

Investment Consultants Market Investigation

Appendices and Glossary

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12 December 2018

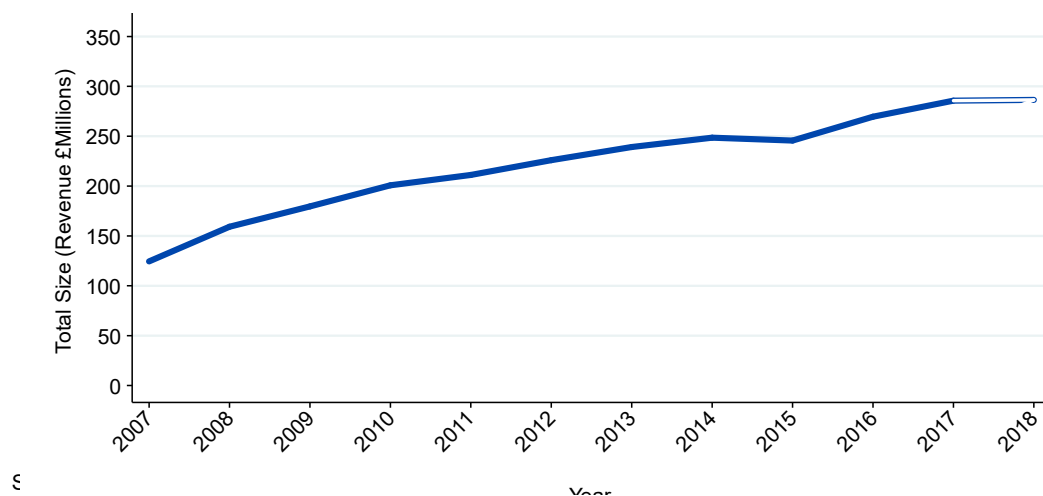
Appendix A1: Competitive Landscape

1. In this Appendix we set out supplementary analysis in relation to our analysis and conclusions in chapter 4 of the report.
2. In particular, we present our analysis of the size of the investment consultancy market through time, and our analysis of the size and concentration within individual candidate segments of the investment consultancy and fiduciary management markets. We also set out our views on the implications of joint purchasing with actuarial and administration services for market structure. We discuss each aspect in turn.

Evolution of the size of the investment consultancy market

3. As set out in chapter 4, we have calculated the size of the investment consultancy market, based on the revenues submitted to us by Parties and in nominal revenue terms, over the last ten years. This analysis is shown in Figure A1.1 below.

Figure A1.1: Total size of the market for investment consultancy services to pension schemes through time

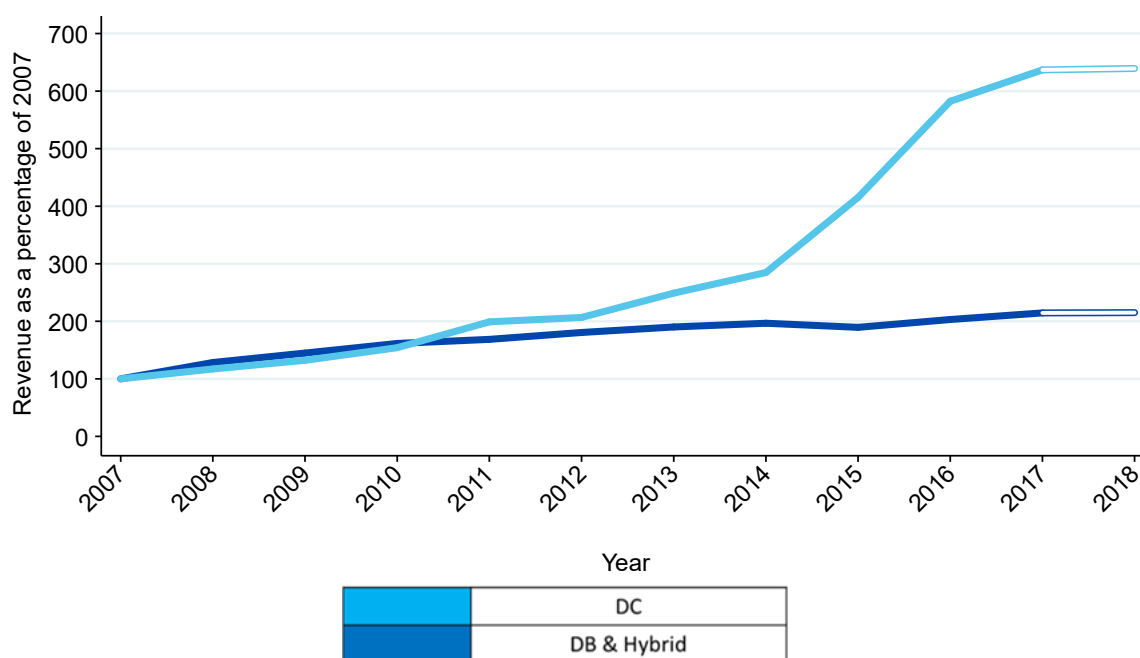


4. Figure A1.1 shows that the investment consultancy market has been growing through time. Over the 11 years for which we collected data, it has

more than doubled in size.¹ Our 2018 revenue estimate² is similar to 2017 revenue.

5. We understand that DC has been an area of particular growth as members are increasingly enrolled in schemes other than DB schemes. We therefore examined how total revenue for DB and Hybrid schemes on the one hand, and DC schemes on the other hand, have increased relative to their sizes in 2007. The vertical axis shows the percentage of that segment's size compared to its size in 2007.

Figure A1.2: Size of the 'DB/Hybrid' and 'DC' segments of the market for investment consultancy services to pension schemes through time



Source: CMA Analysis, Parties' Data

6. Figure A1.2 shows that the DB segment doubled in size over the 11-year period. Given the market is mostly comprised of DB pensions, it is unsurprising that this figure is around the same as the figure for the whole market.
7. Figure A1.2 also shows that there has been much more significant growth in DC schemes over this period, and a significant uptick in the last few years (possibly consistent with the roll out of autoenrollment), although the DC

¹ We have not collected data from any firm which is not currently active, which may understate historical shares if any firms had exited. However, we are not aware of significant market exit over this period. In the timeseries data, we are also unable to apply an estimate of the percentage of the market not covered by our data gathering exercise. We have this data only for our static analysis. As a result, the total market size here is likely to be a lower bound.

² 2018 estimates are calculated as double the values collected for data of Q1 & Q2 of 2018.

segment remains comparatively small in absolute terms at present.³ Our estimates for 2018 shows similar figures to 2017.

8. We undertook similar analysis for the fiduciary management market; given the greater importance of dynamics in the fiduciary management market to this investigation, this analysis is presented in paragraph 4.99 rather than here in the appendix.

Segmentation of the investment consultancy market

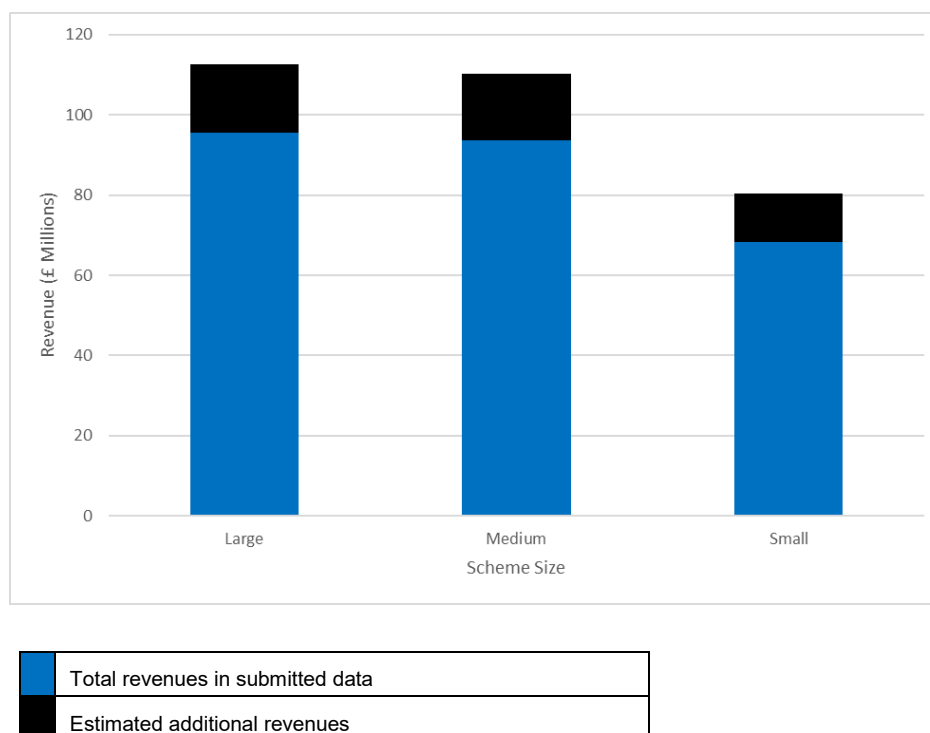
9. As set out under market definition in chapter 4, we have not found it necessary to define separate markets by customer type, nor have we found it necessary to conclude on precise segmentation within the investment consultancy market.
10. Nevertheless, we recognise that competitive conditions may vary somewhat along particular scheme characteristics and that our competitive assessment should take this fact into account. We have therefore conducted analysis of concentration within particular segments along scheme size and type. The boundaries of these segments are considered indicative-only.

By scheme size

11. In line with approaches we have seen in the industry, for the purposes of this exercise we have used the following indicative thresholds to assess variation in concentration by scheme size.
 - (a) Small: schemes with assets of less than £100 million;
 - (b) Medium: schemes with assets of between £100 million and £1 billion, and
 - (c) Large: schemes with assets greater than £1 billion.
12. We show the sizes of each of these segments below in revenue terms. The blue portions of each bar represent the revenues firms have confirmed to us in our data gathering exercise. The black portion represents our estimate of the size of that part of the segment we did not cover in this exercise, as explained in the section on analysis of market structure.

³ Both the segment for hybrid schemes, as well as the total revenues provided to other institutional investors have grown significantly over this period. However, due to concerns about the categorisation of our data in the former and the coverage of the market in the latter, we do not display this growth on the below chart or place weight on this finding.

Figure A1.3: Total revenues in the segments for ‘large’, ‘medium’ and ‘small’ clients within the market for investment consultancy services to pension schemes



Source: CMA Analysis, Parties’ Data.

13. Figure A1.3 shows that each segment is of comparable size. That is, investment consultants in aggregate gain roughly as much revenue from ‘large’ schemes as they do from ‘medium’ schemes, and almost as much from ‘small’ schemes.
14. We have also calculated the size of each segment in terms of assets under advice and number of clients. These statistics are presented below.

Table A1.1: AUA and Number of Clients in investment consultancy pensions market, segmented by scheme size

<i>Scheme Size</i>	<i>AUA*</i>	<i>Number of Clients</i>
Small	74	2,802
Medium	263	1,022
Large	2,025	470

Source: CMA Analysis, Parties’ Data.

* Note: Figures rounded to the nearest whole number

15. When split by assets under advice, ‘large’ clients are found to account for almost the whole market. When split by number of clients, ‘small’ clients are found to account for most of the market. This is because there are a very small number of very large clients, and a very large number of very small clients: even though there are about six times fewer ‘large’ clients, in total they account for 27 times the AUA of small clients (although less than 1.5

times the revenue).⁴ Using revenue as a market shares metric avoids us assigning too much weight to schemes of any given size when calculating shares.

16. We have calculated shares of supply across each of these client types (using revenue). The following chart shows shares of supply for the largest five providers in each segment, all other providers are aggregated together.⁵

Figure A1.4: Shares of supply in the segments for 'large', 'medium' and 'small' clients within the market for investment consultancy services to pension schemes

[✂]

Source: CMA Analysis, Parties' Data. Parties listed alphabetically within groups.

