on French dividends at any point in the future.

### ***Operational structures***

Although it is the cheapest structure to establish and run, the Joint Committee structure is the only one out of the three that is non-regulated, and DCLG has already discouraged such an approach, due to the perceived lack of clarity over governance and oversight.

The ACS operator with ACS Fund and the AIFM without ACS are both regulated entities, with lower cost under the AIFM without ACS structure due to operational and compliance costs of the ACS fund itself.

The ACS operator will take longer to establish due to a more robust authorisation processes plus higher advisor requirements, especially around the tax treatment of transferring assets, transparency of the fund and the legal structure.

It is expected that internal staff from the Funds would transfer into either the ACS operator or into the AIFM. Regulatory authorisation will be required of key individuals in order to perform their roles. To the extent that existing key staff of the funds are transferred to the pool, this could result in skill shortages in the Funds and we recommend that role mapping is performed and benchmarked at the Asset Manager, Fund and Administering Authority level as soon as possible in the next phase once a high level structure is selected.

### ***Other considerations and comments***

As we have discussed with the Pool, due to the scale of the current assets within the 3 LGPS Funds, it is not anticipated that one structure would give additional savings in asset management fees over another one. Each of the structures is expected to benefit from a reduction in custodian fees, as was confirmed in our recent meeting with BNP Paribas.

We have assumed that, regardless of the structure, each Fund will retain current investment managers and mandates around listed equities and bonds in the short term. In practise, if any changes are made to consolidate mandates with a particular manager, then we expect that there will be a minimum 5bps charge to transition the assets that are moved (maybe 30/40% of a portfolio). However those transition fees would be similar whether the transition takes place inside or outside an ACS fund.

In regards to the regulated structures, it should be noted that the second structure, an AIFM without the ACS would provide the most flexibility through the early years of the pool, being able to set up and operate different funds for the pool for different investments and to carry out segregated investment management or asset manager selection where more appropriate. The AIFM (with MiFID type permissions as appropriate) would need to have a fund it sets up and operates and this could for example be a Real Estate or Private Equity Fund. The AIFM could also establish an ACS fund in time should the financial benefits seem worthwhile once the pool evolves. It will be important for the Pool to ensure that the segregated portfolio management activities of the Pool do not 'taint' the AIFM status of the manager and we would recommend further guidance is sought on this point in the next phase.

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Due to the unique nature of the 3 Funds in the Northern Pool, in particular the scale of the Funds, low level of existing mandates and existing low investment manager fees already in place, alongside relatively high level of internal management, it is expected that the benefits of pooling will be realised regardless of whether appropriate investments are held via an ACS or outside of an ACS. In fact the ACS structure may well result in a less efficient solution for the pool for relevant asset classes. In either of the regulated structures the benefits of pooling for alternative assets could be achieved to the same degree as these would be invested in relevant alternative funds that could be established under either structure.

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## 2. Introduction and background

### Introduction

This report has been prepared for the Northern Pool, made up of the Greater Manchester Pension Fund (“GMPF”), the West Yorkshire Pension Fund (“WYPF”) and the Merseyside Pension Fund (“MPF”). This report is prepared to assist the Pool in its consideration of certain alternative operating models that the Northern Pool could use as part of their response to DCLG’s Local Government Pension Scheme Pooling initiative.

Our analysis compares both the set up and ongoing costs arising from each structure and considers the costs of asset transfers into an ACS fund. This analysis provides a useful comparison from a costs perspective of the three structural options being considered. The report also compares and contrasts the different operating and asset holding structures and notes the tax considerations that the Pool will need to bear in mind.

The report is to support the Northern Pool’s final submission to the Government on 15 July regarding their investment pooling intentions and for the meeting with Treasury on 16 June.

More information on our scope is contained below.

### Our scope

In our previous report dated February 2016 and meetings, we considered three different operating models that the Northern Pool could use to pool assets. These were:

1. **Own ACS operator.** *The Northern Pool Funds would manage all assets via an FCA regulated Asset Management Company. The Company would also establish an ACS fund for holding appropriate assets (notably listed equities, bonds and possibly real estate). The asset management company would be overseen by a Joint Committee arrangement.*
2. **Joint Committee with Asset Manager.** *The Northern Pool Funds would manage all assets via an FCA regulated Asset Manager Company. The Listed bonds, equities and real estate would not be held in an ACS fund established by the pool but held in segregated mandates. The asset management company would be overseen by a Joint Committee arrangement.*
3. **Joint Committee.** *An Oversight Group is set up by the participating funds to manage assets collectively but no FCA regulated business is established.*

It is important to set some context for the various structures above, in particular the ACS operator. The difference between structures 1 and 2 essentially comes down to whether the funds would hold certain assets in a fund structure (ACS) created and managed by the asset management company, or not. It is not currently envisaged by any LGPS pool that all assets would be held in a single ACS fund as that vehicle is not suitable for all assets. We have considered the advantages, disadvantages and costs of an ACS for listed equities, bonds and real estate for the Northern Pool. In each of structures 1 and 2 the asset management company may decide to hold other assets (private equity, infrastructure) via alternative structures which would be considered on a case by case basis.

