Government Actuary's Department

Academies LGPS pension arrangements

2016 valuation analysis

Date: 11 September 2018

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Contents

1 Executive summary

1.1 This report has been prepared by the Government Actuary's Department (GAD) at the request of the Ministry of Housing, Communities and Local Government (MHCLG) and the Department for Education (DfE).

1.2 MHCLG and DfE have asked GAD to review the treatment of academies within the Local Government Pension Scheme (LGPS). In particular, to gather evidence on the variation in treatment of academies within and across different LGPS Funds. Data from the most recently completed valuations as at 31 March 2016 was obtained for this purpose. The findings in this paper rely on the accuracy of the data provided.

1.3 Our principal conclusions are:

- on average academies currently pay 2% of payroll less in contributions than local authorities (LAs) - 21% versus 23%, respectively - despite being 11% worse funded on average (73% versus 84%, respectively). This reflects how academy contribution rates were set initially and the relative maturity of their liability profiles.
- there is a high degree of variability in individual contribution rates (some academies contribution rates exceed 30% of pay, whilst others pay less than 10%) and funding levels for academies both within and across Funds (some academies have funding levels below 25% whilst others are above 100%) . A wide range is also observed for LAs.
- The data indicates that, on the whole, academies are treated consistently with LAs with regard to the 2016 valuation funding assumptions, suggesting that the DfE guarantee is currently being recognised by Funds
- Given the existing approach for setting academy contribution rates, we would expect (material) nationwide variation between individual academy contribution rates and LA contribution rates to persist in future. Further, the extent of the variation observed at the 2016 valuation could potentially increase further, particularly if there is a large increase in the number of new academies.

1.4 A number of factors will contribute to variation in academy contribution rates (and the impact of each factor will depend on the individual circumstances). These factors include:

- **The size of the deficit allocated to the academy when it was created**
  This will depend on the assessed funding level at the time of academisation, and the deficit allocation method applied. The market conditions at the point of academisation play an important role. There is no evidence that the current process systematically increases the contribution rates payable by academies relative to local authority schools, and some methods (asset share) systematically reduce the contribution rates payable by academies
- **The membership profile of the academy staff (in particular, the age profile)**
  The *standard contribution rate* is higher for older members
- **The funding assumptions adopted for the actuarial valuation**
  Evidence suggests that, on the whole, funding assumptions adopted for academies are consistent with those adopted for LAs

- **Experience within the Fund (investment returns, demographic impacts)**
  Asset performance after academisation will have materially different impacts on LAs and academies, because only LAs retain assets and liabilities in respect of current pensioners and former employees (deferred pensioners)
- **The period over which deficit contributions are payable ('deficit recovery period')**
  Around half of Funds apply the same deficit recovery period for academies and LAs, but the remainder apply a shorter rate for academies. We understand that some Funds vary academy deficit recovery periods in order to target that all academies pay the same (or similar) total contribution rate to the LA. This approach may result in shorter (or longer) deficit recovery periods.
- **Actions of the academy (for example pay awards)**
  Currently we have little or no evidence of the actions of academies driving the differences in contribution rates, although it is a possible factor.

Next steps

1.5 Whilst this paper does not make any recommendations, we suggest that DfE and MHCLG consider what changes to academy pension arrangements within the LGPS might be appropriate in order to meet policy objectives. It should be noted that, if changes to the current arrangements are not made, we would expect material volatility in academy contribution rates (against local authority rates and other academies) to persist. GAD will be very happy to provide additional analysis or support further policy discussions as required.

2 Introduction

Section summary

MHCLG and DfE requested that GAD carry out analysis on the 2016 LGPS Fund valuation data in order to understand how academies are being treated in the LGPS. This request follows concerns expressed by stakeholders about the current arrangements.

As background, when a school converts to an academy, the academy becomes an individual employer in its LGPS Fund and is responsible for the pension obligations of the academy's support staff. In March 2016, there were around 6,000 academies in England, participating across 79 LGPS Funds.

The analysis in this paper compares academies to Local Authorities (noting that schools pay the relevant Local Authority contribution rate). A number of charts and observations are included in this paper. No recommendations are set out in this report, however it is expected that the analysis will be helpful in informing future MHCLG and DfE policy considerations.

2.1 This report has been prepared by the Government Actuary's Department (GAD) at the request of the Ministry of Housing, Communities and Local Government (MHCLG) and the Department for Education (DfE).

2.2 This analysis forms part of a broader analysis of Local Government Pension Scheme (LGPS) Fund valuations being performed by GAD as at 31 March 2016 under Section 13 of the Public Service Pensions Act 2013.

2.3 MHCLG and DfE have asked GAD to review the treatment of academies within the LGPS. In particular, MHCLG and DfE wish to gather evidence and gain a better understanding of how the financial position for individual academies varies within and across different LGPS Funds. Data from the recently completed LGPS actuarial valuations as at 31 March 2016 was obtained for this purpose.

2.4 We note that PwC were commissioned by the LGPS Scheme Advisory Board (SAB) to carry out a wide ranging review on the pension arrangements for academies within the LGPS and a report entitled 'Options for Academies in the LGPS' was published on the SAB website on 31 May 2017. The report highlighted issues raised by various stakeholders relating to the existing pension arrangements.

2.5 In light of the issues raised in the PwC report, ministers have agreed that DfE, MHCLG, GAD and the SAB should continue to work closely together to address the issues identified with the current arrangements. The PwC report covers three main areas: policy and governance, administration and operations, and contributions and finance. MHCLG and DfE have asked GAD to carry out a more detailed investigation of the contributions and finance aspect by analysing the results of the 2016 valuations at an individual academy level. This is the first time GAD has carried out such an exercise. GAD would be happy to perform similar analysis at every triennial valuation and monitor the position over time, if required.

Background

2.6 When a school converts into an academy, a new employer (the academy) is created. At inception, the academy takes over the running of the school which was previously the responsibility of the relevant local authority (LA). Some of the staff employed by the school, primarily support staff, are members of the LGPS, and responsibility for the associated pension obligations is transferred to the newly formed academy. To determine the contributions payable by the academy after conversion, the relevant Fund Actuary carries out an initial assessment. The contribution rate payable will take account of the value of assets and estimated liabilities allocated to the new academy.

2.7 Typically, we understand that each academy is treated as an individual employer for LGPS purposes and will therefore pay an individual contribution rate, reflecting its own circumstances, and that rate will vary from academy to academy. The total contribution rate consists of:

> the standard (or ongoing) contribution rate, which covers the estimated cost of future benefit accrual. This is also referred to as the Primary rate in the LGPS.

> the deficit recovery contribution rate, which covers the shortfall between the value of the assets and the assessed value of previously accrued benefits (or the liabilities). Academies will often inherit a deficit at outset, the size of which depends on a number of factors. This is also referred to as the Secondary rate in the LGPS.

2.8 In some instances, if the academy belongs to a multi-academy trust (MAT), we understand that the MAT is treated as the relevant employer within the LGPS[1]. Some Funds also operate pooling arrangements whereby some (or all) academies within a Fund pay a single combined contribution rate.

2.9 In 2013, DfE introduced a financial guarantee[2] in response to concerns from LGPS administering authorities over who would support the legacy pension liabilities if an academy were to close. This guarantee was expected to lead to administering authorities reviewing their academy risk assessments and, all else being equal, to result in academies being treated equitably with LAs when determining employer contribution rates. MHCLG and DfE have previously issued guidance[3] (including Frequently Asked Questions) which provides practical advice aimed at individuals involved in LGPS pension arrangements in relation to the conversion of a school to an academy.

[1] For example, we understand there were around 6,200 academies with LGPS members in December 2016. However, we understand there were around 3,000 LGPS academy employers; 1,200 MATs (covering 4,400 academies) and 1,800 single academy trusts. Source: see PwC 'Options for Academies in the LGPS' paper of May 2017.

[2] See the written ministerial statement from the Secretary of State for Education, published on 4 July 2013.

[3] Academy arrangements and the Local Government Pension Scheme

Data

2.10 Valuation data as at 31 March 2016 was provided by the Fund Actuary to each of the 79 English LGPS Funds with academy employers. The actuarial firms involved are Hymans Robertson (36 Funds), Barnett Waddingham (22 Funds), Mercer (12 Funds) and Aon Hewitt (9 Funds).

2.11 We have not carried out any detailed checks on the accuracy or completeness of the data provided, and have relied on it being correct for our analysis. The data is presented without any standardisation (for example, to adjust for differences in valuation assumptions). However, the following adjustments have been made to the data:

- converted academy lump sum deficit payments into an equivalent percentage rate (using data on the lump sums payable and the academy payroll[4]).
- in cases where no asset information was provided, the implied asset value was calculated based on other items of information provided[5]

2.12 We note that the PwC report of 31 May 2017 refers to concerns about the quality of data for academies. Given the large volume of data collected, it is beyond the scope of this exercise to determine the extent to which data inaccuracies are present in the data (and could therefore impact the analysis included in this paper). In carrying out the analysis, we have identified a handful of data queries (and have excluded some items from the analysis, where appropriate). We would be happy to support MHCLG and DfE should they wish to review the quality of the data in more detail.

Purpose

2.13 This remainder of this report summarises the 2016 valuation data in order to provide insight into how academies are treated across the LGPS. In particular, we have focussed on comparing academies within a Fund to the LAs in that Fund (noting that schools will pay the relevant LA contribution rate). Our analysis is detailed in the following sections:

- 3: Academies and LAs in the LGPS
- 4: Contributions
- 5: Funding levels
- 6: Funding approach
- 7: Academy cashflows

A glossary is included as an appendix which explains some of the technical pensions terms (highlighted in *italics)* which appear in this report.