17. Figure A1.4 shows that the combined shares of supply for the largest three providers of investment consultancy services (Aon, Mercer and WTW) increase with scheme size. Specifically, their combined shares are below 30% for 'small' schemes, 45% for 'medium' schemes and 56% for 'large' schemes.⁶ In each segment these three investment consultants are the largest three players. The fourth and fifth largest firms remain of notable size.
18. The five-firm concentration ratio (ie the combined share of supply of the largest five firms, shown as that percentage of each bar which is not coloured grey or black in the chart above) is around 20 percentage points higher for large schemes than for small schemes.⁷
19. Although the segment for supply to smaller pension schemes is particularly unconcentrated, the figures above demonstrate that concentration is higher for the largest pension schemes.
20. However, the characteristics and purchasing behaviours of these large schemes may mitigate the impact of the greater concentration faced by these customers. For example, attendees of our pension in-house investment staff roundtable considered that larger schemes are less dependent on investment consultants because they are able to do more

⁴ This may be because large clients undertake a lot of small project work, use multiple investment consultants (and therefore may be double counted) or because the market is simply very skewed by measures of AUM and Number of Clients.

⁵ If a particular firm is one of the largest five firms in the large client segment but is, say, seventh largest in the medium client segment, that firm will appear with a coloured portion of the large client stack but will be part of the grey 'Other (known)' portion of the medium client stack. We have pseudonymised the firm identities: due to the method used, firms which are not in the chart will appear in the key.

⁶ These are lower bounds, the corresponding upper bounds are 32%, 49% and 60%.

⁷ The chart is ordered by the share of each firm in the market as a whole.

work in-house, particularly that of a more routine nature, and pick and choose different advisors for specific bits of advice.⁸

By scheme type

21. We have also broken the market down into segments based on scheme type. The revenue received from advice to DB pensions represents the majority of the market. DC pensions together appear to constitute a very low fraction (about 10%) of the total market.⁹ This remains true when we consider the number of DC clients and the value of DC assets relative to those for DB and Hybrid schemes.

22. Looking within these segments, we have calculated shares of supply to indicate whether clients of particular types are likely to face greater concentration than the average for the market overall. We present the shares of the top five providers in each segment in Figure A1.5 below.

Figure A1.5: Shares of supply in the segments for 'DB/Hybrid' and 'DC' clients within the market for investment consultancy services to pension schemes

[✂]

Source: CMA Analysis, Parties' Data.

23. The chart shows that the largest five firms in each segment make up over 60% of each segment. Concentration in the DB pension segment looks very similar to concentration in the market as a whole: this is unsurprising because over 80% of the market is DB pensions.

24. Concentration in the DC segment appears to be higher: whilst the five-firm concentration ratio for DC schemes is comparable, the combined shares of Aon, Mercer and WTW is around ten percentage points higher in the DC segment.

25. Six of the next seven largest providers have lower shares in DC compared to DB.¹⁰ The tail of smaller providers outside of the largest ten also have a smaller share in DC than in DB, however the lower share of midsized and smaller competitors is not necessarily a problem. The DC market is smaller in absolute terms than DB and smaller markets support fewer firms.

⁸ [Summary of discussion with pension scheme in house investment staff: 16 May 2018, paragraph 5.](#)

⁹ We note that we have relied on investment consultants' own classification of schemes between types. If investment consultants advise mainly on the DB portion of Hybrid schemes, it may lead investment consultants to have categorised them mainly as DB schemes. We have therefore aggregated together DB and Hybrid schemes. This is consistent with practice sometimes taken in this industry. Note that if some of these schemes are actually DC schemes, this would lead us to understate the size of the DC market.

¹⁰ share in terms of total market revenue.

Differentiation at service level

26. Investment consultancy services usually include a combination of discrete elements, such as strategic asset allocation advice, liability hedging or manager recommendations.
27. For schemes which require particular services such as liability hedging, their options for their main investment consultant might be constrained to those providers which offer that service. In practice however, almost all investment consultants from which we obtained service level data offered advice on the full range of services.
28. We considered whether the evidence showed only a small subset of these providers could provide high quality, highly complex, or highly cost-efficient advice, such that differentiation between providers would systematically constrain trustees' choices. Responses stated that although firms vary in their resourcing and abilities to conduct either very complex analysis or very cost-effective analysis, there remain a significant number of options for clients seeking advice of each type.¹¹ Further, there are many ways in which schemes' demands differ, such that the suppliers of investment consultancy services cannot be divided in any meaningful way.
29. Even if a client were forced to choose a particular firm due to their strength in one individual service offering, we consider that they would not necessarily have to use that same firm for all services. Some customers will contract for 'ad-hoc' project work from another investment consultant focussing on one of these services.¹² Bfinance told us that another form which multiple consultant usage can take is for schemes to use a roster of several advisers.¹³
30. In practice however, we note that most clients of all investment consultants purchase a full range of services from that main investment consultant. The [CMA survey](#) shows that at least 70% of schemes purchase strategic asset allocation, asset manager selection, reporting and operational services and advice on setting scheme objectives from their main investment consultancy provider. At least 60% also purchase monitoring and de-risking services,

¹¹ Responses to the Market Information Request.

¹² Although some investment consultants told us that ad-hoc work for non-retained clients makes up less than 15% of their business, some firms told us that a relatively high proportion of their work for retained clients might be treated as project work. For example, [X].

¹³ [Bfinance's response to the Competitive Landscape Working Paper](#), p2.

design of liability hedging and dynamic asset allocation from their main investment consultant.^{14,15}

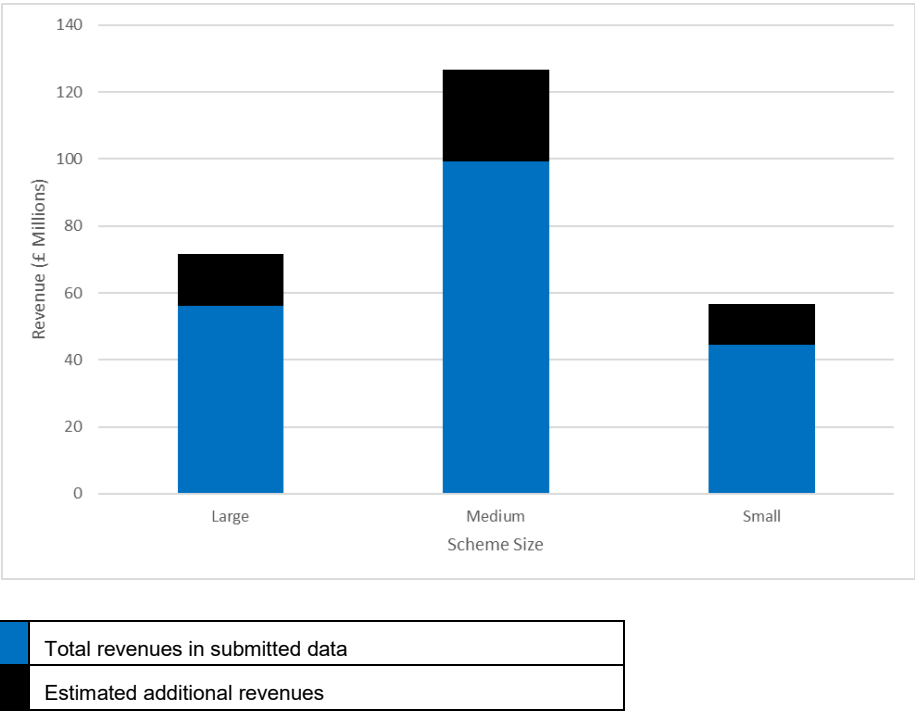
Segmentation of the fiduciary management market

31. As we did in our assessment of the market for investment consultancy services to pension schemes, we have conducted some analysis at segment level.

By scheme size

32. We have segmented the market by scheme size. We present the total size of each segment in the bar chart below, again dividing the market into ‘large’, ‘medium’ and ‘small’ schemes.

Figure A1.6: Total revenues in the segments for ‘large’, ‘medium’ and ‘small’ clients within the market for fiduciary management services to pension schemes



Source: CMA Analysis, Parties' Data

33. Figure A1.6 shows that the segment for ‘medium’ size schemes is larger than the segment for ‘large’ and ‘small’ schemes.

¹⁴ CMA survey.

¹⁵ Whilst schemes may use multiple consultants for these services, this does not undermine the point that most schemes appear able to purchase a full range of services from their main provider, implying that there is not sufficient differentiation in the nature of the service level offerings of investment consultants to require segmentation of the market by services.

34. As a sensitivity, we have also calculated the size of each segment as measured by AUM and number of clients. We set this information out in Table A1.2 below.

Table A1.2: AUM and number of clients in fiduciary management pensions market, segmented by scheme size

Scheme Size	AUM £bn	Number of Clients
Small	40.6	738
Medium	45.8	213
Large	75.4	29

Source: CMA Analysis, Parties' Data

35. Table A1.2 shows that only 29 'large' clients use fiduciary management, as compared with over 700 'small' clients. Yet these 29 clients account for a greater value of AUM and revenue than investment consultants obtain from the 'small' clients. So, as for investment consultancy, a very small number of clients account for a very large share of assets in the market. As such, we consider that revenue is the best metric to use for market shares.
36. We have calculated shares of supply across each of these client size bands. This analysis is presented using a stacked bar chart in Figure A1.7 below. We show the shares of the largest five firms in each segment, representing the remainder in the grey portion of the bars, and the estimate of the market size not covered in the black portion of the bars.

Figure A1.7: Shares of supply of the top five providers in the segments for 'large', 'medium' and 'small' clients within the market for fiduciary management services to pension schemes

[✂]

Source: CMA Analysis, Parties' Data. Parties listed alphabetically within groups.

37. Figure A1.7 shows that the largest five suppliers across the market as a whole vary across segments, although [✂] and [✂] are amongst the largest five providers in each segment. [✂] is not amongst the largest five providers for 'large' clients.
38. The largest five firms in each segment make up around 70% of revenues in each segment. The segment for large schemes appears the most concentrated, with the three biggest firms accounting for over half the market. As set out above however, we consider that larger schemes have characteristics which mitigate against higher concentration. The segment for small and medium size schemes appears to be less concentrated.

By scheme type

39. Fiduciary management revenues were reported to us as being overwhelmingly comprised of DB schemes. Whilst DC schemes do purchase fiduciary management services, the form which this takes can vary. We have not found it necessary to provide specific figures at scheme type level for fiduciary management.

Differentiation at service level

40. In contrast to advisory work, we understand that clients do not purchase fiduciary management services in a project- or ad-hoc based setting. Consequently, the division of services is less meaningful than in advisory work, where one may in theory be purchased in isolation from the others.¹⁶
41. Further, although some fiduciary managers are specialists in particular aspects of fiduciary management, for example dynamic liability hedging, we understand that almost all fiduciary managers can offer a full range of services. Therefore, we consider that the concentration faced by customers in need of aspects of fiduciary management such as hedging or partial/bespoke mandates would not be materially higher than in the market for fiduciary management services to pension schemes as a whole. As a result, we have not conducted analysis at this level.

Joint purchasing with actuarial and administration services

42. Stakeholders told us that investment consulting services are distinct from services such as actuarial advice and administration services. For example:
- (a) WTW told us that ‘the formal separation of actuarial and investment appointments was recommended in the Myners Report of 2001 and has been considered best practice since then’.¹⁷
 - (b) Capita told us that ‘there is a clear boundary between actuarial and investment [advice] services, as our investment advisors are authorised by the FCA and the actuaries are not’.¹⁸

¹⁶ DB customers generally purchase each service within fiduciary management. We understand DC customers likewise generally purchase several services, although they are less likely to buy dynamic liability hedging or dynamic asset allocation.