As part of our previous work, we identified with the Northern Pool that the ACS option was likely to be relatively costly as an option. However, this is one of the key vehicles created by the UK authorities for asset pooling and we are aware that it is being considered by a number of other pools. It should be noted that any structural decision will be impacted by the facts of the case, for example the current investor profiles of the Funds in the Northern Pool. It is clear that there is not one solution for all answers for pooling in the LGPS.

We have split our work into three phases – 1) operating costs, 2) asset transition and taxes, 3) advantages and disadvantages for each structure. Given the views articulated by Treasury regarding the need for a separate, FCA regulated operating company, our focus has mainly been on structures 1 and 2. These two structures will both involve a regulated asset manager which does appear to be a base requirement. Treasury have been less

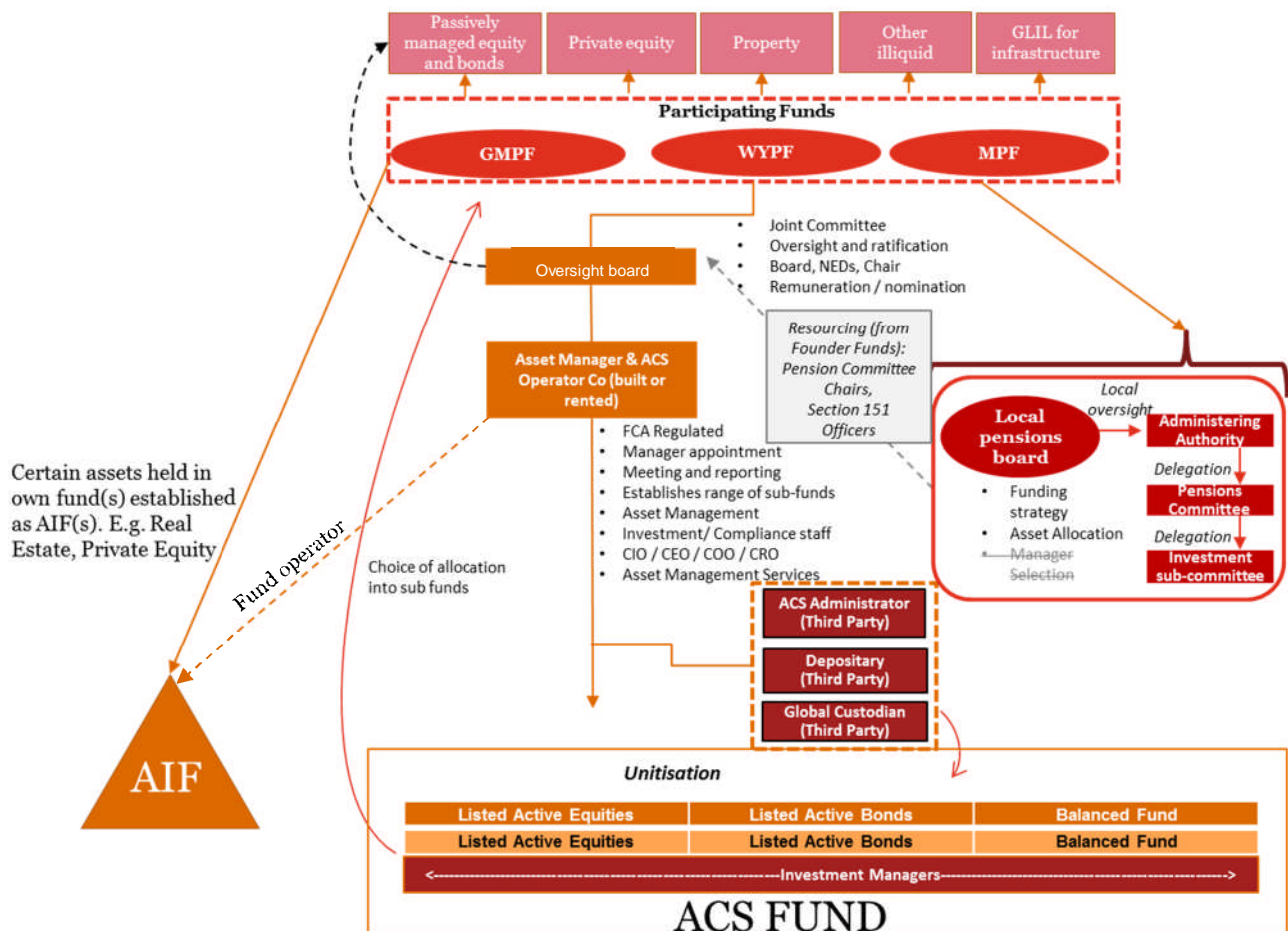
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prescriptive on asset holding structure such as the ACS and do appear willing to consider alternative structures put forward by the Pools.