[4] Note that the size of LGPS pensionable payroll could vary significantly by academy, depending on number of support staff, so that two apparently similar academies may look quite different

[5] Information used in this calculation included the deficit contribution rate, assessed value of the liabilities, payroll and relevant financial assumptions.

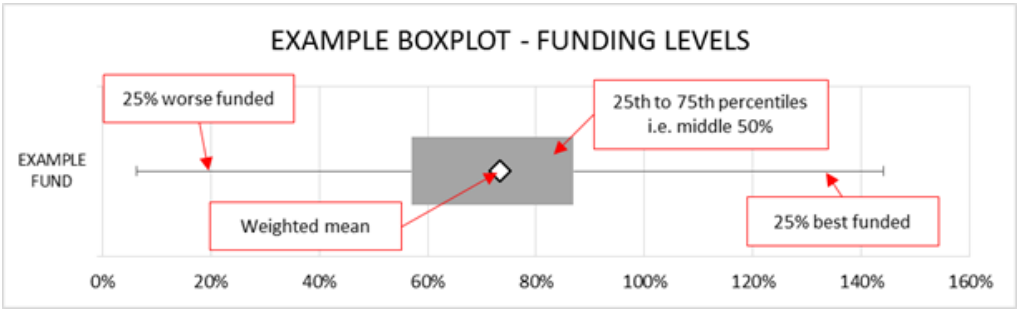
2.14 The comments in this report are necessarily summarised. We do not have sufficient data to analyse how the financial position developed up to 31 March 2016 or to carry out detailed individual academy reviews. The position for individual academies will reflect its own circumstances and specific factors. However, we have provided DfE and MHCLG with summary details on individual academies to enable them to investigate further should they wish.

2.15 This report is provided mainly for information, and does not set out any recommendations. However, it is expected that the information in this report will be helpful in informing considerations over how the pension arrangements for academies might be varied to better meet policy objectives. GAD would be happy to advise further as required.

Chart design

2.16 The charts in sections 4 to 6 have been produced by comparing LA data against academy data in each Fund. The charts have the following features (see example boxplot graphic below):

- the red lines represent the average (weighted mean) LA metric within each Fund
- the diamond points represent the average (weighted mean) academy metric within each Fund
- the solid coloured bars show the 25th to 75th percentile academy range within Funds. Associated thinner lines show variation outside the percentile range
- the key to each chart sets out any colour coding that are represented



2.17 For all the Funds we show a single average LA metric even though some Funds have multiple LAs. If you were to assess the position of any one academy, it is arguably most appropriate to compare against the LA which was responsible for the school prior to conversion. However, for the purpose of this analysis, a comparison against the average LA position within each Fund is reasonable.

Disclaimers and compliance

2.18 **Third parties**: this report is addressed to the MHCLG and DfE. This report may be of relevance to academies, administering authorities and other employers, actuaries, the LGPS Scheme Advisory Board (SAB), HM Treasury (HMT) as well as other LGPS stakeholders. The Government Actuary's Department (GAD) does not accept any liability to third parties.

2.19 **Data**: in preparing this report, GAD has relied on data and other information provided by the 4 actuarial firms with Fund Actuary appointments. GAD does not accept responsibility for advice based on wrong or incomplete data. In particular, GAD has relied on the general completeness and accuracy of the information supplied without independent verification.

2.20 **Compliance**: This work has been carried out in accordance with the applicable Technical Actuarial Standard: TAS 100 issued by the Financial Reporting Council (FRC). The FRC sets technical standards for actuarial work in the UK.

3 Academies and LAs in the LGPS

Section summary

The table in this section includes some key summary statistics for academies and Local Authorities as at 31 March 2016 based on 2016 LGPS valuation data.

3.1 Table 3.1 summarises some of the main LGPS 2016 valuation data items, as at 31 March 2016, for academies and LAs across England.

Table 3.1. Summary of academies and LA 2016 valuation data

	Academies	Local Authorities (LAs)	Academies as a proportion of LAs
Total no. of members ('000s)	340	3,780	9%
Total payroll (£m)	2,862	19,574	15%
Average* age (actives)	48	48	-
Total accrued pension (£m)	447	10,376	4%
Total liabilities (£m)	6,875	165,015	4%
Total assets (£m)	5,040	139,329	4%
Aggregate funding level	73%	84%	-
Funding level range **	26% - 108%	70% - 94%	-
Average* total contribution rate	21%	23%	-
Total contribution rate range**	16% – 30%	18% - 33%	-

* Averages are weighted by salary.
** Range represents 5th to 95th percentile so a small percentage (10%) will be outside this range

3.2 The current scale of the academy footprint within the LGPS is relatively small compared to LAs[6]; academy assets and liabilities only represent around 4% of those for LAs. However, academy assets and liabilities are expected to become more significant over time as the payroll for academies represents a higher percentage (around 15%) of the LA payroll. Also, more academies are expected to be created in the future which will further increase the academy footprint within the LGPS.

[6] Note that LAs include all local government staff, not just education staff.

3.3 On average, academies pay around 2% of payroll less than LAs (21% versus 23%, respectively) despite the overall funding level being 11% lower (73% versus 84%). This arises mainly because academy liabilities are predominantly in respect of active members so any deficit is spread over a proportionately larger payroll.

3.4 Both academies and LAs have a wide range of individual funding levels and contribution rates across England. In the following sections, we highlight how different metrics compare across and within individual LGPS Funds.

4 Contributions

Section summary

This section focuses on the contribution rates payable between April 2017 and March 2020 by academies compared to LAs. Following the 2016 LGPS valuations, academies are paying an average total contribution rate of 21% compared to a rate of 23% for LAs. However, there is significant variation between rates paid by individual academies (and similarly LAs).

Many factors can contribute towards the observed variation (for example, funding levels, assumptions used, membership profiles) and the extent to which any individual academy's contribution rate varies from the average rate depends on its own specific circumstances.

4.1 An area of concern for academies is the level of contributions paid into the LGPS. In particular, as well as the actual amount paid, academies are often interested in knowing how their contribution rates compare to those payable by local schools (that is, the LA rate) and other academies.

Total contribution rates

4.2 Chart 4.1 shows the range of academy total contribution rates (*standard contribution rate* plus *deficit contributions*) payable between April 2017 and March 2020, within each Fund against the corresponding LA average[7]. Contribution rates are expressed as a percentage of pensionable payroll.

4.3 There is a large variation of total contribution rates paid by academies both within and across Funds. Some academy contribution rates are much higher than the overall average academy contribution rate of 21% (for example, a number of academies pay over 40%). Conversely, there are also academies who pay substantially below the average rate (for example, a number of academies pay less than 10%).

4.4 Funds where there is no (or little) variation between academy rates typically reflect that an academy pooling arrangement is in place within the Fund. This means that all academies in the pool are required to pay a common rate (and financial risks are shared by employers across the pool). We also understand that in certain Funds, academy contribution rates have been calculated to specifically target the rate paid by the relevant LA.

4.5 Contribution rates also vary significantly between different LAs; in particular, some LAs pay considerably more than the LA average (23%) and also considerably more than the academies within their Funds. We have re-expressed lump sum payments to be included in these rates. It should be noted that in some cases it is possible that the LA may be voluntarily paying higher lump sum payments, which could materially affect any comparisons or observations.

[7] Averages are weighted by salary.

4.6 There does not appear to be any particular correlation between total contribution rates and actuarial firms.

***Standard contribution rate* (SCR)**

4.7 Chart 4.2 shows the range of academy standard (or ongoing) contribution rates within each Fund against the corresponding LA average. The overall average SCR for an academy at the 2016 valuation is 17% of pay, which is the same as the LA average.

4.8 Variation in SCRs between Funds will typically arise due to:

> the different funding assumptions used (such as the assumed *discount rate*; lower *discount rates* will lead to higher contribution rates and vice versa - very broadly, all else being equal, a 1% pa reduction in the discount rate might lead to around a 5% (say) increase in the *standard contribution rate*, expressed as a percentage of payroll.), and/or

> differences in membership profiles (primarily age; lower average ages will lead to lower contribution rates and vice versa)

4.9 Variation in SCRs within Funds will typically reflect differences in membership profiles and not differences in funding assumptions.

4.10 Chart 4.3 shows the range of average ages of active members in academies within each Fund against the average age of LA active members.

4.11 This shows that the average age of active members in academies across Funds is broadly the same as for LAs (both around age 48). However, average ages for individual academies can vary considerably within each Fund and we expect that to be a factor affecting the range of academy ongoing contribution rates within each Fund (very broadly, all else being equal, we might expect the ongoing contribution rate, expressed as a percentage of payroll, to be approximately 5% higher for an academy whose staff are on average 10 years older) as illustrated in Chart 4.2.

***Deficit contribution* rate**

4.12 Chart 4.4 shows the range of academy *deficit contribution* rates within each Fund against the corresponding LA average. Overall, the average deficit contribution rate for academies is 4% compared to an LA average of 6%.