¹⁷ WTW’s response to the market information request, question 5c.

¹⁸ Capita’s response to the market information request, question 5c.

43. Nevertheless, several firms told us that there were complementarities between the services described above and other services which their clients may purchase. For example:
- (a) WTW told us that although there were a relatively small number of areas where actuarial services and investment consultant services converged, in some cases actuarial and investment services are complementary inputs.¹⁹
 - (b) Aon told us that ‘Most well-run pension schemes take Integrated Risk Management (IRM) seriously. IRM is the consideration of the sponsor covenant, the actuarial valuation and the investment strategy holistically. Large portions of the IRM can be and is done either by an actuary or by an investment adviser.’²⁰
44. The areas where actuarial techniques and investment consulting may converge, include asset liability modelling and construction of Liability Driven Investment portfolios, as well as advice on integrated risk management frameworks considering funding arrangements, investment strategy and the sponsor’s covenant.
45. Several firms told us that it is immaterial whether they provide the actuarial services or the actuary is employed by a different firm; in each case they will work with the actuaries to provide joined-up services.
- (a) JLT told us that a number of their larger clients use other actuarial firms. JLT told us that they consider a joined-up approach integral, and so they would look to set up monthly calls between themselves and the actuary, just as they do with clients for whom JLT provides the actuarial services.²¹
 - (b) XPS told us that ‘we have seen external actuaries advise on appropriate return targets and levels of risk.’²²
 - (c) In the context of actuarial and administration advice, Mercer told us that ‘The client may appoint a number of advisors to assist them in managing their pension fund. Mercer is often expected to work with professionals from other companies and firms’.²³

¹⁹ WTW’s response to the market information request, question 5c.

²⁰ Aon’s response to the market information request, question 5c.

²¹ JLT’s response to the market information request, question 3.

²² Xafinity’s response to the market information request, question 5c.

²³ [Mercer hearing summary](#), paragraph 22.

46. However, for most firms, a majority of schemes do purchase these services from the same provider. We provide the figures for these below where firms gave us this information.²⁴

Figure A1.8: Percentage of DB investment consultant clients purchasing actuarial services from the same firm, split by firm

[X]

Source: CMA Analysis, parties' estimates

47. Figure A1.8 shows that the percentage of clients purchasing DB investment consultancy services who also purchase actuarial services varies significantly by firm, but in all cases is a substantial fraction. Of the firms who provided data, one of the largest IC-FM firms ([X]) had the lowest percentage of clients also purchasing actuarial services at [X], whilst [X] had the highest at around [X].
48. Consistent with these figures, the [CMA survey](#) showed that 59% of DB schemes purchase actuarial services from the provider of their main investment consultancy services. The figure was similar for Hybrid schemes, but lower for DC schemes (16%).
49. As regards scheme administration, the [CMA survey](#) showed that about half of schemes of all types purchased this service from their main investment consultancy provider.
50. Many parties told us that although firms might purchase investment consultancy (or fiduciary management) services in addition to administration or actuarial services from the same provider, the incidence of joint tenders is (i) demand side led and (ii) more infrequent. That is, the investment consultancy part of the services purchased might be open to competition from a full range of providers.
51. Nevertheless, there appears to be a notable group of pension schemes which prefer to purchase these jointly.
- (a) KPMG told us that 'A number of smaller pension schemes prefer a bundled investment and actuarial service and we are more often appointed to deliver full service trustee services to these clients'.²⁵

²⁴ Information sourced from each firms' responses to the market information request.

²⁵ KPMG's response to the market information request, question 5.

(b) WTW told us that ‘some small clients actively choose to have their actuarial provider also provide investment services in a bid to simplify governance arrangements’.²⁶

52. Aon told us that 13% of tenders, for investment consultancy and/or fiduciary management services they were involved during 2016 in were combined with a tender for actuarial services.²⁷ WTW told us similarly that fewer than 20% of tenders were combined in this way. Hymans Robertson also told us that such joint tenders are not common, particularly for larger clients.²⁸
53. For clients of other firms however, this scenario seems more common. LCP and Barnett Waddingham provided figures showing around a third of their (successful) tenders involved joint provision of services.²⁹ Capita and JLT told us the ‘vast majority’ of their new tenders are of this type,³⁰ Xafinity told us this scenario is ‘very typical’³¹ and Spence & Partners told us it is typical.³²
54. In such cases, clients’ choice sets will include only those firms which are able to offer all the relevant services, and the market may appear more concentrated.³³ We have therefore conducted analysis to assess the degree of concentration amongst firms which we understand also offer actuarial services.

Customers jointly purchasing actuarial services

55. We have calculated shares of supply for that group of firms which also offer actuarial services. We acknowledge that these shares include customers who may not purchase actuarial services. We show these in Figure A1.9 below.

Figure A1.9: Shares of supply for investment consultancy services to pension schemes, including only firms which offer actuarial services.

[X]

Source: CMA Analysis, Parties’ Data

²⁶ WTW’s response to the market information request, question 5.

²⁷ Aon’s response to the market information request, question 5.

²⁸ WTW’s response to the market information request, question 5; Hymans’ response to the market information request, question 5.

²⁹ LCP’s response to the market information request, question 5; Barnett Waddingham’s response to the market information request, question 5.

³⁰ Capita’s response to the market information request, question 5; JLT’s response to the market information request, question 5.

³¹ Xafinity’s response to the market information request, question 5.

³² Spence and Johnson’s response to the market information request, question 8.

³³ Even where clients do not conduct market searches or tenders for investment advisory and either actuarial or administration services jointly, if clients (a) value the joint provision of services and (b) have already appointed the provider for one of the above services, competition may be weaker.

56. Figure A1.9 shows that concentration amongst these particular firms is not significantly higher than for the market as a whole. The largest three investment consultancy providers have the largest share amongst these firms, however there remains a large number of other significant players.

Other joint-purchasing customers

57. We do not have consistent data on which firms also offer scheme administration services. Nevertheless, we understand that it is common to provide this service if the firm also provides investment consultancy services, and that there would therefore be a large number of such providers available.
58. We therefore do not consider that customers who wish to purchase investment consultancy services from the same provider as their administration provider would face significantly higher levels of concentration than customers of similar types set out in the segment breakdowns above.

Our view on joint purchasing customers

59. Our view is therefore that concentration is not materially higher for customers which purchase actuarial or administration services jointly with investment consultancy services.

Appendix A2: Manager recommendations analysis

Introduction

1. In this appendix we set out the methodology and present the results of the quantitative analysis we have conducted in order to test whether investment consultants collectively are able to improve pension schemes' investment returns by recommending asset management (**AM**) products that outperform their benchmarks, on average.
2. This analysis fits into (i) our assessment of outcomes in terms of whether investment consultants are providing value for money in relation to the quality of their services; (ii) our assessment of the information available to pension scheme trustees on the performance of recommendations and (iii) proposed information remedies.
3. This appendix is organised as follows:
 - (a) we describe the data used in our quantitative analysis and detail the process of building our working dataset;
 - (b) we outline our quantitative analysis and explain our choice of methodology;
 - (c) we summarise our results and discuss the main extensions and sensitivities we have conducted; and
 - (d) we present our conclusions.

Data sources and the process of building our final data set

4. Our aggregate quantitative analysis (across investment consultants) is based on a data set combining:
 - (a) Information on the returns of AM products and of their benchmarks, spanning the period between 2006 and 2015. This data was originally sourced from eVestment by the FCA and used for the FCA's Asset Management Market Study, 2016.
 - (b) Historical information on investment consultants' ratings of AM products. Ratings data was directly sourced from a sample of eight

investment consultancy firms, namely Aon, Capita, Hymans, Redington, Russell Investments, WTW, KPMG and LCP.³⁴

5. Mercer has not been included in our aggregate analysis as it does not subscribe to eVestment. We have therefore conducted a standalone analysis for Mercer, using Mercer's proprietary Global Investment Manager Database (**GIMD**) of returns.
6. In the following paragraphs
 - (a) we describe our main data sources (eVestment, Mercer's GIMD, ICs' historical ratings data) and discuss how their limitations may have affected our analysis and our results;
 - (b) we set out and explain the steps we took in preparing the data set used for our final analysis and discuss how our handling of the data set may have affected the results of our analysis; and
 - (c) assess how representative our final data set is and discuss the implications for our conclusions.

The eVestment database

7. EVestment is an established third-party data provider that is widely recognised in the asset management industry and used by the majority of the investment consultants in our sample.³⁵ It contains data on investment funds under traditional and alternative management.
8. We have used the same eVestment data that was used by the FCA in its Asset Management Market Study in 2016. This data set includes information on:³⁶
 - (a) the returns of AM products;
 - (b) manager specified benchmarks for these products and their respective returns;

³⁴ Compared to the FCA analysis, we have increased the sample of firms from 6 to 8. We also attempted to include Cambridge in our analysis, but were unable to match any of their ratings into our eVestment dataset because the product identifiers submitted by Cambridge did not correspond to valid eVestment product codes (IDs).

³⁵ With the exception of Mercer.

³⁶ In addition to the variables listed above, the data set also contains information on the dates AM products were inceptioned, the dates they were added to eVestment as well as the dates they became inactive. eVestment data further indicates whether reported returns have been simulated and specifies the affected period and; maps AM products to the appropriate asset classes and vehicle types.

- (c) assets under management (AUM) for these products and;
 - (d) AM fees.
9. In their submissions, several parties have referred to the limitations of the eVestment data set, making special reference to its product coverage, its timespan and quality issues with the reported data. We summarise and discuss these concerns below.

(i) The coverage of the eVestment database

10. Several parties submitted that the eVestment database only accounts for a small subset of the market and the AM products that are available to UK investors. In particular:
- (a) Redington submitted that eVestment has a disproportionate focus on listed, liquid asset classes.³⁷
 - (b) Hymans submitted that an increasing amount of IC recommendations focus on alternative assets, which are under-represented in the eVestment universe.³⁸
 - (c) Russell Investments submitted that the limited coverage of alternative products in the data is likely to bias the results of our analysis given the relatively high active returns for this asset class.^{39,40}
11. We acknowledge that the eVestment database does not cover all AM products, and that it has better coverage with respect to ‘traditional’ AM products, as compared with ‘alternative’ AM products. Nevertheless, alternatives (including hedge funds) account for 39% of products and 48% of observations in our version of the eVestment dataset.⁴¹ We have further considered whether the fact that certain asset classes are under-represented in the eVestment database may have affected our results. Taking into account the points raised by the parties, we have identified two ways in which the asset class composition of the eVestment database may have impacted our analysis:
- (a) To the extent that ‘alternative’ AM products systematically perform better (compared to the more traditional AM products), our results risk

³⁷Redington response to CMA working paper ‘Asset Manager Product Recommendations’, 10 April 2018.

³⁸Hymans’ response, March 2018.

³⁹Comments of Russell Investments on CMA’s working paper ‘Asset Manager Product Recommendations’.

⁴⁰Alternative asset management products include hedge funds, private equity, investments in real estate, infrastructure and commodities in a variety of vehicles.

⁴¹Hedge funds are the main alternative asset class covered in eVestment (44% of observations).

understating the overall ability of investment consultants to identify products that improve the investment returns of their customers.

- (b) In addition, if the focus of investment consultants' recommendations has shifted towards alternative assets, as suggested by Hymans in its response to our working paper, our results risk placing undue weight on a subset of products that are not representative of the universe of investment consultants' recommendations.

12. Notwithstanding these limitations, we also note that eVestment is a leading data repository providing one of the most complete pictures available of traditional and alternative institutional investor and asset management trends.⁴² Moreover, some parties use the eVestment database when presenting information on the performance of their recommended AM products.