We have expanded upon the initial work that we have undertaken for you and built upon this analysis to consider a wider range of operating costs, asset classes and transactional taxes, based on the actual holdings of all three Funds in the Northern Pool.

A summary of the first two structures is set out in this section. We have not included a structural summary of the Joint Committee, due to the lack of an FCA regulated vehicle and the importance that DCLG is placing on this.

## 1. Own ACS and 'in-house built' operator

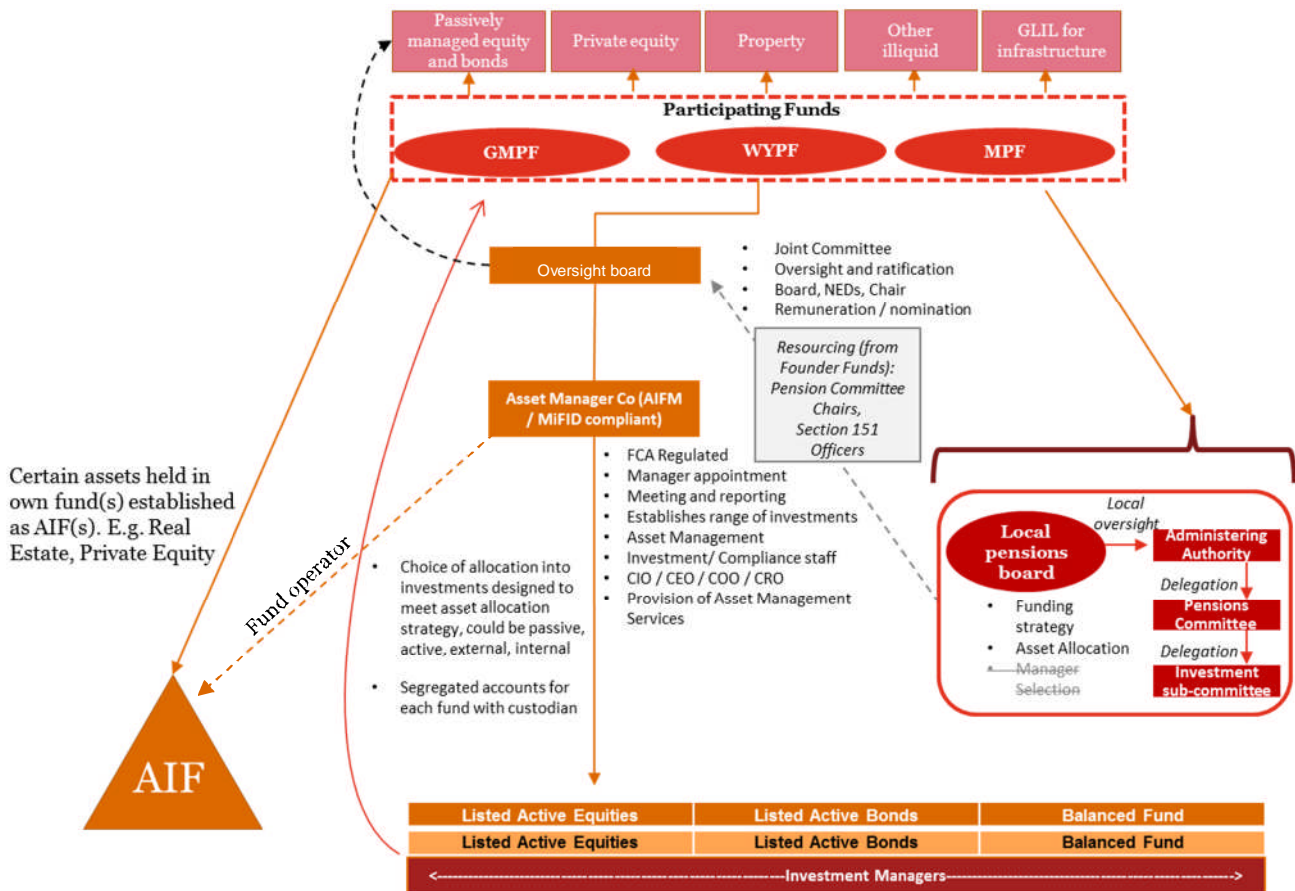


### Key features

1. ACS operator & Asset Manager set up to manage all pool assets. This forms the permanence in the structure.
2. The manager would provide some in-house asset management and would select third party providers as appropriate.
3. A specific ACS fund is established by the operator to hold all listed equities and bonds for the pool.
4. ACS operator & Manager is FCA authorised, which would require FCA approved staff and regulatory capital to be held.
5. This will be staffed primarily from employees from the LGPS Funds themselves – TUPE transfer in.
6. Asset manager company will also set up and operate funds to manage investments into Real Estate/Private Equity/Infrastructure etc and will provide asset management services over those investments.
7. An Oversight Board is set up by the founding funds to provide oversight and report back to the pensions committees and investment sub-committees.



## 2. Own Asset Manager with AIFM



### Key features

1. An Asset Management Company is created to manage all Pool assets. This manager provides the permanence around the pool.
2. The manager would provide some in-house asset management and would select third party providers as appropriate over other asset classes
3. The Asset Management Company is required to be FCA regulated, although with reduced capital and reporting requirement when compared with an ACS Operator.
4. The Asset Management Company will be staffed predominately from current employees of the participating authorities.