4.13 The *deficit contribution* rate calculated depends on:

> The *funding level* (the actual deficit amount) and underlying actuarial assumptions

> The length of the *deficit recovery period*

> The payroll size

4.14 In some cases deficit lump sum payments defined in cash terms have been converted into equivalent percentage rates. Whilst this allows comparisons to be made at the Fund or national level, care is needed when interpreting any individual result as the deficit contribution rates may be volatile if the size of an employer's payroll varies over time (the number of support staff an academy employs and varying staffing levels between academies will affect comparisons). Further, the mechanism(s) applied by LAs in determining how deficit payments should be allocated to schools could materially affect any comparisons or observations.

4.15 Additional comments on *deficit contribution* rates are set out in the next two sections. Note that a small proportion of academies had surpluses as at 31 March 2016. Typically, a surplus will lead to the total contribution rate payable being less than the SCR calculated.

Chart 4.1 Total contribution rate by Fund

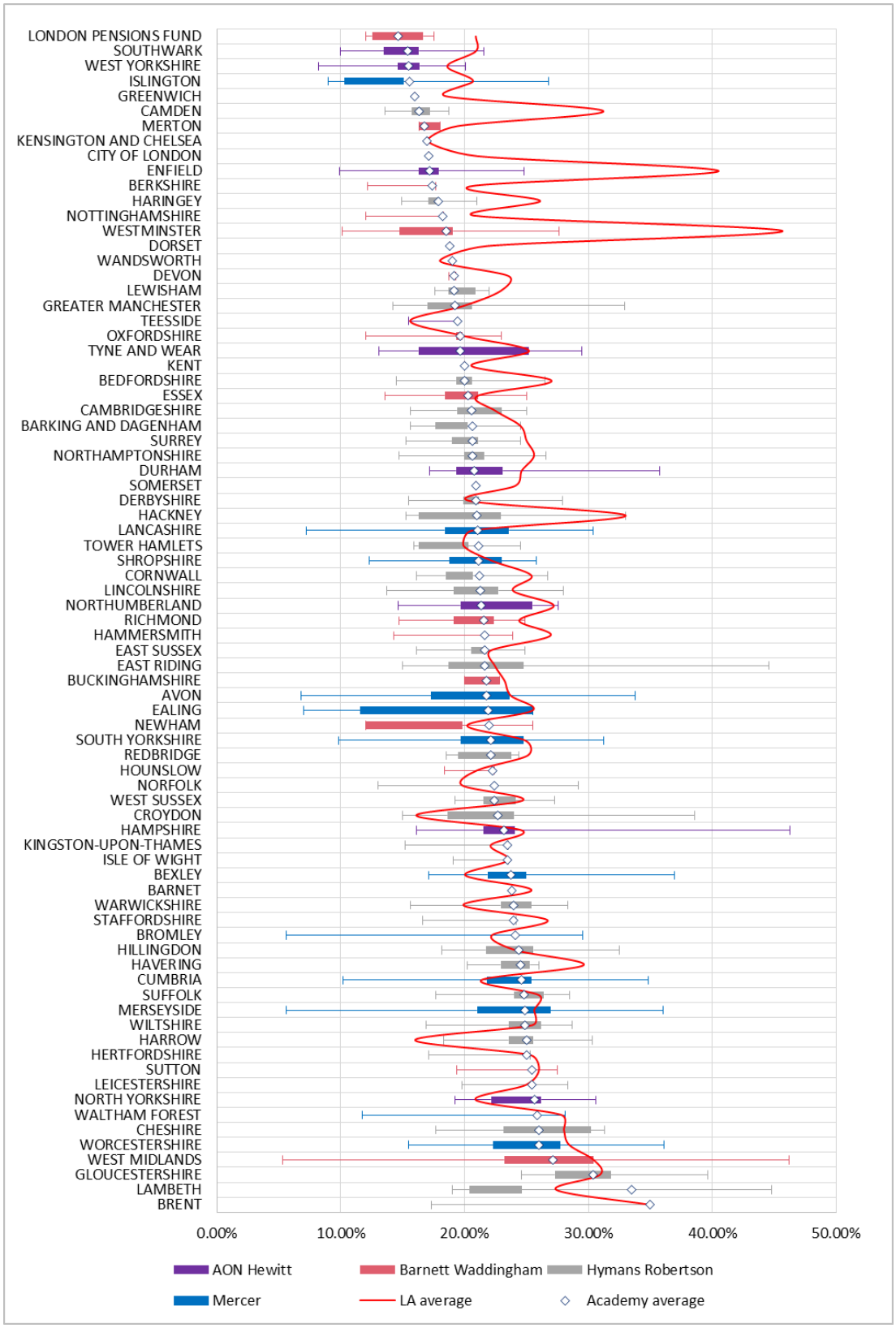


Chart 4.2 *Standard contribution rate* by Fund

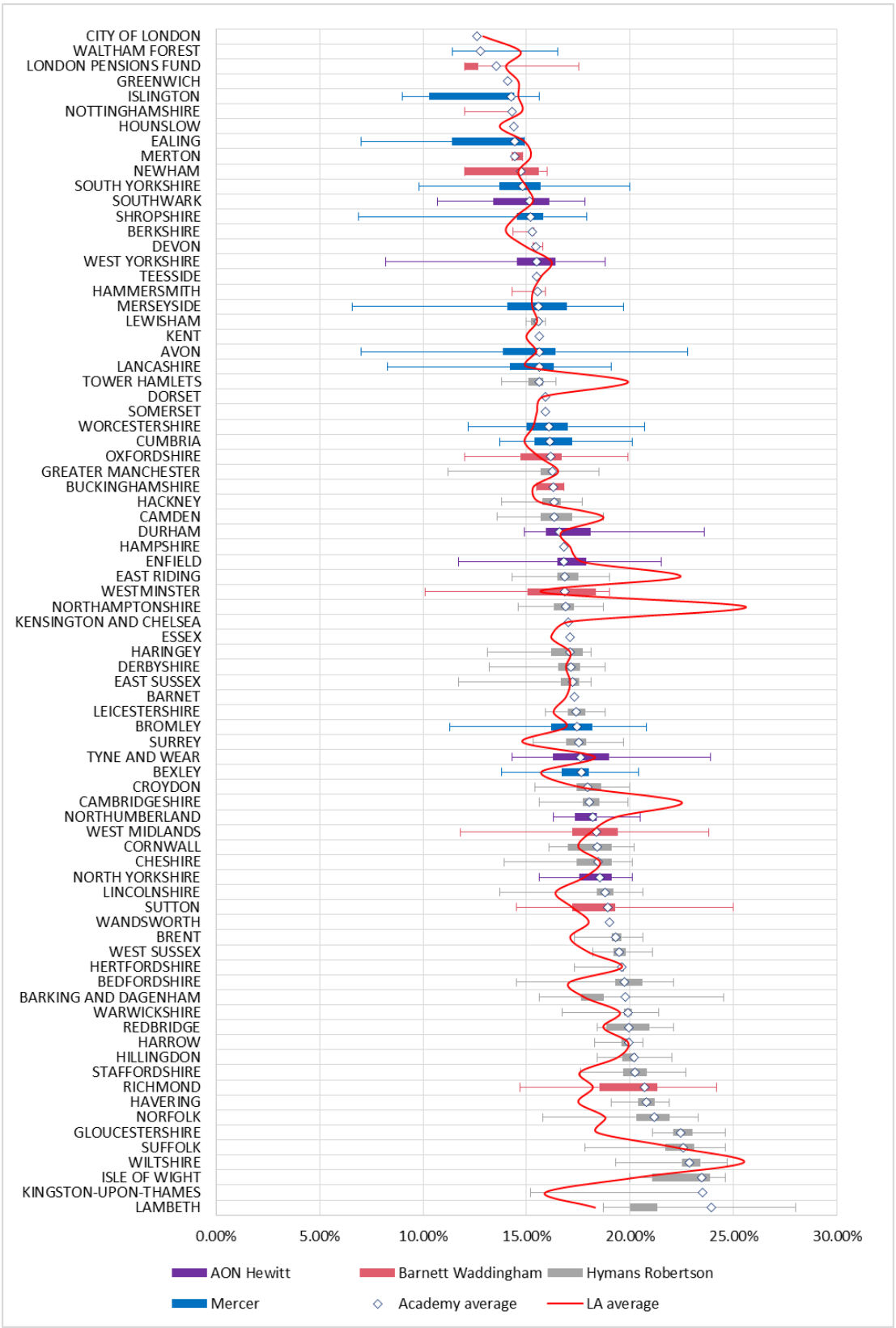


Chart 4.3 Average age of active members

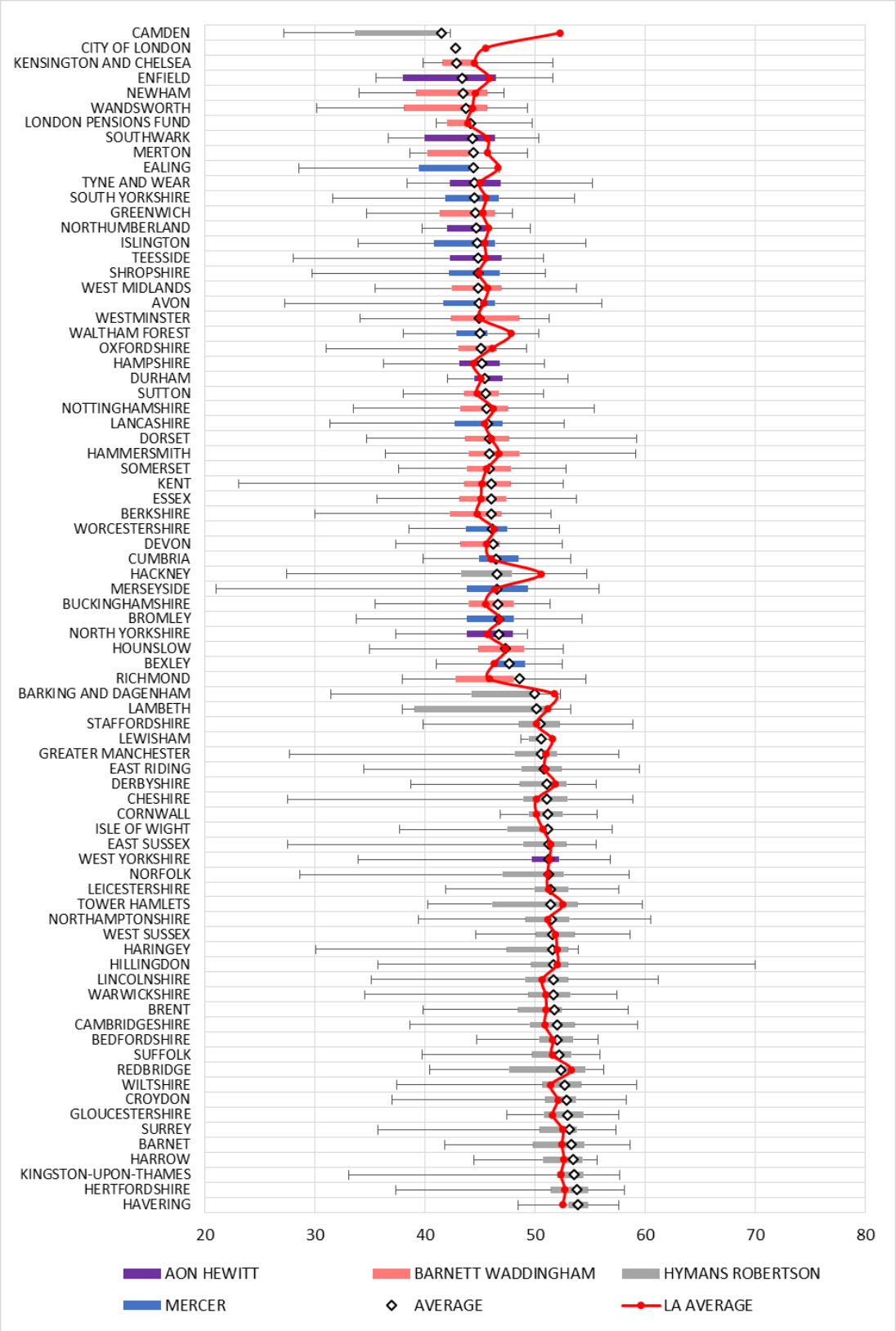
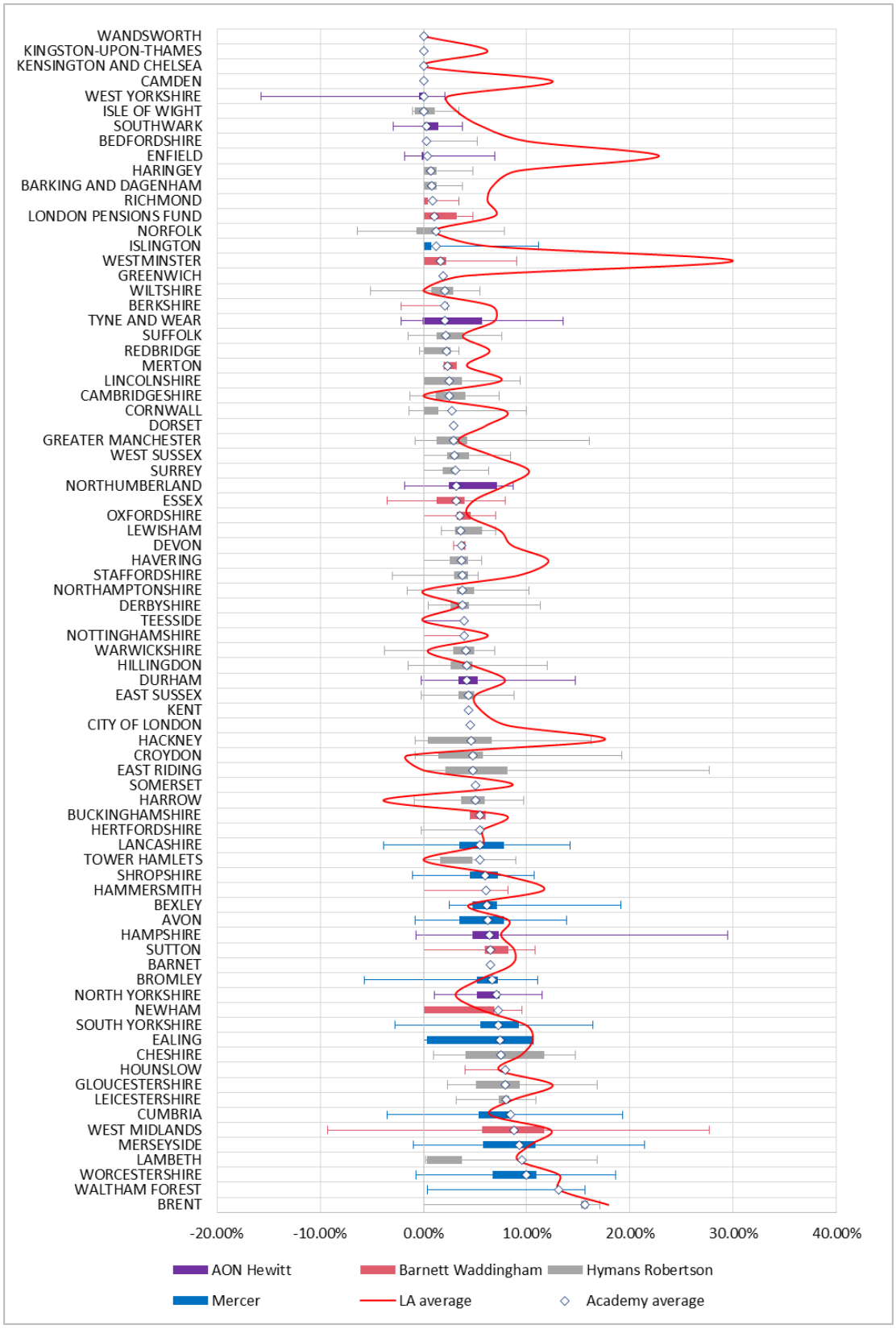


Chart 4.4 *Deficit contribution* rate by Fund



5 Funding levels

Section summary

This section compares the *funding levels* of academies with LAs as at 31 March 2016. On average, academy *funding levels* were found to be 11% lower than LAs (73% versus 84%, respectively). The data revealed significant variation, particularly for academies, in individual *funding levels* around the average.

Many factors influence the *funding level*, although the initial *funding level* will depend on the deficit allocation method used. The most commonly applied deficit allocation method is 'non-active cover'; this method targets the same total contribution rate payable by the LA school prior to conversion. Assuming a deficit exists, this method will result in lower initial *funding levels* for academies (total contribution rates may be broadly similar to LAs because payrolls, as a proportion of the liabilities, are higher for academies). Changes in market conditions can also lead to material fluctuations (positive or negative) in the initial deficit amount allocated.

5.1 *Funding levels* reported at actuarial valuations represent the ratio of the asset value to the estimated value of the liabilities. Chart 5.1 shows the average and range of academy *funding levels* within each Fund against the corresponding LA average. This chart does not reveal any particular correlation between the *funding levels* for academies and LAs.

5.2 Similar to the total contribution rate chart, there is a wide range of academy *funding levels*, both within and between Funds as at 31 March 2016 (*funding levels* will reflect different experience and assumptions used to value the liabilities). It should be noted that some of the very high academy *funding levels* relate to academies with only a handful of LGPS members.