(ii) The timespan of the eVestment dataset used

13. Several parties have submitted that a longer timespan would be preferable.
14. In response to our working paper, WTW submitted that it has access to eVestment data for a longer time period (2000-2016). WTW challenged our decisions (i) not to update the FCA's original data set with the more recent data for 2016 and (ii) not to take into account available data prior to 2006.⁴³
15. We agree that a longer time dimension would in principle be preferable. However, our version of the eVestment dataset covers a period of 10 years, which is a sufficiently long-time horizon for a rigorous and robust quantitative analysis in the present case. Over this period, we are able to observe the returns history of around four thousand products.
16. Whilst we have not been able to source product returns data for more recent years from eVestment, we are not concerned that our data does not include the most recent available data (ie for 2016), as no parties told us that their approach to rating or market conditions had changed significantly since

⁴² As noted by the FCA in Annex 6 of the Interim report for the Asset Management Market Study, published in November 2016.

⁴³ WTW submission of April 20, 2018 in response to CMA's working paper on asset manager product recommendations, paragraphs 2.9, 2.10, 2.11.

2015.⁴⁴ Furthermore, the data indicate that most parties haven't rated substantially more products in 2016 and 2017.⁴⁵

17. Extending our analysis to include returns data for the period prior to 2006 would increase the size of our data set but we consider older data to be less relevant in assessing recent performance and the current ability of investment consultants to identify assets that improve the investment returns of their customers.

(iii) The quality of the eVestment data

18. In its response to our working paper, Redington has outlined its concerns regarding only using eVestment data for our quantitative analysis. In particular, Redington highlighted some fixed income examples where: multiple vehicles with different risk-return profiles and varying fees are included under the same product ID in the eVestment database; several of the investment universes in the database are incorrectly specified; some products are missing from the investment universes or; there are significant issues with the fee data.⁴⁶
19. The points raised by Redington regarding the quality of the eVestment data cannot be easily verified. Though Redington has given examples for each of the concerns described above, we are not in a position fully to assess the occurrence and magnitude of such issues in the data and whether such mistakes display a systematic pattern that would threaten to bias our results materially.
20. That being said, we further note that:
 - (a) The eVestment database is an established data repository and is widely used in the industry and by the parties. Hence, we believe that any such inaccuracies are not systematic, are infrequent and limited in magnitude.
 - (b) Our baseline analysis is conducted at an aggregated level and therefore any accuracy concerns with respect to specific products are less likely to have affected our results.

⁴⁴ The following parties made some clarifications. (i) Hymans said that a higher proportion of their ratings were now in 'alternative' asset classes; (ii) Redington said that ESG factors are now included in their selection criteria (iii) Several parties said that their approach was essentially the same, but that the application of this approach is continually enhanced.

⁴⁵ We have received data on ratings also for 2016 and 2017.

⁴⁶ Redington submission of April 10, 2018 in response to CMA's working paper on asset manager product recommendations.

Mercer's Global Investment Manager Database (GIMD)

21. Several parties, namely Hymans, Russell Investments and Aon, have noted that the exclusion of Mercer from our aggregate analysis is likely to have affected our results.
22. We have not been able to incorporate Mercer into our aggregate analysis as it does not subscribe to eVestment and we could not match its ratings data to returns data from the eVestment database. We have therefore conducted a standalone analysis for Mercer, using Mercer's proprietary database.
23. GIMD, like eVestment, contains data on the performance of asset management products (or strategies). The principal difference between GIMD and eVestment is that GIMD performance data is organised into and presented via a number of universes and (selective) sub-universes, each containing a set of comparable products and was submitted with a benchmark, which was selected by Mercer. eVestment is also organised into universes, although products need to satisfy fewer criteria to appear in a given eVestment universe and each product has an accompanying benchmark, which is chosen by the asset manager in question.
24. We report the results of our analysis for Mercer in paragraphs 118-0 below and Table A2.5. We note however that the findings of the Mercer analysis are not directly comparable to the findings of our aggregate analysis (a) as a result of the underlying differences between GIMD and eVestment and; (b) given that Mercer, submitted data for a longer time period (ie between 2000 and 2017) allowing us to undertake an extended analysis over 17 years.

The ratings data

25. Historical information on investment consultants' ratings of asset management products was directly sourced from the investment consultants in our sample. Investment consultants submitted ratings data for the period between Q1:2006 and Q1:2018.
26. We have categorised the parties' ratings as 'Buy', 'Hold', 'Sell' and 'Other'. 'Other', encompasses the more granular rating categorisations that the parties were unable to map to 'Buy', 'Hold' or 'Sell'.⁴⁷
27. Table A2.1, summarises the ratings data provided by each investment consultant, broken down by rating category (ie 'Buy', 'Hold', 'Sell' and

⁴⁷ In its response to our Confidentiality Ring, Aon told us that we have not accurately treated the rating data it submitted and as a result we have incorrectly categorised products in some quarters. We acknowledged Aon's suggested correction and have amended our code to incorporate these changes.

Table A2.1. Breakdown of rated products by individual investment consultants

Source: CMA's handling of Parties ratings data

A2.7

consultants to recommend AM products that beat their benchmarks is likely to be weighted towards the practices of these investment consultants.

29. For our main analysis, which combines all investment consultants, we have created a single composite rating for each product-quarter pair. This composite rating corresponds to the most commonly occurring rating assigned to this product (across investment consultants) in each quarter. If, in a given quarter, there is no dominant rating, we have classified this product as 'Unrated'.⁵⁰ Our final data set contains information on around nine thousand 'buy-rated' product-quarter pairs.
30. We have assessed the performance of all products which had ratings attached over the studied period (ie Q1: 2006 – Q4: 2015), not only those which received new ratings.

Data set building

31. In the following paragraphs we detail the steps we took in preparing the data set used for our aggregate analysis (ie across investment consultants), reflect on the reasoning driving these adjustments and discuss how the restrictions we impose are likely to affect the results of our analysis.⁵¹
32. In building our working dataset we have performed some basic consistency checks. More specifically, we have dropped products without a valid eVestment ID, products with missing eVestment returns or fees data, products for which a benchmark was not identified and products for which the corresponding benchmark returns are not available on eVestment.
33. We have considered whether these restrictions may have distorted our sample and biased our results. However, we have not come across any evidence implying that products without a valid eVestment ID and/or products for which data on returns, fees and benchmark returns is missing are systematically associated with higher-than-average net returns and account for a substantial share of 'buy-rated' products.⁵²

⁵⁰ In response to the confidentiality ring, [X] advisors tested the impact of some alternative approaches of aggregating ratings they considered in order to identify whether the results of our quantitative analysis are sensitive to alternative aggregations. [X] advisors did not find a change in the statistical significance of the headline results.

⁵¹ When processing the GIMD for Mercer's standalone analysis we have applied the same adjustments as when processing the returns data from eVestment, where feasible. We discuss our standalone analysis for Mercer in more detail in paragraphs 105-106.

⁵² Regarding our decision to exclude from the analysis products for which benchmark returns were not available on eVestment, WTW submitted that the CMA could have used other sources for benchmark returns or compared these products to another suitable index. Relatedly, Aon submitted that the CMA has omitted a large number of fixed income strategies as the benchmarks are not listed in its version of the eVestment database even though

34. In addition to these basic consistency checks, we have:
- (a) reduced the product scope of our analysis by excluding passively managed products;
 - (b) restricted our analysis to return data where the base currency is USD, or return data that were originally expressed in other currencies, but converted to USD by eVestment;
 - (c) excluded simulated returns and;
 - (d) removed products from the analysis entirely if their inception date was at least one quarter prior to the date they were added to the eVestment database to correct for backfill bias.

We discuss each of these steps in turn below.

(i) Excluding passively managed products

35. Most parties with the exception of Capita, agreed that passively-managed AM products should be omitted from the analysis as their returns are close to the benchmark.
36. In its submission following the confidentiality ring, Mercer has noted that our data building process fails to identify and remove all passive products from our data set. We have amended our data cleaning process to ensure that no exchange traded funds (ETFs) or passive products are present in the final data set.⁵³

(ii) Focusing on US Dollar-denominated returns

37. WTW submitted that by removing a subset of products not denominated in US Dollars, the CMA may have removed a number of products that may be of particular interest to UK clients.⁵⁴

these strategies have well known market benchmarks, which are included in Aon's version of the eVestment database. Aon further submitted that there are also a number of well-known market benchmarks that are not currently listed in eVestment. We acknowledge that we are constrained by our dataset. Although we are not in a position to accurately recreate the universe of funds available to UK investors, we note that eVestment is a sufficiently comprehensive data set of AM products and enables a thorough and robust analysis.

⁵³ Part D in the confidential annex prepared on behalf of Mercer dated April 19, 2018.

⁵⁴ Willis Tower Watson's response to CMA's working paper on Asset Manager Product Recommendations dated April 20, 2018, paragraphs 2.12 and 2.13.

38. Aon submitted that a significant proportion of Aon's rated funds are excluded from the CMA's net active return analysis due to the omission of asset managers' fees reported in GBP.⁵⁵
39. We have also received non-USD return data⁵⁶ from the FCA. However, we did not use these data as we understand (following conversations with FCA and the parties), that it is not possible to convert return data if the product in question is hedged. As the data set does not identify which products are hedged and which are not, we did not convert non-USD return data for fear of introducing measurement error in our analysis.
40. Building on the FCA's assessment of third-party databases, we have identified two potential sources of bias in the eVestment data,⁵⁷ simulation bias and backfill bias.

(iii) Correcting for simulation bias

41. eVestment, like other third-party databases, allows product providers to submit a simulated past performance history for newly inceptioned products. Only a small proportion of products in the eVestment universe is affected (ie 1.8% of the observations in our data set) and users of the database are in a position to identify these products.
42. As product providers have an incentive to make their new products appear more attractive, they are likely to employ statistical techniques in order to produce misleadingly strong simulated historical returns and attract prospective investors. Hence, an analysis based on simulated performance data would potentially risk overstating average returns. In the context of our investigation this would imply that:
- (a) Our quantitative assessment would be exposed to the risk of overestimating the ability of investment consultants to improve the investment returns of their customers by recommending AM products that outperform their benchmarks. We have addressed this concern by excluding simulated returns from our analysis.
 - (b) The information provided by investment consultants to their customers would likely be overstating the returns of 'recommended' products. We

⁵⁵ Annex to Aon's response to CMA's working paper on Asset Manager Product Recommendations, part A2 and Aon's response to the provisional decision report.

⁵⁶ ie return data for which the base currency is not USD.

⁵⁷ See Annex 5 to the Final Report of the FCA's Asset Management Market Study and Table 1 in our working paper on 'Asset Manager Product Recommendations' of March 22, 2018.

discuss this concern with regard to the information investment consultants present to their customers in chapter 5.