5. The manager would provide some in-house asset management and would select third party providers as appropriate.
6. Listed equities, bonds etc would be held directly by the Funds, rather than in an ACS.
7. Asset manager company will also set up and operate funds to manage investments into Real Estate/Private Equity/Infrastructure etc and will provide asset management services over those investments.
8. The funds would establish an oversight board set up as a Joint Committee, to oversee the asset manager company



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### ***3. Phases 1 and 2 – Operational cost differentials and asset transition and tax***

From the proposed structures we have identified the key areas of difference in the operational costs for the 3 models that are likely to have the highest degree of financial impact.

We have considered the initial set up and ongoing costs involved for operating the various models. This draws upon a number of sources, including Project Pool, publically available information, our market knowledge and quotes provided by a custodian. In addition, we have considered the costs and taxes from the outset of transitioning the assets into the various structures.

From this baseline cost, we identified key cost differences between the asset manager with ACS, asset manager with no ACS and the non-regulated Joint Committee option. In particular we have developed our previous February analysis by testing assumptions, discussing likely investment scenarios by the pool and by considering a wider range of operational costs that may give rise to a differential, such as custodian charges and depositary.

We have split the costs up into one off set up costs and recurring ongoing costs.

In addition to the financial analysis, we have also set out details of the Capital Gains Tax implications for five territories for each of the Funds, based on the territories with the greatest risk of significant cost. Finally, we have reviewed at a high-level the tax position if Real Estate assets were transferred into an ACS structure.