Deficit allocation methods

5.3 Chart 5.2 is the same funding level chart as Chart 5.1, except it is colour coded according to the deficit allocation method currently applied by each Fund to establish the initial academy funding position at inception. Note however, different methods may have been previously applied, which will have influence on current *funding levels*.

5.4 The deficit allocation method determines the amount of assets (and hence deficit) attributable to an academy upon academisation. The deficit allocated, and the resulting contribution rate payable, can vary materially depending on the method applied. The different methods are summarised below:

Deficit allocation method	Number of Funds	Description
Non-active cover	50	Initial academy deficit set equal to the total deficit of the previous LA multiplied by the (academy: LA) ratio of active member liabilities. This results in the academy having the same active cover as the LA, where active cover is the funding level for the active member liabilities once available assets have first been used to fully reserve for all non-active liabilities.
Share of fund	11	The academy is allocated an initial deficit equal to the total deficit of the previous LA multiplied by the ratio of the academy's active member liabilities to the total liability of the LA. This results in the academy having the same funding level as the LA at outset.
School/LA matching	11	The deficit of the academy is calculated in order that the academy's initial deficit recovery contributions are the same as a corresponding LA school.
Proportion of deficit based on payrolls	3	The academy is allocated an initial deficit equal to the total deficit of the previous LA multiplied by the ratio of the academy's payroll to the total payroll of the LA.
Non-active cover and share of fund	2	Two Funds use either non-active cover or share of fund depending on the circumstances of the academy
N/A	2	Academies in two Funds already had identifiable assets attributed to them before academisation

5.5 The non-active cover method is the most widely currently used. The method targets the same deficit amount (in £ terms) as would have been attributable to the school pre-academisation. All else being equal, it will therefore result in the academy paying the same total contribution rate as the LA. However, it is worth noting that:

- The academy *funding level* at outset will be lower than that for the corresponding LA (assuming the LA has a deficit) due to academies only inheriting active members.
- In practice, the deficit calculated using the non-active cover method can be very sensitive to both the initial *funding level* and changes in market conditions and will therefore not necessarily result in "matching" contributions (there is a "gearing effect"). In particular, if market conditions change materially between the previous triennial valuation date (when the LA contribution rate was calculated) and the point of academisation, resulting *deficit contribution* rates can be significantly higher, or lower, than those payable by the LA. The impact of market conditions is significant for academies as the deficit inherited at outset is crystallised and is not revisited.