(iv) Correcting for backfill bias

43. The eVestment database allows asset managers to 'backfill' product returns information for the period before reporting their products to eVestment. We have considered whether this practice could affect the results of our analysis.
44. Allowing managers to backfill returns information would risk distorting a database if:
 - (a) Managers choose to report products selectively to the eVestment database, only after they have proven to perform well (ie poor performers remain unlisted). This could lead to the database comprising products that perform on average better than the entire universe of products available to investors.
 - (b) After reporting the products that performed well to the eVestment universe, managers 'backfill' historical data in the database. Hence, returns for the period between a product's inception and the date the product was added to eVestment are potentially biased upwards.
45. The FCA's approach to dealing with backfill bias was to remove from the analysis observations on product returns for the period after a product's inception date but prior to the date the product was added to the eVestment database.
46. We have refined the correction used by the FCA and have entirely removed from the analysis the products for which the inception date and the date they were listed in the eVestment database were at least a quarter apart. The justification for this is that while the FCA's approach corrects for the fact that performance over this period may be biased upwards as a result of backfilling, it does not address the risk that the performance of potentially recommended products in the eVestment universe is biased upwards due to selective reporting.
47. Two parties however have criticised our preferred approach of dealing with backfill bias, on the grounds that it leads to extensive data loss which is unjustified given that backfill bias presents a limited risk. In particular,
 - (a) Redington submitted that our approach discards 25% of the products and 20% of the observations in the eVestment data set and leaves less than 50 eligible funds in several universes. Redington considers it unnecessary to discard all of these products as it believes the majority

of asset managers are not incubating strategies and then adding them to eVestment but rather add them once they are sold eVestment's services or when encouraged to do so by consultants and/or potential customers.⁵⁸

- (b) Aon told us that our approach has the unintended effect of dropping the vast majority of products that were incepted since 2007. Further, Aon submitted that, as eVestment did not become the preferred database until around 2012, failure to register funds with eVestment would most likely reflect that it was not the database of choice at the time rather than backfill bias.⁵⁹

48. We have carefully considered these points but we continue to be concerned that backfilling past returns risks biasing the analysis of performance data. As a result, we are concerned that:

- (a) An analysis of the average performance of AM products using the eVestment data⁶⁰ (without accounting for backfill bias) would risk overstating the performance of 'buy-rated' products relative to their benchmarks and hence overstating the ability of investment consultants to recommend net outperforming AM products to their customers.
- (b) Any information and/or quantitative evidence regarding the performance of 'recommended' products vis a vis their benchmarks that is presented to investment consultants' customers may be misleading if underlying returns data is not corrected for backfill bias.

49. In addition, our approach addresses the backfill bias more thoroughly, compared to the FCA's approach as it is explained in paragraphs 44-46.

50. However, we acknowledge that our methodology drops a large number of products from our working dataset,⁶¹ which may have an impact on our ability precisely to estimate the relationship between ratings and performance.⁶² We have therefore considered whether there are more efficient ways (in terms of information loss) to address backfill bias and how these affect our headline results. We present and discuss the results of our sensitivities in paragraphs 133 to 138.

⁵⁸ Redington response to CMA's working paper on 'Asset Manager Product Recommendations', dated April 10, 2018 and note prepared on behalf of Redington's advisers paragraph 2.4.

⁵⁹ Aon's response to CMA's working paper on 'Asset Manager Product Recommendations', paragraphs 2.3.1 to 2.3.3 and; Aon's response to the provisional decision report.

⁶⁰ Or any other returns database that is subject to the backfill bias.

⁶¹ The backfill bias correction 'costs' us c.25% of the universe of rated products and c.15% of 'buy-rated' products that have been successfully merged with the eVestment returns and fees data.

⁶² In other words, it is less likely to find statistically significant results.

Assessing the representativeness of our data set

51. Several parties have submitted that our data building approach discards a lot of information and distorts our data set thus undermining the generality of our results and hence our ability to draw conclusions about the degree to which investment consultants add value to their customers through manager recommendation services. In particular, the parties have raised the following concerns:
- (a) Our resulting data set only covers a small fraction of not only the universe of funds available to UK investors but also of the universe of each investment consultant's recommendations.
 - (b) The asset class composition of the resulting data set is not representative of the universe of products in eVestment, the universe of funds available to UK investors or the universe of investment consultants' recommendations.
52. We acknowledge that in the process of cleaning, combining and handling the data we had to drop a large amount of information on investment consultants' recommendations. Only c.45% of investment consultants' ratings data, are present in our final data set.⁶³ Each investment consultant retains between 35% and 50% of its 'buy-rated' products in the final dataset.⁶⁴ We note however that a robust quantitative analysis requires data on a representative sample of the population and not on the entire population.
53. To assess that, we have also analysed the asset class composition of our final data set in more detail. Equities account for almost 70% of 'buy-rated' products in our data set (compared to c.45% of the assets in pension schemes' portfolios in Q1: 2016);⁶⁵ Fixed Income assets for 23% (compared to c.20% of pension schemes' portfolios in Q1: 2016) and⁶⁶ alternative assets (including Hedge Funds) for 4.8% (compared to c.10% of pension schemes' portfolios in Q1: 2016).⁶⁷
54. Our data building process therefore has, to some extent, impacted the asset class composition of our data set. Most notably, equities are materially over-represented in our data while alternative AM products (including Hedge

⁶³ Not including Cambridge.

⁶⁴ With the exception of Capita and Redington which participate in the analysis with a very small number of products and Cambridge, for which we have not been able to match any of its rated products.

⁶⁵ 'Asset Management in the UK 2016-2017'; The Investment Association Annual Survey, September 2017. See chart 26, p56. See also, 'The Purple Book, DB Pensions Universe Risk Profile, 2017', Pension Protection Fund. See Fig. 7.3, p 34.

⁶⁶ The Purple Book, DB Pensions Universe Risk Profile, 2017, Fig. 7.3, p 34.

⁶⁷ The Purple Book, DB Pensions Universe Risk Profile, 2017, Fig. 7.3, p 34.

Funds) are under-represented. We have further considered whether our data-building routine and the ensuing information loss raises concerns about the quality of inference and the generality of our results.

55. We acknowledge that if investment consultants are more capable of identifying products that improve investment returns beyond the benchmark for the asset classes that are under-represented in our analysis (in particular alternative products) and/or the aforementioned product categories are systematically more likely to outperform their benchmarks, our results risk understating the overall ability of investment consultants to recommend outperforming products to their clients. We revisit this point in paragraphs 145 to 149 below, where we repeat our analysis for each asset class individually.

Our quantitative analysis

56. In the following paragraphs we present and explain the methodology behind our quantitative analysis. In particular, we detail our baseline test, discuss our baseline econometric approach and our methodology with regard to our gross to net of AM fees returns conversion. We further discuss any methodology points that were raised by the parties in their responses to our working paper and the provisional decision report.

Our baseline test

57. In order to assess whether investment consultants' recommendations improve their clients' investment returns we have tested whether 'buy-rated' AM products outperform their respective benchmarks on average, ie whether the average active return for 'buy-rated' AM products is positive to a statistically significant extent.
58. We have chosen this to be our baseline test, as it is consistent with the standard way in which the performance of AM products is measured in the financial services industry.
59. Alongside our 'baseline test', we have also looked at the performance of 'recommended' AM products, relative to that of other actively-managed AM products that an investment consultancy customer may have invested in, if they decided not to take investment consultants' recommendations into account. We present the results of our secondary test in paragraphs 111 to 113.
60. We consider that our baseline test, as well as the secondary test we are using as a sensitivity, are more appropriate for assessing the ability of

investment consultants to recommend outperforming AM products to their clients compared to the alternative methodologies used by some parties. [X],⁶⁸ one of the tests used by [X] analyses the aggregate cumulative return against benchmarks for product ratings which have existed for 1, 3, 5 and 10 years. We consider that this methodology is subject to survivorship bias.⁶⁹

Choice of econometric model

Time series model (baseline econometric specification)

61. We have conducted our baseline test on an aggregated data set, mapping average quarterly returns (across AM products) to (lagged) composite ratings.⁷⁰ We have performed an Ordinary Least Squares (**OLS**) regression of average quarterly active returns for 'buy-rated' products on a constant term. We have used Newey-West standard errors,⁷¹ which are robust to both heteroskedasticity⁷² and auto-correlation of the error term (up to the second lag, by assumption).⁷³
62. The parties have challenged our decision to convert a panel data set featuring information on the quarterly performance of several 'buy-rated' products into a time series, on the grounds that:
- (a) This approach reduces the richness of the data by removing potentially useful cross-sectional information.
 - (b) The panel data approach has greater statistical power because of the greater number of observations.
63. We note that our approach can deliver a robust analysis and is consistent with the recent literature investigating the ability of investment consultants to pick out-performing products, see Jenkinson et al., 2014.⁷⁴ In addition, it has

⁶⁸ [X].

⁶⁹ Survivorship bias (or survival bias) is a form of selection bias that arises when the analysis of the variable of interest (here performance relative to the benchmark) concentrates on individuals (here AM products) that made it past (ie survived) some selection process (here retaining their 'buy' rating) while not taking into account those that did not. As continuing to receive a 'buy' rating is contingent on performance over one, three, five and ten years the observed performance of products that have retained their ratings over the pre-specified periods will likely be inflated compared to the overall performance of the universe of 'buy-rated' products.

⁷⁰ We have lagged ratings data by one quarter to account for the delayed response of ICs' clients to changes in ratings.

⁷¹ The term 'standard error' refers to the estimated standard deviation of the sampling distribution of the coefficient on the constant term in our regression. It is a measure of the statistical accuracy of an estimate, in other words the precision with which our estimate based on a given sample approximates the true population value.

⁷² A time series is heteroskedastic if the volatility of errors is constant over time.

⁷³ In the presence of autocorrelation and/or heteroskedasticity our point estimates are unaffected, but the estimator of the standard errors, used for hypothesis testing, is no longer consistent.

⁷⁴ Jenkinson, Tim and Jones, Howard and Martinez, Jose Vicente, 2014. 'Picking Winners? Investment Consultants' Recommendations of Fund Managers.' *Journal of Finance*, 71 (5): pp. 2333-2370.

the advantage of being less exposed to measurement error arising from inaccuracies permeating the product-specific returns and fees data on eVestment. In addition, our results are less sensitive to the number of rated products that come in and out of our sample (given that we are dealing with an unbalanced panel) as averaging takes out some of the variation.

Panel model (alternative econometric approach)

64. However, we acknowledge that there is potentially useful information in the cross-sectional variation of the panel dataset, which is ‘discarded’ in our time series approach.
65. We have therefore tested the sensitivity of our results to an alternative econometric model and have re-run our analysis on the product-quarter panel data set, performing a pooled OLS regression of quarterly active returns for ‘buy-rated’ products on a constant term.
66. We have conducted our analysis using two different specifications, accommodating different assumptions on the modelling of errors. In particular,
 - (a) We use ‘clustered’ standard errors at the product-level, to account for the fact that there may be auto-correlation in the performance data.⁷⁵
 - (b) We use Driscoll-Kraay standard errors to account for auto-correlation (up to the second lag, by assumption) and arbitrary cross-sectional correlation in performance data.⁷⁶
67. Given that cross-sectional correlation (ie between AM products) of performance is often a feature of financial data, we are concerned that our product-level clustered standard errors specification is likely to yield misleadingly narrow confidence intervals. In other words, under this specification we are more likely to find statistically significant results because our estimation process understates standard errors.

⁷⁵ Under specification (i), the underlying assumption is that unobserved factors driving the performance of individual AM products may be correlated over time, while they are assumed to be uncorrelated for different AM products. Failure to control for within-cluster error correlation can lead to misleadingly small standard errors and consequently erroneously narrow confidence intervals. The risk is that we are then more likely to find falsely significant results.

⁷⁶ We can think of the Driscoll Kraay estimator as a hybrid estimator combining a heteroskedasticity and autocorrelation consistent (HAC) estimator and a ‘cluster robust’ estimator. The former accommodates the temporal dependence (ie autocorrelation) whereas the latter accommodates the cross-sectional dependence. The error structure is therefore assumed to be heteroskedastic, autocorrelated (up to some lag, here lag=2) and possibly correlated between individuals (here, AM products).