## Set up costs

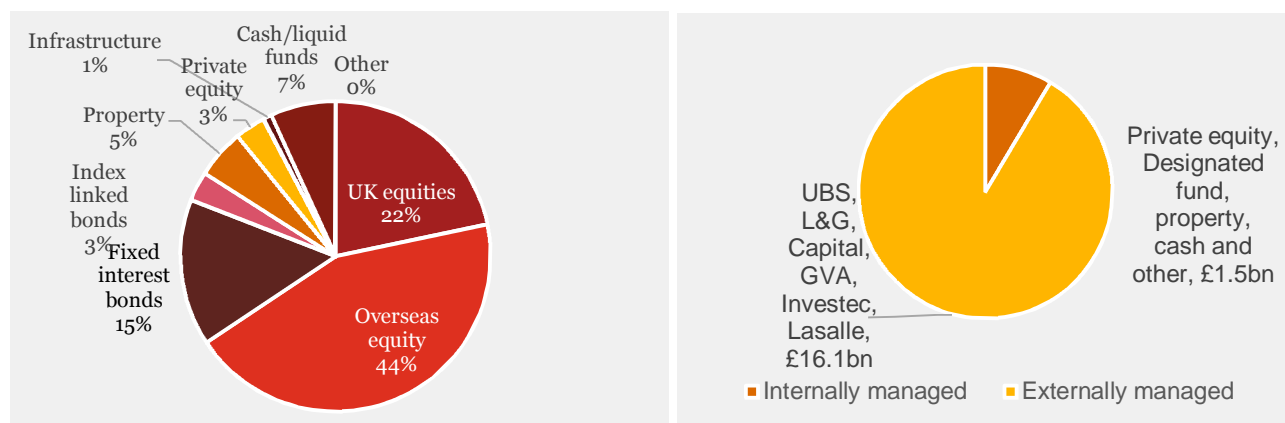
Area	ACS Operator	AIFM without ACS	Joint Committee	Key assumptions
Set-up cost (total)	£2.6m	£1.8m	£1.2m	<p>As the constituent funds are seeking to ensure that the operating model selected for the Northern Pool is robust and evidences best practice for governance (i.e. shows alignment to FCA equivalent requirements as far as needed), the level of effort required to set-up the operating model will be high under all options. However, the extent to which this effort is delivered through external advisors rather than by LGPS staff will directly impact the financial cost of set-up. Anecdotally the estimated costs to date for the set-up of the ACS and 'in-house built' operator for London CIV is approximately £2m - £2.5m. Further, in a recent meeting of the Northern Pool with Sid Newby from BNP Paribas, he referred to "little change from £3m" in setting up an ACS and operator co. The additional key differences in cost across the 3 structures result from:</p> <ul style="list-style-type: none"> <li>FCA authorisation advice and authorisation process required for the ACS Operator and Fund and to a lesser extent for the AIFM without ACS;</li> <li>Tax advice required to obtain clearance from each territory (c.50 territories) to transfer the assets into the ACS, with more complex advice required for certain territories</li> <li>Legal advice on the proposed structure</li> <li>Extensive financial and tax advice required on the regulated business model and fund (e.g. detailed financial modelling to meet FCA expectation on application, tax transparency clearance applications for a number of territories where assets will be held, VAT optimisation, Transfer Pricing). It is assumed robust legal advice will be needed in all cases, possibly more in options 2 and 3;</li> <li>TUPE advice / consideration will need to be obtained under the ACS Operator and option 2;</li> <li>Recruitment costs will be higher for additional staff required under the ACS Operator and option 2 vs option 1.</li> </ul> <p><b>Source: Project Pool, custodian information and PwC estimates of advice costs based on similar projects based on the particular features of the Northern Pool</b></p>
Transaction tax costs	£3.4m – £7.6m	£0m	£0m	<p>Using an ACS Fund, managed by an Operator will result in a change in legal ownership of the assets. In certain territories, this will result in a transaction tax on equity and convertible stock holdings. Based on the holdings as at 31 March 2015, ten of the most significant territories in which transactional taxes would arise were:</p> <ul style="list-style-type: none"> <li>France – 0.2%</li> <li>Switzerland – 0.15%</li> <li>Ireland – 1.0%</li> <li>Republic of Korea – up to 0.5%</li> <li>Hong Kong – 0.2%</li> <li>Italy – 0.1%</li> <li>China -0.1%</li> <li>Taiwan -0.3%</li> <li>Singapore - 0.2%</li> <li>Poland – 1.0%</li> </ul> <div> <p><b>Key</b></p> <p>Green – reliefs may be possible</p> <p>Red – reliefs not possible</p> </div> <p>It may be possible to obtain certain reliefs, for example by arguing in certain common law territories there is no change in beneficial owner, and we have assumed that some of these would be obtained at the bottom end of our range. The top end of our range assumes that no reliefs are obtained, apart from the UK. However, structuring should be considered prior to any asset transfers to ensure these transactional taxes are not significantly higher and are minimised appropriately. We have ignored capital gains tax costs in the portfolio, as these costs will arise under all scenarios at some point as assets are acquired and disposed of, therefore this would just be a timing difference. More detail on the process that the Funds would have to manage is provided later.</p> <p><b>Source: PwC estimate based on asset holding at 31 March 2015 for each Fund for the top ten territories</b></p>
Asset transition costs	£0m	£0m	£0m	<p>Assumed that there are no changes in the asset portfolios under any of the approaches and these are transitioned across to the relevant structures.</p> <p>If transitions were made from the current managers into new managers, then costs could be 5bps costs on the transitioning assets. That cost would be the same whether the transition took place within or outside an ACS. Given the Northern Pool's unique attributes (low number of mandates and scale per mandate), it is likely little transition would happen in the short term.</p> <p><b>Source: Market information, management estimate</b></p>
Total cost	£6.0m - £10.2m	£1.8m	£1.2m	<b>Note: Regulatory Capital of approx. c.£5m needed for the ACS Operator</b>
Marginal cost/(benefit)		(£4.2m) – (£8.4m)	(£4.8m) – (£9.0m)	