> The overall risk profiles for academies and LAs are fundamentally different (assuming no pooling is in place). Initially, academy liabilities will relate only to active members, whereas LA liabilities also include those in respect of pensioners and deferred members. This means that, even where academy and LA contribution rates are initially the same, they may diverge (materially) over time due to their different risk profiles.

5.6 Allocating initial deficits by reference to payroll has a similar underlying rationale as the non-active cover method in that it targets the same academy contribution rate as the LA.

5.7 The school/LA matching method is predominantly used by Mercer, and tends to have the lowest academy average funding levels. Broadly, you would expect the school/LA matching method to result in similar funding levels as the non-active cover method.

5.8 All else being equal, the share of fund method will result in a lower contribution rate being payable by the academy compared to the LA because the funding level will be the same but the deficit will be spread across the whole academy membership as they are all active members.

5.9 Table 5.1 shows the average academy funding levels and contribution rates for the various deficit allocation methods. Note that the sample size is quite small for share of fund and school/LA matching.

Table 5.1 Non-active cover method versus share of fund

Deficit allocation method	Average academy funding level	Average academy contribution rate
Non-active cover	75%	22%
Share of fund	96%	19%
School/LA matching	56%	23%

5.10 Chart 5.3 shows the range of academy and LA deficits as a proportion of payroll. This provides some further context to the *funding levels*. A lower deficit/payroll ratio tends to indicate that lower deficit contributions are required (when expressed as a percentage of pay). Note the ratio for academies is generally lower than LAs which is consistent with lower academy deficit contributions.

Chart 5.1 Funding levels

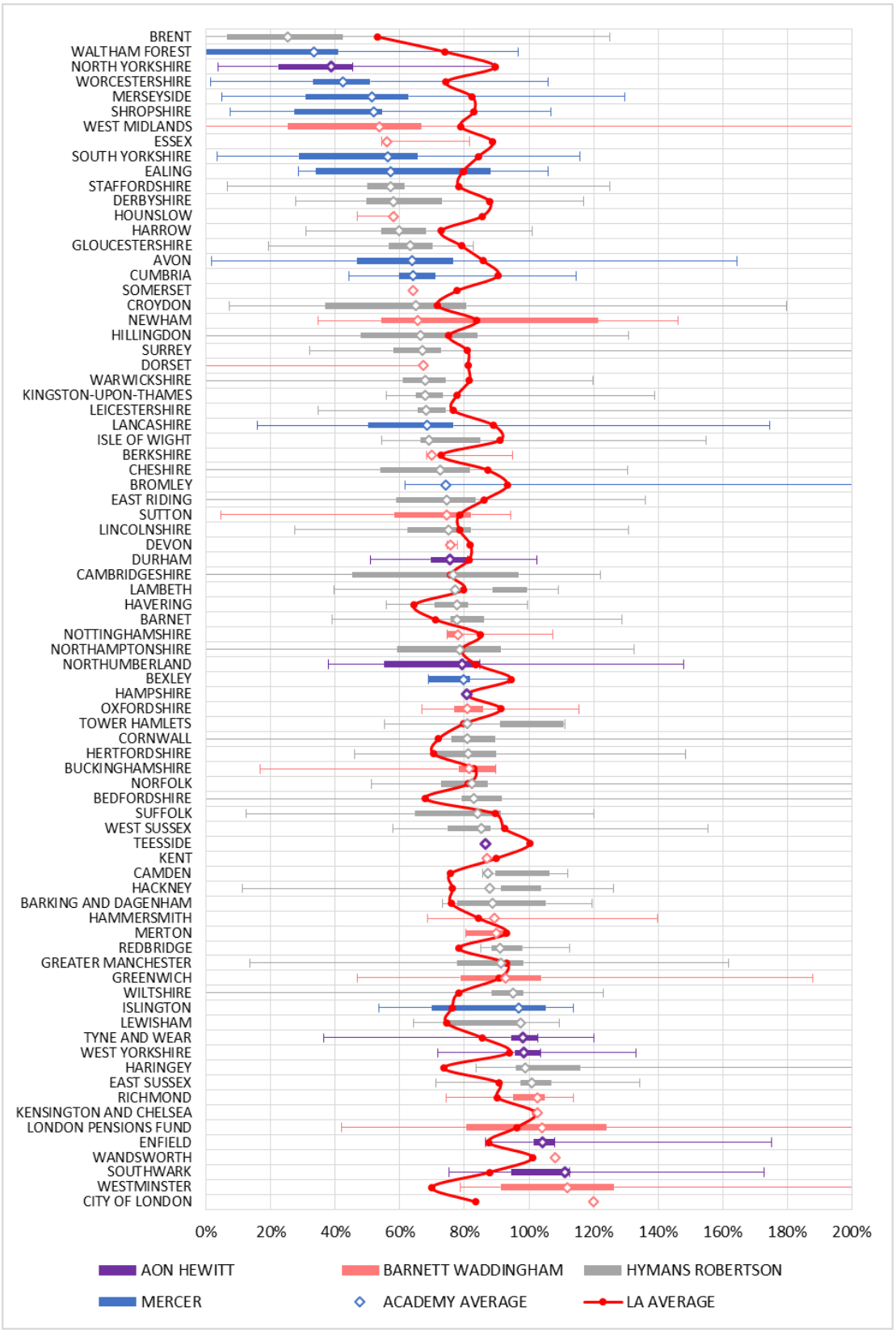


Chart 5.2 Funding levels (deficit allocation method)