68. Two parties however submitted that product-level clustered standard errors are more appropriate compared to Driscoll-Kraay standard errors. In particular,
- (a) Aon submitted that the time dimension of our panel data set ($T=39$) is not sufficiently long as the Driscoll-Kraay estimation requires 'a large number of time periods'.⁷⁷
 - (b) WTW submitted that in the context of the data set available to the CMA, there are drawbacks to using Driscoll-Kraay standard errors. In particular, WTW submitted that Driscoll-Kraay standard errors require a large panel data set with a high ratio of time periods to cross-sectional observations, and that this was not the case for the CMA's analysis.⁷⁸
69. We have carefully considered the points raised by these parties. We further refer the parties to the academic literature⁷⁹ and note the following.
70. The Driscoll-Kraay estimation does not place any restrictions on the limiting behaviour of the number of panels (N) and therefore, it is possible to apply even if the size of the cross-sectional dimension (ie number of panels) is much larger than the time dimension (T).⁸⁰ As such, the Driscoll-Kraay estimator overcomes the 'large cross-sectional dimension compared to time dimension problem' that other asymptotics-based covariance matrix estimators (eg Parks-Kmenta⁸¹ and Panel Corrected Standard Errors⁸²) face.⁸³
71. In addition, Driscoll-Kraay standard errors are robust to very general forms of cross-sectional and temporal dependence when the time dimension becomes 'large enough' for asymptotic inference to hold. That being said, we further note that despite the fact that the cross-sectional correlation consistent standard error estimator proposed by Driscoll and Kraay relies on large T

⁷⁷ Submission by Aon's authorised advisers in response to the CMA's working paper on asset manager product recommendations, April 23, 2018.

⁷⁸ Willis Tower Watson submission of April 20, 2018 in response to CMA's working paper on asset manager product recommendations, paragraphs 2.19 and the confidentiality ring submission of Willis Tower Watson's authorised advisers of April 19, 2018.

⁷⁹ In particular Driscoll, J. C., and A. C. Kraay. 1998. Consistent Covariance Matrix Estimation with Spatially Dependent Panel Data. *Review of Economics and Statistics* 80: 549–560 and; Hoechle, Daniel, 2007. Robust standard errors for panel regressions with cross-sectional dependence. *The Stata Journal* 7, Number 3, pp. 281-312.

⁸⁰ Including the limiting case in which N tends to infinity at any rate relative to T .

⁸¹ See Parks, R. 1967. Efficient Estimation of a System of Regression Equations When Disturbances Are Both Serially And Contemporaneously Correlated. *Journal of the American Statistical Association* 62: 500-509 and; Kmenta, J. 1986. *Elements of Econometrics*. 2nd edition, New York: Macmillan.

⁸² Beck, N. and N.J. Katz, 1995. What to do (and not to do) with time series cross-section data. *American Political Science Review* 89:634-647.

⁸³ We refer the interested reader to the discussion in Hoechle (2007), explaining that these estimators typically become inappropriate when the cross-sectional dimension becomes large.

asymptotics, its finite sample performance dominates the performance of other commonly used alternatives, which do not account for cross-sectional dimension even when the time dimension is quite short.⁸⁴

72. We have therefore decided to place greater weight on the results of the Driscoll-Kraay standard errors specification.
73. We present the results of conducting the analysis using the panel model in paragraphs 114 to 124 below. We note that the choice of econometric model is inconsequential for our baseline results and conclusions.
74. WTW has instead proposed a non-parametric approach (randomisation inference)⁸⁵ as a more appropriate alternative to assess whether ‘buy-rated’ products outperform their benchmarks.⁸⁶ This approach has the additional advantage of not relying on assumptions regarding sample size and/or the accuracy of the model.⁸⁷
75. We acknowledge the appeal of the proposed approach but note that to the best of our knowledge, randomisation inference is not an established methodology in the economics literature and has not typically been used outside experimental setups. Though this does not preclude that it can also be used in non-experimental setups, we are cautious as to its applicability.

⁸⁴ In the original work from Driscoll and Kraay (1998) the authors demonstrate this using Monte Carlo simulations considering a moderate time series dimension of size $T=25$ and a moderate cross section of $N=20$. Relatedly, Hoechle (2007), using Monte Carlo simulations on both a medium (1000 subjects) and a large-sized (2500 subjects) micro-econometric panel with 40 time periods demonstrates that in the presence of cross-sectional dependence Driscoll-Kraay standard errors dominate OLS, White, Rogers and Newey-West standard errors for pooled OLS estimation. Results hold for both balanced as well as unbalanced panels. Our estimation uses the Driscoll-Kraay estimator as it has been adjusted by Hoechle (2007) in the respective `xtscc` Stata command for use with unbalanced panels. Hence, whilst specifying the number of periods justifying appeal to asymptotic inference is not straightforward we note that a time dimension of 39 periods is ‘reasonably long’ for financial data.

⁸⁵ WTW cites Young, A. 2017. Channelling Fisher: Randomization Tests and the Statistical Insignificance of Seemingly Significant Experimental Results. Working Paper. As it is explained in Young (2017) and Hess (2017), – see Hess, S. 2017. Randomization Inference with Stata: A Guide and software. The Stata Journal, Volume 17(3) pp. 630-651 - unlike asymptotic inference, which assumes each observation to be a random draw from a distribution of outcomes, (Fisherian) randomisation inference takes the set of study subjects (here AM products) as fixed to what is observed in the data, but treatment assignment (here a ‘buy’ rating) itself is viewed as random. The researcher hence obtains the distribution of the test statistic under the null hypothesis of ‘no effect’ (here no outperformance relative to the benchmark product) through randomly re-assigning the treatment. The actual test statistic observed is then compared against the distribution of all conceivable test statistics (obtained through re-randomisation), in order to assess the proportion of possible treatment assignments that yield a test statistic greater than or equal to the observed test statistic.

⁸⁶ In response to our working paper on asset manager product recommendations, WTW advisers have submitted an analysis using randomisation inference demonstrating that randomly generated ‘buy-rating’ samples outperformed the real WTW ‘buy-ratings’ in less than 10% of the cases, which is however below the conventional statistical significance threshold.

⁸⁷ See WTW’s response to our Working Paper on asset managers’ product recommendations, paragraphs 2.31 to 2.38; the confidentiality ring submission of WTW’s authorised advisors and; WTW’s response to the provisional decision report, paragraphs 4.46 to 4.49.

76. Notwithstanding our reservations, we have tested the robustness of our conclusions to employing the proposed methodology.⁸⁸ Our results did not provide evidence of outperformance for buy-rated products in our sample on either a gross or net of fees basis. This is not surprising given that:
- (a) As noted in Young (2017), randomisation inference systematically raises the p-values of otherwise obtained statistically significant results. Hence, to the extent that the results reported in Young (2017) hold in general, our preferred methodology is more likely to yield statistically significant results compared to the proposed alternative.
 - (b) All the AM products in our data,⁸⁹ regardless of their rating, are found to outperform their benchmarks on a gross basis to a statistically significant extent (by 17.4 bps per quarter on average). This may explain why we did not find any evidence that 'buy-rated' products outperform randomly selected products on a gross basis.

Gross vs net of AM fees performance and gross to net of AM fees conversion

77. We have conducted our analysis both on a gross and net (of AM fees) basis. Several parties have challenged our decision to place more weight on results net of AM fees. In particular:
- (a) Mercer submitted that performance gross of AM fees is a more relevant and reliable measure for individual pension scheme decision-making. Mercer told us that trustees incur AM fees regardless of whether they pick an active product themselves or engage instead an investment consultant to assist in the selection process, the difference being that investment consultants can negotiate lower fees for their customers.⁹⁰
 - (b) WTW submitted that our analysis should consider performance both net and gross of AM fees as the incompleteness of the fee data and the

⁸⁸ In particular, we have used the Stata code submitted by WTW's authorised advisors (in the context of the confidentiality ring held following the publication of the CMA's working paper on asset manager product recommendations), to test whether the recommended products outperform a sample of randomly selected products, in other words to test whether the observed degree of out-performance is likely to have arisen purely by chance. We find that the randomly generated 'buy-rated' samples outperformed the actual ICs' buy-ratings in 11% of the cases on a gross of AM fees basis and, in 39% of the cases on a net of AM fees basis.

⁸⁹ We refer to our working data set ie the data set resulting after we have implemented the data cleaning and the data restrictions discussed in paragraphs 25-55.

⁹⁰ Mercer's response to Asset Manager Product Recommendations working paper, paragraphs 2.182.24.

challenges associated with calculating a representative average fee level and discount rate cast doubt over our results.⁹¹

78. On the other hand, KPMG is supportive of the analysis and conclusions in our working paper which focus on 'net of fees performance' as this is more reflective of the 'real world experience' for customers.⁹²
79. Relatedly, several parties submitted that to the extent that our analysis finds evidence of out-performance of 'buy-rated' products on a gross of AM fees basis, but not on a net of AM fees basis, this should not be interpreted as lack of investment consultants' ability to identify high performing products. In particular:
- (a) WTW submitted that the CMA's focus should be on ensuring asset manager fees are low enough to have reasonable confidence that the skills of investment consultants in picking asset management products will translate into positive net of costs returns for clients.⁹³
 - (b) Mercer submitted that it is relevant that concerns about the levels and opacity of AM fees have already been identified by the FCA and that remedies are already being implemented in this area.⁹⁴
 - (c) Aon submitted that this may suggest weak competition among asset managers.⁹⁵
80. We have considered the parties' points but for the purposes of this exercise, we consider it appropriate to place more weight on the figures net of AM fees, as these are a better approximation of the return on investment an investment consultancy customer could expect to receive if it invested in a 'buy-rated' product.⁹⁶
81. In the following paragraphs we outline the principles driving our gross to net of AM fees conversion.
82. Our gross to net of AM fees conversion utilises AM fee data from eVestment, which we received from the FCA. For each product we have calculated a 'standard AM fee' by taking a simple average of the fees corresponding to

⁹¹ WTW submission of April 20, 2018 in response to CMA's working paper on asset manager product recommendations, paragraph 2.29 and WTW's response to the provisional decision report.

⁹² KPMG's response to 'Asset Managers Product Recommendations' working paper, April 12, 2018.

⁹³ WTW submission of April 20, 2018 in response to CMA's working paper on asset manager product recommendations, paragraphs 1.12-1.14.

⁹⁴ Mercer's response to Asset Manager Product Recommendations working paper, paragraphs 2.9 and 2.10.

⁹⁵ Response from Aon to CMA's working paper on asset manager product recommendations, paragraph 1.1.4 (c).

⁹⁶ TPR guidance states that trustees should monitor performance on a net of fees basis. Eg for DB schemes: TPR guidance on 'monitoring DB investments', which accompanies Code of Practice 3 ('funding defined benefits').

different size mandates (USD 10 million, 25 million, 50 million, 75 million, 100 million, 200 million, 500 million) based on the fee scales entered onto the eVestment database for each vehicle type⁹⁷ (Separate/Segregated Account, Commingled/Co-ownership Fund, Mutual/Pooled Fund).

83. We note that the FCA took into account investment consultants' fees as well as AM fees when converting from gross to net.⁹⁸ Including investment consultants' fees would further reduce the performance of recommended products relative to their benchmark on a net basis.
84. Asset managers told us at the round table discussion that investment consultants are able to successfully negotiate discounts on their customers' behalf. Hence, the 'rack rate' AM fee for a product/asset class may not be representative of the effective fee level an investor would incur in practice. Our analysis of parties' data on the fees their customers pay to asset managers confirms that only a minority of customers pay the 'rack rate'. In our calculation of active returns 'net of AM fees' we have therefore incorporated discounts, which appear to be an important feature of pricing in this industry.
85. To obtain the level of discounts, we compared the data we received directly from the parties on pre- and post- negotiated fees and computed average discount rates across all customers (which we use in our headline results) and by investment consultant (which we use in our investment consultancy-specific results).⁹⁹
86. For the parties included in this analysis, we find that customers received a discount rate of approximately [X]%, on average. This rate varied across the parties included, although we note that this variation may be driven by the characteristics of their customers rather than their respective negotiating positions.
87. Our approach is different from the approach favoured by the FCA, which used the fees for segregated mandates to indirectly account for discounts. The justification for that was that segregated mandates¹⁰⁰ typically have negotiated fees. We consider that the FCA's approach risks mis-stating the fee discounts achieved by customers if those using segregated mandates are

⁹⁷ Vehicle types, are essentially 'wrappers' for investment product.