## Ongoing recurring cost differentials between operational structures

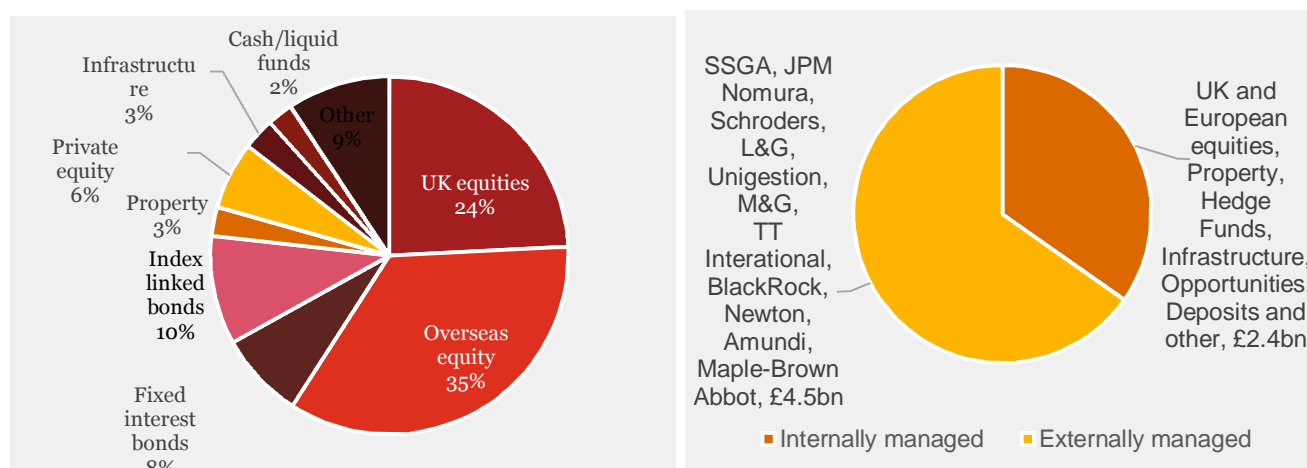
Area	Type of cost	ACS Operator	AIFM without ACS	Joint Committee	Key assumptions
A. Assets to be pooled	Withholding tax efficiency	(£1.5m)	£0m	£0m	Based on 0% withholding tax for ACS Fund on French dividends. This opportunity is based on the grounds that similar entities to an ACS in France are exempt. In the vast majority of cases, an ACS is entitled to the same ongoing treatment as a pension fund but that would need to be confirmed with each overseas territory as part of the set up <b>Source: Actual figure based on French dividends for the Northern Pool funds 2015.</b>
	VAT	£0.5m (£0?)	£0m	£0m	VAT is complex but non-recoverable VAT may arise in the ACS Operator, and this could be significant. <b>Source: Assumed non-recoverable VAT of 20% on supply of £2.5m. PwC estimate.</b>
	Fund admin/ investment	£1.0m	£0.1m	£0m	Administration fees are expected to be at least 0.5bps of assets in the ACS structure. Costs lower under the asset manager and are for accounting purposes. <b>Source: Custodian indicative pricing</b>
	Depository	£1.0m	£0m	£0m	Under the ACS Operator, depository responsible for holding and safeguarding the assets on behalf of the schemes. Costs expected to be 0.5bps <b>Source: Custodian indicative pricing</b>
	Custodian settlement	£0m	£0.1m	£0.1m	Custodian would make a fixed settlement charge per trade apart from in the ACS. <b>Source: Custodian indicative pricing</b>
B. Staffing	Joint Committee and Roles in new entity	£0.6m	£0.4m	£0.1m	An oversight board would need to be established for each of the 3 options and have real and demonstrable independence from the operation entity leadership to ensure the overall governance is robust. For the regulated structures, there would be a need for key individuals to be FCA approved. These Directors carry responsibility for all activities of the vehicle. As a result, these individuals attract a salary premium and, following discussions with management, it has been assumed that 2 additional senior level staff would be required to fulfil these roles in option 1, with just one required for option 2. A market rate could be £200k for each role. Allowance for transferring staff costs to increase by £200k overall. This is a key assumption and it is recommended that roles and responsibilities are mapped and benchmarked as soon as possible. For the Joint Committee, assumed to be costs of independent chair / non executives at cost c. £100k. <b>Source: PwC estimate of salary cost based on market information. Number of roles decided based on discussions with the Northern pool</b>
	Ongoing FCA compliance	£0.1m	£0.05m	£0m	£100k pa assumed for ongoing training, monitoring of staff and operations to meet FCA compliance requirements under the ACS. Lower level of costs assumed for the Joint Committee with Asset Manager due to lower FCA requirements. <b>Source: PwC estimate.</b>
C. FCA requirements	Regulatory capital	£0.3m	£0.05m	£0m	The required regulatory capital cost for an ACS will be c£5m whereas for a Joint Committee with asset manager the regulatory capital will be at most c£1m assuming fixed operating costs of less than or equal to £4m. It has been assumed that the regulatory capital would be provided via an interest bearing loan from the founding administering authorities, at an assumed net borrowing cost of 5% pa. <b>Source: FCA prescribed calculation and assumption on interest rate.</b>
	Ongoing monitoring and requirements	£0.05m	£0m	£0m	Note: Pillar II capital may also be required under the AIFM without ACS FCA requires quarterly reporting under ACS structure. Assumed this is outsourced. As there is no FCA requirement under the Joint Committees, monitoring is not required to the same detail. <b>Source: PwC estimate of outsourcing cost.</b>
E. IT and infrastructure	None	£0m	£0m	£0m	For these purposes, we have assumed that the current IT infrastructure is already sufficient and robust or if not it would be improved to the same degree in each case. Any additional IT infrastructure required under the ACS structure is assumed to have been captured within the Funds Admin line. It is assumed in all cases that support functions, e.g. HR, are sourced from existing Fund / local authority resources, ie is an outsourced function. <b>Source: Management view on IT system, information from custodian</b>
F. Custodian	Ongoing fees	£0m	£0m	£0m	A reduction in custodian fees of c20% may be possible, however, this is not expected to vary between alternative structures <b>Source: Custodian market information</b>
G. Investment management fees	Fund investment charges	£0m	£0m	£0m	Due to the current scale and low number of Northern Pool Fund mandates and existing low level of investment management fees, it is not expected that investing assets via an ACS will result in a greater reduction in investment management fees compared to other structures <b>Source: Custodian market information, management view</b>
Total cost		£2.05m	£0.7m	£0.2m	
Total marginal cost/(benefit) relative to ACS			(£1.35m)	(£1.85m)	