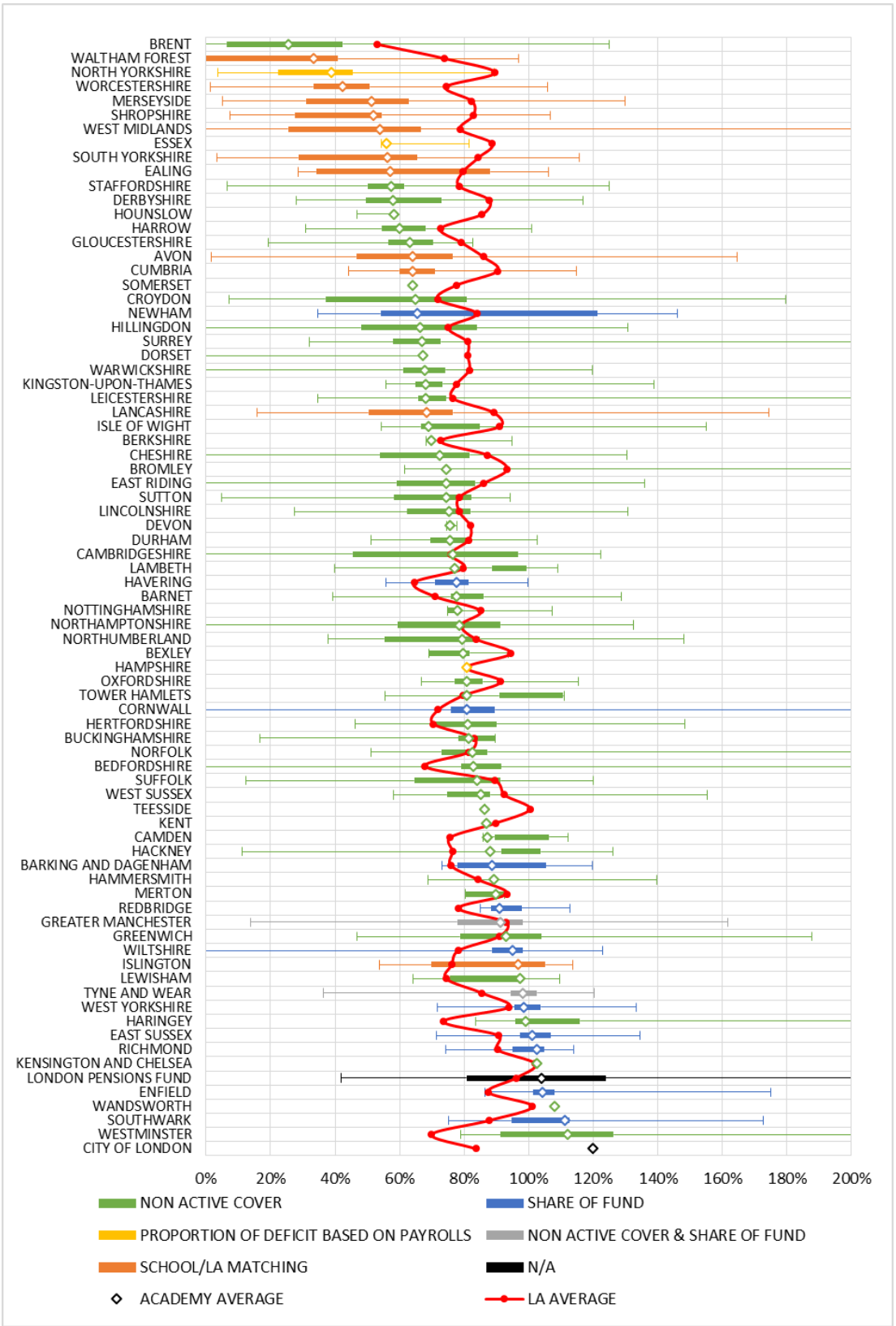
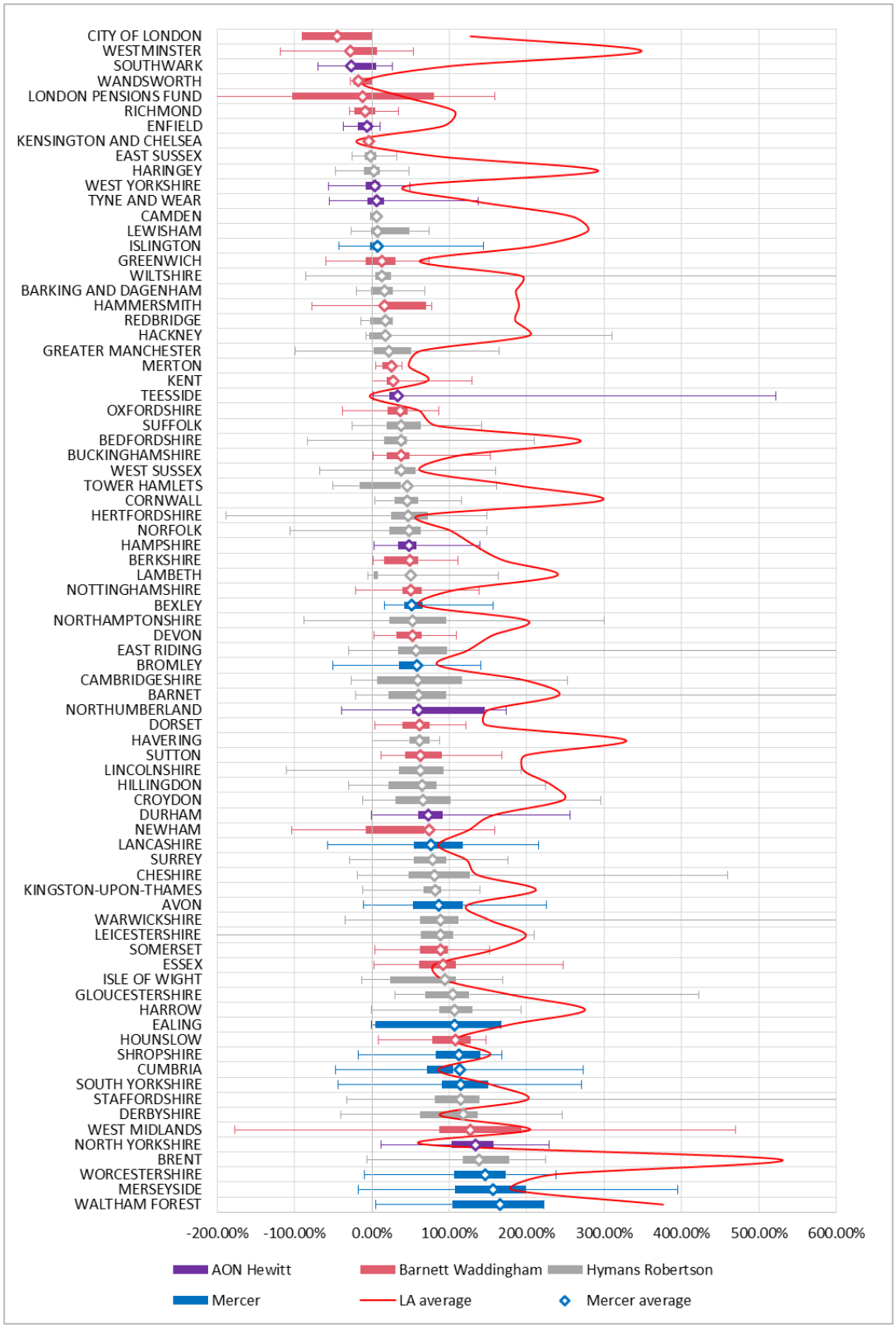


Chart 5.3 Deficit as proportion of payroll



6 Funding approach

Section summary

This section focuses on the funding approach adopted for academies and LAs at the 2016 valuations. Our analysis indicates that:

> Funding assumptions – evidence suggests that, on the whole, funding assumptions adopted for academies were consistent with those adopted for LAs

> *Deficit recovery periods* – around half of Funds align recovery periods for academies and LAs (usually 20 years). Otherwise, some Funds adopt shorter, fixed periods for academies (for example, 15 years rather than the 20 year LA period), and others adopt variable shorter period for academies, often as a way to target a certain contribution rate

This suggests that the DfE guarantee is generally being well recognised in the funding approaches used for the 2016 valuations.

6.1 Each LGPS Fund has its own individual funding approach (e.g. actuarial valuation assumptions, *deficit recovery* periods) which will reflect its specific circumstances. We have reviewed the 2016 valuation data provided to understand how these different approaches affect academy contribution rates and whether academies are treated differently to LAs for valuation purposes.

Deficit recovery periods

6.2 A *deficit recovery period* is the number of years over which an employer pays additional contributions (above the *standard contribution rate*) in order to eliminate the deficit calculated at an actuarial valuation. A shorter period will result in higher *deficit contributions* in the short-term, and vice versa. Chart 6.1 shows the range of *deficit recovery periods* for academies and LAs across the Funds. In setting a *deficit recovery period*, the strength of the employer covenant will be an important consideration (a shorter recovery period will often be adopted for those employers viewed as having a weaker covenant).

6.3 Our analysis reveals that around half of Funds use the *deficit recovery period* for the LA in setting contribution rates for academies within their Fund (which would indicate that academies, and the DfE guarantee, are perceived as having employer covenants of broadly similar strength to LAs). Funds in the bottom half of the Chart generally use the same *deficit recovery period* as the LA (typically 20 years). Some Funds illustrated in the top half of the Chart apply a much shorter recovery period for academy employers. We understand that some Funds use a range of academy *deficit recovery periods* in order to target that all academies pay the same (or similar) total contribution rate to the LA.

6.4 When assessing the suitability of a given *deficit recovery period*, employer affordability of the resulting *deficit contributions* is a principal consideration. An employer may choose a shorter period, perhaps because they only have a small deficit or the resulting contribution rate is affordable and they wish to pay the deficit off sooner rather than later. The level of contributions is mainly a timing point, in that the more you pay now the less you pay later (and vice-versa).

6.5 It is worth noting that academies whose *deficit recovery periods* were extended (to align with the period used for the LA) at the 2016 valuation will be paying a lower total contribution rate in future because higher historic *deficit contributions* will have led to a higher *funding level* now than would otherwise have been the case.

Funding assumptions

6.6 The most important assumption at a valuation is usually the *discount rate* (which is equivalent to the return which is expected to be earned on Fund assets in future). Lower *discount rates* will lead to higher contribution rates and deficits in the short term (and vice versa). The actual cost will depend on Fund experience, including actual investment returns, over the long term.

6.7 Chart 6.2 shows the correlation between average net discount rate[8] and average ongoing contribution rate for academies. This illustrates the range of net discount rates used and ongoing contribution rates charged across England. Differences in net *discount rates* will contribute to (potentially significant) variations in contribution rates payable across Funds. Broadly a 1% reduction in net discount rate might lead to around a 5% increase in SCR expressed as a percentage of payroll.

6.8 As expected, the higher the net discount rate the lower the ongoing contribution rate. This is because higher investment returns are anticipated in the future so less money is required to be set aside now in order to meet future benefit payments. Different Funds tend to use different discount rate assumptions depending on the investment strategy of each Fund, views on expected future returns, the risk appetite of the Fund and views on sponsor covenant.

6.9 Within Funds there is little variation in financial assumptions used between LAs and academies:

- 2 of the 79 Funds used lower discount rates for academies compared to LAs. One Fund used 0.1% a year lower rates for academies and another 0.2% a year lower
- 2 of the 79 Funds used higher inflation assumptions for academies compared to LAs (both assuming 0.1% a year higher inflation for academies)
- 1 of the Funds used a higher earnings assumptions for academies compared to LAs (between 0.5% and 0.7% a year higher earnings growth for academies)

6.10 The evidence suggests the DfE guarantee is being well recognised in the 2016 valuation funding assumptions, and there are only minor differences where assumptions vary. However, it is recognised that this reflects the position as at 31 March 2016 and it is possible that historic differences between LA and academy funding assumptions (if any) might have affected contribution rates paid by academies.

[8] The *discount rate* net of assumed CPI inflation is compared as this is the most relevant comparison for this purpose.