⁹⁸ Investment consultants' fees are non-negligible and can be as high as 30 bps per annum.

⁹⁹ Our calculations exclude outliers, negative implicit discounts and discounts above 100%.

¹⁰⁰ In its response, Mercer told us that it considers the fee level of segregated mandates to be representative as it reflects the structure of the CMA's dataset. See Mercer's response to the asset manager product recommendations working paper, paragraphs 2.29-2.34.

not representative of the broader customer base for investment consultants.¹⁰¹

88. In their responses to the CMA's working paper on asset managers recommendations and to the provisional decision report, parties have made special reference to the following points regarding our 'gross to net of fees' conversion methodology.
- (a) The CMA overstates the level of AM fees and understates the level of discounts that the investment consultants' customers receive.
 - (b) The CMA's gross to net of AM fees conversion fails to take into account passive fees.
 - (c) The CMA's gross to net of AM fees conversion does not adjust for withholding tax deductions of benchmarks where applicable.
 - (d) The CMA's gross to net of AM fees conversion does not take into account the additional costs associated with trading a foreign exchange hedge.
 - (e) The CMA does not take into account US Securities and Exchange Commission regulations and therefore risks understating gross returns.
89. We discuss these points in greater detail in the following paragraphs.

(a) Calculation of average level of fees and discounts used in our analysis

90. Some parties, namely Mercer, WTW and Redington have argued that the asset management fees used in our analysis are higher than those paid by their customers.¹⁰² In particular, they have argued that our use of a simple averages across AUM levels and vehicle types in computing the product-specific standard AM fee overstates the resulting level of AM fees for the following reasons:
- (a) AM fees vary markedly between vehicle types. By placing equal weight on each vehicle type¹⁰³ our methodology assumes that the customer base of each investment consultant is equally spread amongst the three

¹⁰¹ Hence the level of AM fees used in the FCA's headline analysis appears to be lower compared to our analysis.

¹⁰² Mercer's response to the asset manager product recommendations working paper, paragraphs 2.29-2.34 and paragraphs 12-19 of the Annex submitted on behalf of Mercer on April 19, 2018. Willis Tower Watson submission of April 20, 2018 in response to CMA's working paper on asset manager product recommendations, paragraph 2.27(a). Confidential submission from Redington's authorised advisers, April 19, 2018 paragraphs 3.1-3.3.

¹⁰³ Including vehicle types that are rarely used in the UK as noted by Willis Tower Watson in its submission of April 20, 2018 in response to CMA's working paper on asset manager product recommendations.

vehicle types and hence does not yield fees that are representative of the fees paid by the parties' customers.

- (b) By averaging across AUM levels, the CMA's standard fee calculation does not take into account the tiered fee structure that is used in reality.
- (c) The presence of some distortive outliers appears to inflate the average fees calculated.

91. In the same vein, some parties (namely Aon, WTW and Redington) have argued that by calculating a simple average of implicit discounts across all products¹⁰⁴ (including passive products, which are not relevant for the analysis) we mis-state the average AM fee discount rate that they secure for their customers.¹⁰⁵
92. We acknowledge that the data used to compute these discount rates may not be fully representative. We do not have discount data for smaller customers, and due to returns containing missing or poorly populated fields, we had to drop many records. Nevertheless, we consider that the former issue is likely to overstate the average discount achieved, and the latter is not likely to have a systematic effect. Therefore, we do not think these issues are likely to affect the conclusions we have drawn from the analysis.
93. In paragraphs 125 to 128 below we have tested the sensitivity of our results to using (a) AM fees that are 50% lower compared to the product-specific average fees calculated by averaging across AUM levels and vehicle types and; (b) an average discount rate of [X]%¹⁰⁶ instead of our estimated average discount rate of [X]%.

(b) Accounting for passive fees

94. Several parties (namely Mercer, WTW, Redington, PLSA) have told us that pension schemes are subject to management fees when investing in passive tracker products (ie benchmarks) and therefore our calculation of returns 'net

¹⁰⁴ We note that the data set does not allow us to compute product-specific discount rates.

¹⁰⁵ Response from Aon to CMA's working paper on asset manager product recommendations, paragraph 3.2 and A.3.3 in the accompanying Annex and; Aon's response to the provisional decision report. WTW submission of April 20, 2018 in response to CMA's working paper on asset manager product recommendations, paragraph 2.27(b). Confidential submission from Redington's authorised advisers, April 19, 2018 paragraphs 3.4-3.8.

¹⁰⁶ The sensitivity level for the discount rate is equal to 1.5 x [X]% (ie the implied average level). Our analysis of the data suggests that 70% of observations in the data are associated with discounts up to [X]%.

of fees' should also account for the appropriate fee level for each passive benchmark.¹⁰⁷

95. Mercer submitted that most passive products tend to attract management fees between [X] and [X], depending on the product category.¹⁰⁸ WTW told us that passive fees vary between 3 bps and 40 bps, depending on the AUM level and the asset category. WTW also submitted an additional piece of analysis using its own ratings and incorporating passive fees of 5 bps, 10 bps and 20 bps.¹⁰⁹
96. We consider our baseline approach to be more appropriate, as the focus of our analysis is to test whether investment consultants are able to identify products that out-perform their benchmarks on average, rather than compare the average gains from active management with the average gains from passive management.¹¹⁰
97. We have also considered assessing quantitatively whether investors are on average better off when they choose actively managed products over passively managed products. We have therefore tested the sensitivity of our results to incorporating different levels of passive fees. In particular, we have repeated our analysis (a) incorporating passive fees of 5 bps, 10 bps, 20 bps and 40 bps and; (b) incorporating estimates of asset-specific passive fees we obtained from the FCA. We present the results of our sensitivities in paragraphs 129 to 133 below.

(c) Tax assumptions

98. Aon submitted that for some products the CMA uses benchmarks that are gross of withholding tax despite the product claiming its tax, which results in

¹⁰⁷ Mercer's response to asset manager product recommendations working paper, paragraphs 2.30 and 2.31. Willis Tower Watson submission of April 20, 2018 in response to CMA's working paper on asset manager product recommendations, paragraphs 2.22-2.24, results reported in Tables 4-6 and confidentiality ring submission of WTW's authorised advisers of April 19, 2018 and; WTW's response to the provisional decision report. Redington's response to CMA's working paper on Asset Manager Product Recommendations dated April 10, 2018. PLSA response to CMA working paper on Asset Manager Product, dated April 5, 2018.

¹⁰⁸ Mercer's response to asset manager product recommendations working paper, paragraph 2.31.

¹⁰⁹ WTW finds that its own 'buy-rated' products outperform their benchmarks to a statistically significant extent for all assumed levels of passive fees when they use Newey-West SE or product-level clustered SE. See WTW submission of April 20, 2018 in response to CMA's working paper on asset manager product recommendations, paragraphs 2.22-2.24 and results reported in Tables 4-6 as well as the confidentiality ring submission of WTW's authorised advisers of April 19, 2018.

¹¹⁰ The focus of our analysis is on 'active returns' ie on how the performance of buy-rated AM products compares to the performance of the market, which is represented by the performance of the benchmark. Benchmarks, especially index trackers, are typically non-investible products. Arguably, the more a fund departs from a tracking index, the higher the running costs and resulting fees.

the understatement of both the gross and net active returns for these products.¹¹¹

99. As we state in our working paper,¹¹² multi-country strategies typically choose a benchmark which reports returns on a net basis, meaning withholding tax deductions that are applied to dividends prior to investment. In its analysis, the FCA found that only 11% of products are affected by this issue and that the overall bias was likely no higher than 5 bps, a relatively small amount. As per the FCA's approach and given that this poses only a limited concern we have decided not to incorporate the proposed change in our baseline methodology.¹¹³

(d) Foreign exchange hedge

100. Aon submitted that the foreign exchange hedged benchmarks recorded in eVestment do not take into account any additional costs of trading a foreign exchange hedge.¹¹⁴
101. We note Aon's concern but have decided not to address it further on the basis that:
- (a) As is acknowledged by Aon, there is no readily available source for the actual market cost of foreign exchange hedges.
 - (b) No other party has raised this point. We therefore think that even if there are additional costs associated with trading a foreign exchange hedge, these costs are not sufficiently significant to warrant correction.
102. To the extent that such costs are material, our analysis likely underestimates the net active returns of recommended products and thus understates the ability of investment consultants to identify products that improve their customers' investment returns. We consider this in interpreting the results.

¹¹¹ Annex to Aon's response to CMA's working paper on asset manager product recommendations, part A.3.4 and; Aon's response to the provisional decision report, paragraph 3.13.1.

¹¹² Slide 11.

¹¹³ In the Annex to Aon's response to the CMA's working paper on asset manager product recommendations, Aon's advisers have identified in our sample, products that use benchmarks that are gross of withholding tax where net of withholding tax benchmarks should have been considered instead as the products themselves claim tax. The quantitative analysis submitted by Aon uses benchmarks net of withholding tax for these products. Following the publication of our provisional decision report, we have tested the sensitivity of our analysis to incorporating these 'corrected' benchmarks submitted by Aon. Our results are robust to this sensitivity across specifications (ie we continue to find no evidence that recommended products outperform their benchmarks on a net of fees basis). Our updated results provide further reassurance that tax assumptions pose a limited concern for our analysis.

¹¹⁴ Annex to Aon's response to CMA's working paper on asset manager product recommendations, part A.4.

(e) Gross returns and SEC regulations

103. Aon told us ‘it believes that’ when reporting net return information to eVestment, AMs typically convert from gross returns by subtracting the highest fee reported by eVestment, in line with SEC regulations. Hence, by adding the average fee to the net AM return in order to obtain the gross return, the CMA understates the gross return by an amount equal to the difference between each fund’s average and maximum fees.¹¹⁵
104. We note Aon’s concern but have decided not to address it further on the basis that:
- (a) No other party has confirmed that Aon’s understanding of how AM managers report net returns to eVestment is correct.
 - (b) Given that we already find evidence of outperformance for ‘buy-rated’ products (relative to their benchmarks) on a gross basis, this would not change the direction of our results.

Standalone analysis for Mercer

105. We have also conducted an analysis for Mercer using its GIMD database. We have conducted the same tests and used the same econometric specification and methodology as we did for our aggregate analysis and for the other ICs in our sample.
106. When processing the data from Mercer’s GIMD we applied the same methodology we used to process data from eVestment, where feasible. One notable difference however, is that, in the Mercer analysis, the ‘rack rate’ fee for a given product was calculated on the basis of fees for the vehicle type that is most relevant for a UK investor, as submitted by Mercer, and for which data was available. In the eVestment analysis, the ‘rack rate’ fee for a given product was calculated by averaging across fees for different vehicle types.

Results

Results of our baseline test

107. Table A2.2. presents our baseline results on a gross and net of AM fees (adjusted for the average discount) basis.

¹¹⁵ Response from Aon to CMA’s working paper on asset manager product recommendations, paragraph 3.2 and A.3.2 in the accompanying Annex.

Table A2.2: Baseline results

	<i>Average active returns per quarter (%)</i>	
	<i>Gross</i>	<i>Net</i>
Buy	0.231*** (0.004)	0.041 (0.608)
Observations	39	39

pvalues in parentheses

*** p<0.01, ** p<0.05, * p<0.1

108. We found that ‘buy-rated’ products outperform their respective benchmarks on a gross basis by 23.1 bps per quarter on average, to a statistically significant extent. We further note that on a gross basis all products in our sample,¹¹⁶ regardless of their rating, outperform their respective benchmarks by 17.4 bps per quarter on average at the 1% significance level. In other words, any randomly selected AM product, would in expectation outperform the market by that margin.
109. Once we account for ‘AM fees’ however, we no longer find statistically significant outperformance for ‘buy-rated’ products relative to their benchmarks. In other words, because of the variability in the performance of ‘buy-rated’ products, we are not in a position to state that the observed net outperformance of recommended products as against their respective benchmarks (by 4.1 bps per quarter on average) is not entirely attributable to chance.