# Appendix 1 – Asset breakdown of each fund at 31 March 2015

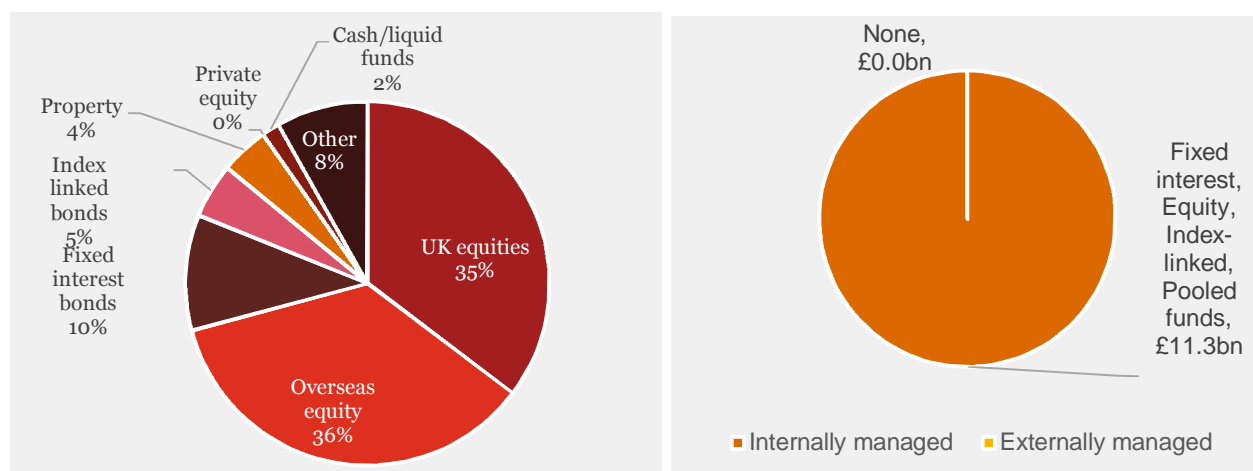
## GMPF



## MPF



## WYPF



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## ***Appendix 2 – Methodology and summary of significant tax charge by Fund (excluding reliefs)***