Chart 6.1 Deficit recovery period

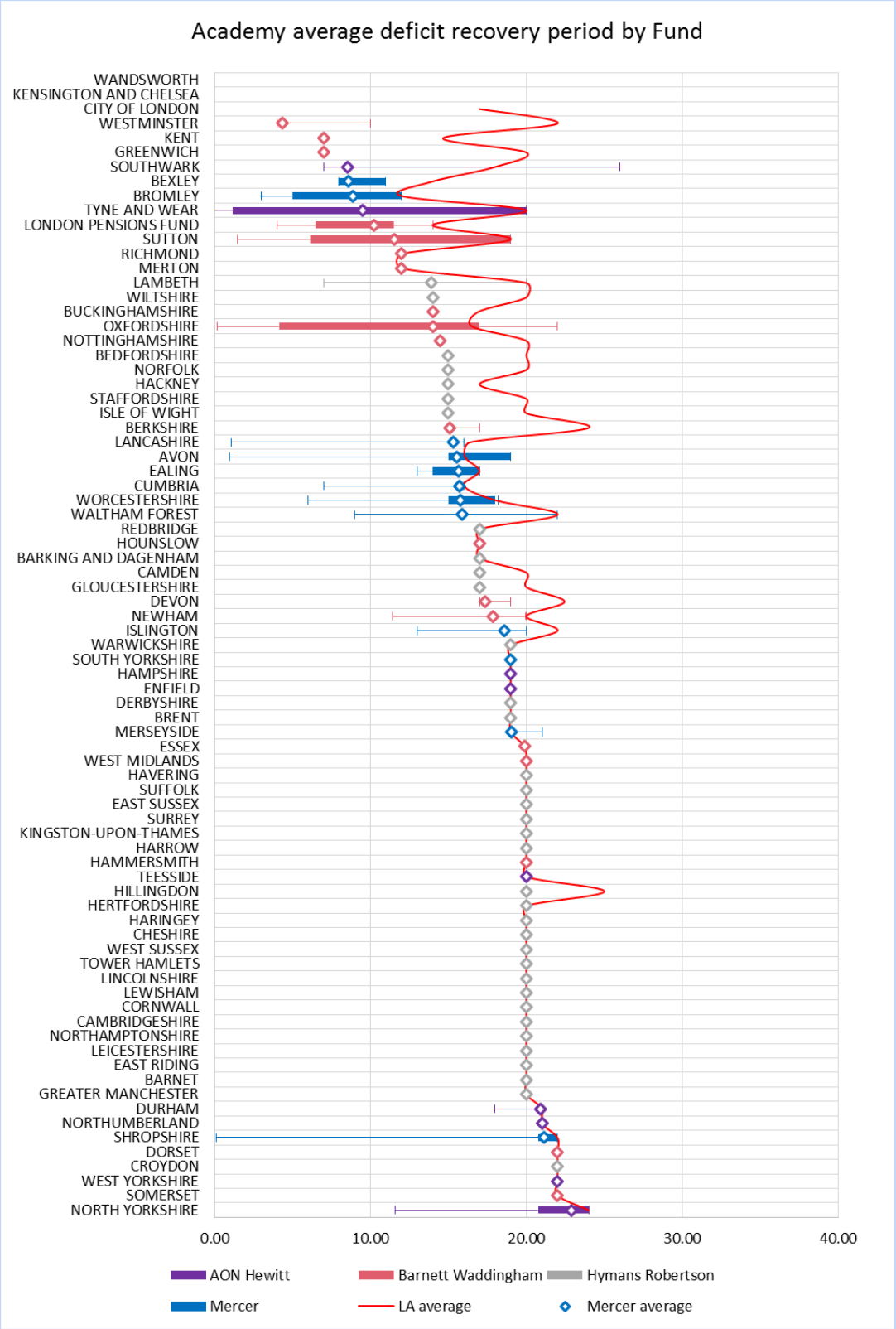
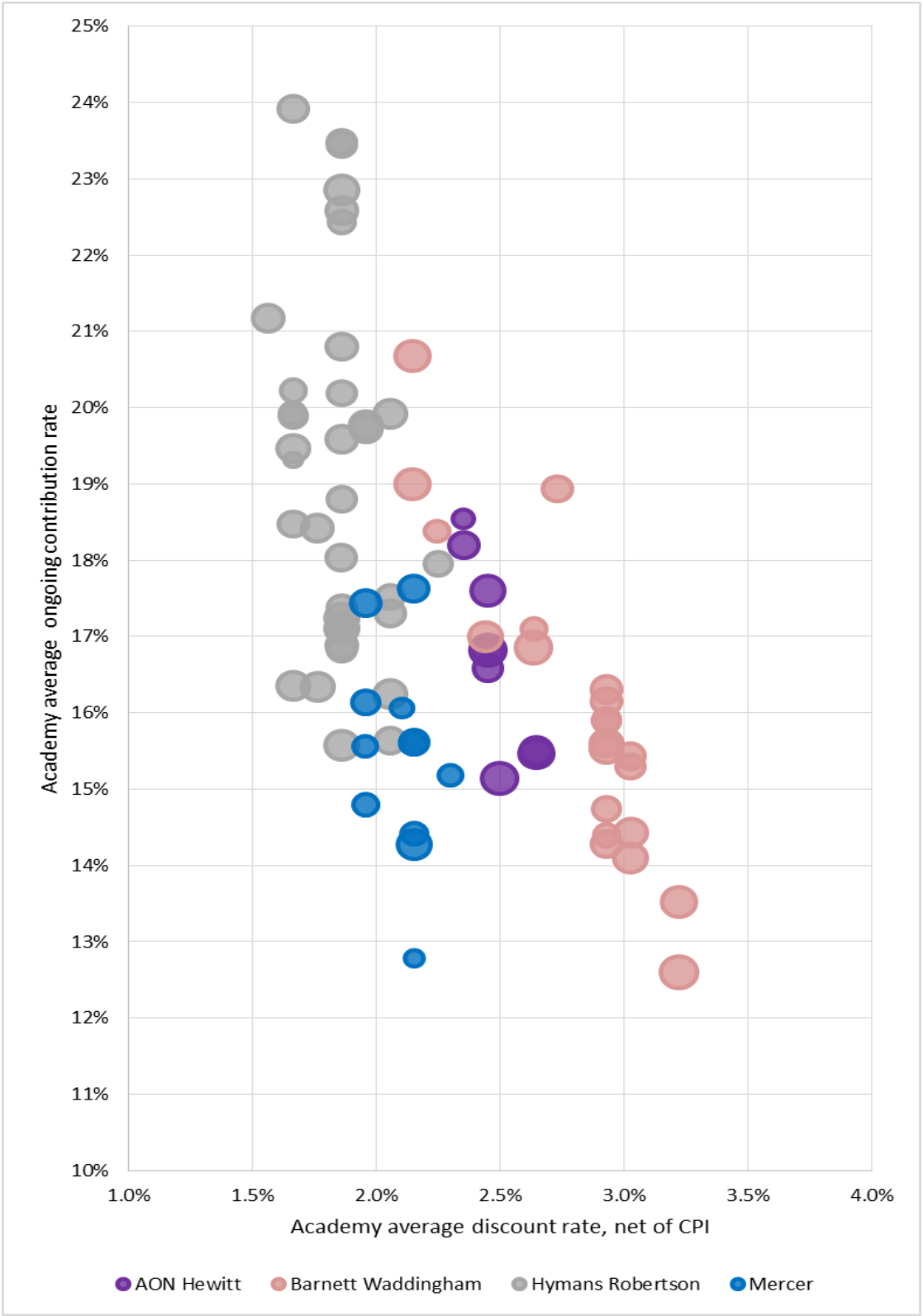


Chart 6.2 academy average ongoing contribution rate against net discount rate (bubble size represents average funding level of academies)



7 Academy cashflows

Section summary

This section includes analysis on the level of cashflows associated with academies. The net cashflow position is an important consideration when setting investment strategy and significant short-term changes in the position may necessitate a review of the investment strategy.

Our analysis suggests that removing academy cashflows would result in the net annual cashflow position reducing by around 0.5% of total assets, on average. The impact varies between individual Funds (materially in some cases).

7.1 MHCLG and DfE requested that GAD review the level of cashflows relating to academies in the LGPS. The cashflow position is a relevant consideration when setting an investment strategy, and any material changes in the cashflow position may necessitate a review of the investment strategy.

7.2 Chart 7.1 shows the proportion of the Fund payroll which relates to academies for each of the 79 Funds. As we only received academy and LA data for this exercise and not at an overall Fund level, we have used the total Fund payrolls from the 2013 valuations as provided to GAD for the purposes of its Section 13 'dry run' exercise (this was the latest data available when the analysis was being produced). If we were to use the corresponding Fund payroll figures from the 2016 valuation, some figures may vary slightly, however it is reasonable to expect the overall picture to be broadly similar.

7.3 Overall, the combined academy payroll is around 10% of the total across all Funds, however this percentage varies materially between different Funds. For example, in some Funds it is as low as 1% whilst in others it can be as high as 30% or 40%.

7.4 Chart 7.2 shows how the net cashflow position (as a proportion of total Fund assets) would change if academies were removed from each Fund. The net cashflow figures are taken from SF3 2015-16 data published by MHCLG and they include investment income. A Fund with a negative cashflow position, to the left of the vertical line, is likely to need to realise (or sell) assets to meet their outgo. The funding risk relates to the possibility of being forced to sell material assets at a time when market conditions are unfavourable.

7.5 The longer the horizontal line for a Fund, the greater the impact removing academies would have on the net cashflow position. In this chart, if the horizontal line bisects the vertical 0% line then removing academies from the Fund would lead to its net cashflow going from positive to negative.

7.6 It should be recognised that the net cashflow position can fluctuate (possibly materially) over time so the figures in the charts below should be viewed in that context. Further, many pension schemes will become increasingly cashflow negative as they mature, and future changes will need to be taken into account in the investment strategy.

Chart 7.1 Proportion of (2013) Fund payroll which relates to academies

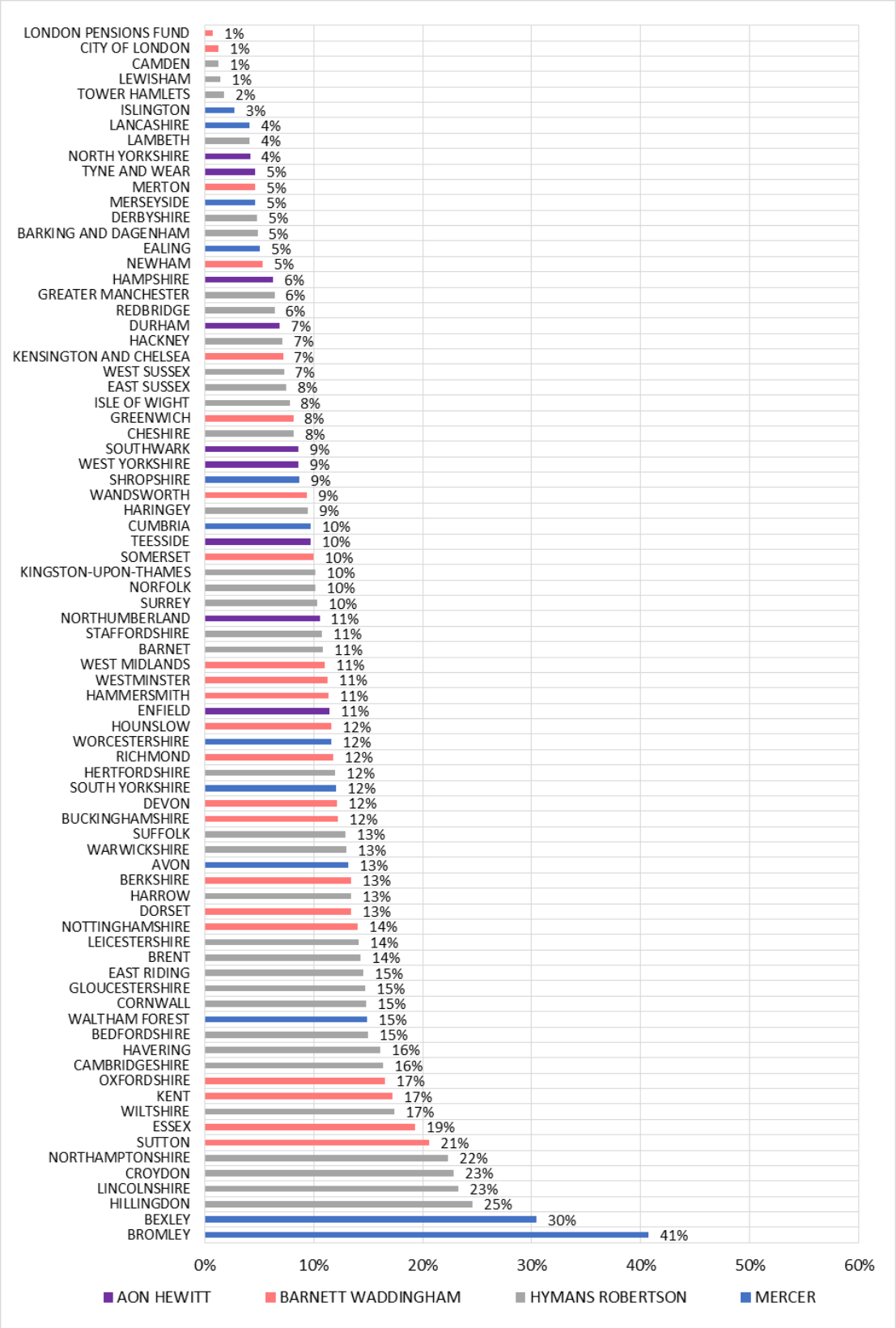
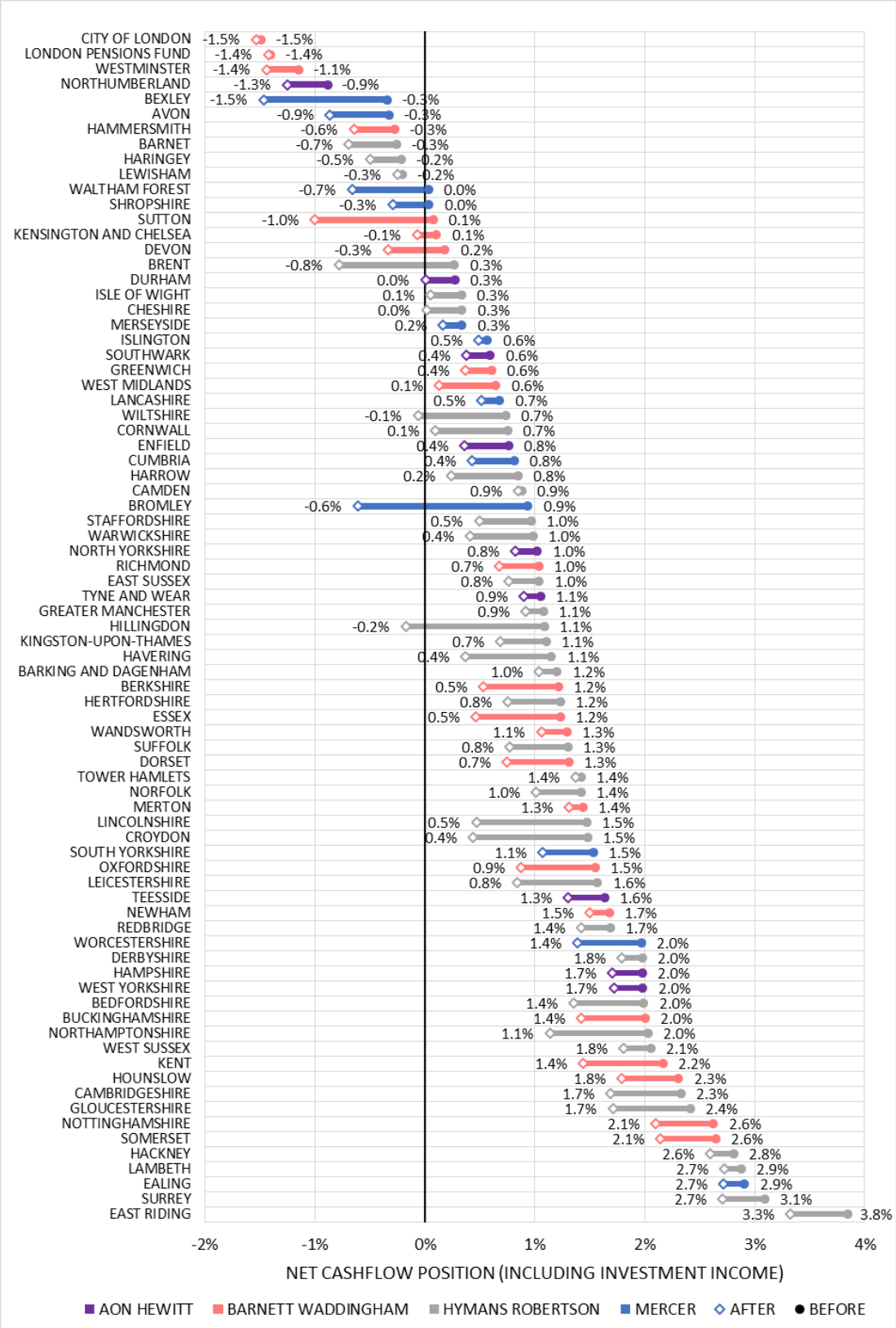


Chart 7.2 Change in net cashflow position after removing academies



Appendix A: Glossary

A.1 ***Deficit contributions*** – Where an actuarial funding valuation shows that the Fund's assets are less than required to cover the expected cost of members' benefits which have accrued up to the valuation date (so the Fund is in 'deficit'), additional *deficit contributions* will be required from the employer to make up the shortfall. *Deficit contributions* are payable for a fixed term, known as the ***recovery period***, after which the deficit would be expected to have been eliminated.

A.2 ***Discount rate*** – The rate at which a defined benefit pension scheme's expected future benefit expenditure is discounted for the purpose of an actuarial valuation. That is, to convert a stream of expected future benefit cash flows to a current capitalised value. It can be thought of as corresponding to an assumed rate of return on assets. A higher discount rate (or assumed rate of return) means that the scheme's assets are expected to generate higher investment returns, and therefore the scheme needs to hold less assets now in order to meet its liabilities, its *funding level* is higher, and its *standard contribution rate* is lower.

A.3 ***Funding level*** – The ratio of the value of the pension scheme's assets to the value of its accrued liabilities. A funding level of 100% means that the pension scheme is deemed to be 'fully funded'; in other words, its assets are expected to be sufficient to meet the expected cost of the benefits accrued to the valuation date, on the basis of the assumptions adopted for the valuation. A 'fully-funded' scheme is not guaranteed to be able to meet its future liabilities; it is only an expectation based on the assumptions adopted.

A.4 ***Liabilities –*** The present value of a pension scheme's past service benefit commitments (future benefit cashflows are discounted using a *discount rate*).

A.5 ***Standard contribution rate (SCR)*** – The level of contributions required to meet the expected cost of the additional pension to which active members will be entitled in respect of service in the relevant period. The SCR is assessed at full actuarial funding valuations.