- Using the ISIN – identify the territory that each investment belong to and the asset class it falls into
- Analyse which regions have the exposure to transactional taxes
- Test each territory and identify which assets are likely to incur a transactional tax by using the ISIN to identify asset class and territory of issue
- Apply transactional tax rate in force for that country to each asset identified as likely to incur a transactional tax
- Identify which of these territories it may be possible to apply for clearance and therefore obtain reliefs
- Calculate and consolidate the range of possible outcomes

### *Note regarding clearance services*

Although not defined in statute, a clearance service is a system for holding securities and offering a facility to trade and settle those securities within the system by book entry. Once deposited in a clearance service, securities can remain in the system indefinitely and can be traded without a change in the underlying company share register, as the legal title of the underlying securities remains in the name of the clearance service or that of its nominee. Interests in securities can therefore be traded and settled between members of the clearance service without using paper instruments. Clearance services are operated worldwide but are particularly common in Europe, of which there are many.

Upon entering a clearance service, securities are typically assigned a service specific ISIN code, a consequence of which hides the true identification of the issuing country e.g. an Italian "IT0000000001" ISIN becomes a generic clearance service ISIN e.g. "XS0000000001". Due to the fact that a clearance service can hold multi territory securities it is therefore not possible to tell which is the relevant rate of international stamp or financial transaction tax when analysing the possible transfer tax implications of any one clearance service ISIN.

Taking a range from the lowest 0.1% FTT rate for Italian securities up to the highest current 1% Irish and Poland stamp and CLAT tax rates, respectively, we have applied a mid range of 0.5% rate for these clearance held securities. It should not be assumed that this rate has been determined based on the UK stamp taxes rates of 0.5%.

**GMPF**

<b>Country</b>	<b>Tax exposure (£m)</b>	<b>British Gilts</b>	<b>Equity</b>	<b>Corporate bonds</b>	<b>Overseas bonds</b>	<b>Open ended fund</b>
UK	17.0	1.5	14.1	0.0	0.0	1.4
Clearance	1.2	0.0	0.0	0.2	1.0	0.0
France	0.4	0.0	0.4	0.0	0.0	0.0
Ireland	0.4	0.0	0.3	0.0	0.1	0.0
Switzerland	0.4	0.0	0.4	0.0	0.0	0.0
Italy	0.2	0.0	0.2	0.0	0.0	0.0
Rep. of Korea	0.2	0.0	0.2	0.0	0.0	0.0
Hong Kong	0.2	0.0	0.2	0.0	0.0	0.0
Singapore	0.1	0.0	0.0	0.0	0.1	0.0
Poland	<0.1	0.0	0.0	0.0	<0.1	0.0

**WYPF**

<b>Country</b>	<b>Tax exposure (£m)</b>	<b>Listed alternative</b>	<b>Equity</b>	<b>Corporate bonds</b>	<b>Overseas bonds</b>	<b>Open ended fund</b>
UK	18.3	0.0	18.3	0.0	0.0	0.0
Ireland	1.7	0.1	1.6	0.0	0.0	0.0
Rep. of Korea	0.6	0.0	0.6	0.0	0.0	0.0
France	0.3	0.0	0.3	0.0	0.0	0.0
Switzerland	0.3	0.0	0.3	0.0	0.0	0.0
Hong Kong	0.2	0.0	0.2	0.0	0.0	0.0
Taiwan	0.2	0.0	0.2	0.0	0.0	0.0
Italy	0.1	0.0	0.1	0.0	0.0	0.0
Singapore	0.1	0.0	0.1	0.0	0.0	0.0
Clearance	0.1	0.0	0.1	0.0	0.0	0.0

**MPF**

<b>Country</b>	<b>Tax exposure (£m)</b>	<b>Listed alternative</b>	<b>Equity</b>	<b>Corporate bonds</b>	<b>Overseas bonds</b>	<b>Open ended fund</b>
UK	6.6	0.0	5.4	1.2	0.0	0.0
France	0.5	0.0	0.5	0.0	0.0	0.0
Ireland	0.2	0.0	0.2	0.0	0.0	0.0
Switzerland	0.2	0.0	0.2	0.0	0.0	0.0
Rep. of Korea	0.1	0.0	0.1	0.0	0.0	0.0
Hong Kong	<0.1	0.0	<0.1	0.0	0.0	0.0
Singapore	<0.1	0.0	<0.1	0.0	0.0	0.0
Italy	<0.1	0.0	<0.1	0.0	0.0	0.0
China	<0.1	0.0	<0.1	0.0	0.0	0.0
Taiwan	<0.1	0.0	<0.1	0.0	0.0	0.0



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