Additional results and sensitivities

110. We have further tested the sensitivity of our results by:
- (a) using an alternative test (ie whether ‘buy-rated’ products outperform ‘unrated’ products);
 - (b) employing an alternative methodology (panel model);
 - (c) performing our analysis separately for each investment consultant;
 - (d) assuming a higher average AM discount rate/a lower level of average AM fees;

¹¹⁶ We refer here to our working data set ie the data set resulting after we have implemented the data cleaning and the data restrictions discussed in paragraphs 25 to 55.

- (e) incorporating passive fees;
- (f) alternative ways of correcting for the backfill bias;
- (g) considering a different time period not exposed to the financial crisis of 2007-8; and
- (h) performing our analysis separately for each asset class;

(a) Alternative comparator test: ‘buy rated’ vs ‘unrated’

111. Alongside our ‘baseline test’, we have also looked at the performance of ‘recommended’ asset management products, relative to that of other actively-managed asset management products that an investment consultancy customer may have invested in, if they decided not to take investment consultants’ recommendations into account.
112. In particular, we tested whether the difference in active returns for ‘buy-rated’ and ‘unrated’ AM products is positive to a statistically significant extent, on average. The results of our secondary test are summarised in Table A2.3.¹¹⁷

Table A2.3: Results of our secondary test

	<i>Average active returns per quarter (%)</i>	
	<i>Gross</i>	<i>Net</i>
Buy - Unrated	0.097 (0.215)	0.066 (0.465)
Observations	39	39

pvalues in parentheses

*** p<0.01, ** p<0.05, * p<0.1

113. We found that the net (of AM fees) active return of ‘buy-rated’ products was higher than that of ‘unrated’ AM products, but not to a statistically significant extent. More specifically, the active returns net of fees for ‘buy-rated’ products are higher than the net active returns for unrated products by approximately 7 bps per quarter on average. The absence of statistical significance implies that the observed outperformance of ‘buy-rated’ products may be entirely due to chance.

¹¹⁷ We have run an ordinary least squares regression of the difference in gross and net (of AM fees) active returns between ‘buy-rated’ and ‘unrated’ products on a constant term using heteroskedasticity and autocorrelation consistent standard errors.

(b) Alternative Methodology - Panel Data

114. Table A2.4, presents the results of our alternative methodology (ie the results of repeating our analysis on a product-quarter level data set using a panel model).

Table A2.4: Panel data methodology

	Average active returns per quarter %			
	Gross		Net	
	Driscoll Kraay SE	clustered SE (product)	Driscoll Kraay SE	clustered SE (product)
Buy	0.228*** (0.007)	0.228*** (0.000)	0.044 (0. 612)	0.044 (0. 241)

pval in parentheses

*** p<0.01, ** p<0.05, * p<0.1

115. We find that the gross product return of ‘buy-rated’ products is 23 bps higher than their respective benchmark returns per quarter, on average. The net of AM fees active return of ‘buy-rated’ products is also positive on average (by 4.4 bps per quarter), though not to a statistically significant extent.
116. We note that our point estimates are not affected by our choice of standard errors specification. In addition, we observe that the choice of standard errors specification does not make a difference for the significance of our results.
117. Overall, results are robust to the different econometric models used. Therefore, our findings are not contingent on our choice of baseline econometric model (ie time series or panel model) or our choice of standard errors specification (ie Driscoll Kraay or clustered at the product level).

(c) Investment Consultancy breakdown

118. In addition to our aggregate approach, which combines investment consultants, we have repeated our quantitative analysis for each of the eight investment consultants in our sample individually, using the same methodology except for the fact that we calculated discounted ‘rack rates’ using investment consultant-specific average discounts.
119. We have also conducted an analysis for Mercer using Mercer’s GIMD.¹¹⁸ Mercer submitted data for a longer time period between 2000 and 2017,

¹¹⁸ Mercer does not subscribe to eVestment and therefore we were not able to include it in our aggregate quantitative analysis.

which allowed us to increase sample size and undertake an extended analysis over 17 years.

120. The results of our investment consultant-specific analysis (including Mercer) are summarised in Table A2.5. below.

Table A2.5: Investment consultant breakdown (baseline test, time series model)

[X]

121. We found that the net active return of 'buy-rated' products is positive on average for all investment consultants but one ([X]). Net outperformance of 'buy-rated' products for different investment consultants ranges between 2.6 bps and 23.4 bps. Results on outperformance, net of AM fees are statistically significant for [X] (at the 10% level) and [X] (at the 5% level of significance).
122. We note that the results for Mercer are not comparable to the results for other investment consultants (a) as the analysis for Mercer is based on a different data set; (b) extends over a longer time period and; (c) features some differences in the methodology, notably regarding the gross to net of AM fees conversion of returns.
123. For completeness, we have also conducted the investment consultant-specific analysis using the alternative methodology (panel model). Results are reported in Table A2.6. Under our preferred specification (Driscoll-Kraay SE), results are broadly robust to this exercise.¹¹⁹

Table A2.6: Investment Consultant breakdown (baseline tests, panel model)

[X]

124. Net active returns of 'buy-rated' products continue to be positive on average for all but one ([X]) investment consultant. Net outperformance of 'buy-rated' products for different investment consultants ranges between 3.6 bps and 18.6 bps. However, results on outperformance, net of AM fees, are statistically significant for [X] (at the 5% level) and [X] (at the 10% level) under our preferred specification (Driscoll Kraay SE).

(d) Sensitivities with the level of AM fees and the average discount rate

125. As we have discussed in paragraphs 91 to 93, some parties have submitted that our average product-specific AM fees are materially higher compared to the fees incurred by their customers whilst our average discount rate of 13%, understates the level of discounts that their customers enjoy. We have

¹¹⁹ The point estimates for some ICs have been affected.

therefore tested the sensitivity of our results to assuming (a) product-specific AM fees that are 50% lower compared to the average fees calculated by taking a simple average over AUM levels and across vehicle types and (b) an average discount rate of 19.5%.

126. We have conducted this sensitivity using both our baseline econometric model (time series with Newey-West standard errors) and our alternative methodology (ie panel model both with product-clustered and Driscoll-Kraay standard errors). Our results are reported in Table A2.7. and Table A2.8.

Table A2.7: Sensitivities with the level of average AM fees used in the gross to net conversion

*Net average active returns per quarter,
assuming 50% lower fees.*

	Time series	Panel Model	
	Newey West SE	clustered SE (product)	Driscoll- Kraay SE
Buy	0.106 (0.192)	0.109*** (0.004)	0.109 (0.214)

pval in parentheses

*** p<0.01, ** p<0.05, * p<0.1

127. When assuming a lower level of AM fees, we find that ‘buy-rated’ products outperform their respective benchmarks on a net of AM fees basis (across specifications). However, results are statistically significant only for the Panel Model with product-level clustered errors.

Table A2.8: Sensitivities with the level of the average discount rate used in the gross to net conversion

*Net average active returns per quarter,
assuming an average discount rate of 19.5%*

	Time series	Panel Model	
	Newey West SE	clustered SE (product)	Driscoll- Kraay SE
Buy	0.051 (0.530)	0.058 (0.121)	0.058 (0.503)

pval in parentheses

*** p<0.01, ** p<0.05, * p<0.1

128. We found that ‘buy-rated’ products outperform their respective benchmarks on a net of AM fees basis but not to a statistically significant degree, across specifications.

(e) Accounting for passive fees

129. As we have discussed in paragraphs 94 to 96, several parties suggested that our analysis should account for AM fees associated with investing in the benchmark product. We have therefore tested the sensitivity of our results to incorporating different levels of passive fees in our gross to net of AM fees conversion. In particular,

- (a) We have repeated our analysis incorporating passive fees of 5 bps, 10 bps, 20 bps and 40 bps.
- (b) Following the publication of our provisional decision report, we have further refined our sensitivity incorporating estimates of asset-specific passive fees we obtained from the FCA. 95% of the products in our working data set correspond to asset classes for which we have received estimates of passive fees from the FCA (equities, fixed income and balanced/multi-asset products). As we have not been able to obtain estimates for the passive fees associated with the remaining asset classes, we have assumed that these incur passive fees as high as 40 bps. We note however that actual fees are likely to be much lower than 40 bps for these products.¹²⁰

130. We present the results of our sensitivities (across methodologies), in Table A2.9. below.

Table A2.9. Accounting for passive fees

Econometric Model		Net average active returns of buy-rated products per quarter, accounting for passive fees (%)				Asset-class varying fees
		5 bps	10 bps	20 bps	40 bps	
Time series	(Newey-West SE)	0.054 (0.504)	0.066 (0.411)	0.091 (0.260)	0.141* (0.086)	0.085 (0.303)
	clustered SE (product)	0.057 (0.133)	0.069* (0.067)	0.094** (0.013)	0.143*** (0.000)	0.087** (0.022)
Panel	Driscoll-Kraay SE	0.057 (0.515)	0.069 (0.427)	0.094 (0.282)	0.143 (0.105)	0.087 (0.329)

pval in parentheses

*** p<0.01, ** p<0.05, * p<0.1

¹²⁰ In other words, by assuming (on an extremely cautious basis) that all remaining products incur passive fees as high as 40 bps, we are more likely to find statistically significant outperformance for products recommended by the ICs. Particularly so given that some of these products fall in asset classes where recommended products are associated with higher net active returns per quarter on average (see Table A2.13.).

131. Under our original sensitivity we did find evidence (at the 5% significance level) that 'buy-rated' products outperform on average their respective benchmarks on a net of AM fees basis when assuming that all benchmarks are associated with management fees of 20 bps or above and only for our least preferred econometric specification (i.e. the pooled OLS model with product-level clustered SE).¹²¹ Moreover, it is only under this specification that we find evidence of net outperformance for 'buy-rated' products when using asset class specific fees (updated sensitivity).
132. Overall, incorporating passive fees in our gross to net of AM fees conversion does not affect our baseline results when, consistent with the evidence we have received, we assume that the benchmarks in our data are associated with fees ranged between 5 to 20 bps.

(f) Alternative ways of correcting backfill bias

133. In paragraphs 43 to 49 we have explained why we are concerned about backfill bias in our data set. To further investigate our concerns, we have tested whether the difference in active returns of recommended AM products for which asset managers have backfilled observations¹²² and the active returns of recommended products for which no backfilling has occurred is positive to a statistically significant extent, on average. Our results are summarised in Table A2.10. below.

Table A2.10: AM products with backfilled returns perform better on average.

Average difference in net active returns of 'buy-rated' products with and without backfilled returns per quarter (%)

	Gross	Net
Newey West		
SE	0.457***	0.339*
	(0.007)	(0.087)

pval in parentheses

*** p<0.01, ** p<0.05, * p<0.1

134. On a gross of AM fees basis, recommended products with backfilled returns, outperform recommended products with no backfilled returns by 45.7 bps per quarter, on average. Results are highly statistically significant. On a net of

¹²¹ For passive fees as high as 40 bps we also find some evidence of marginally statistically significant outperformance for recommended products for our preferred specification. However, assuming that all the benchmarks in our data set incur management fees as high as 40 bps is an extremely conservative approach to account for passive fees. Hence, results under this sensitivity are more likely to be statistically significant under any specification. Based on the evidence we have received from the Parties and the FCA, we understand that the majority of benchmarks are associated with fees ranged between 5 to 20 bps. As shown in Table A2.9, incorporating passive fees within this range in our analysis does not affect our baseline results.

¹²² And which are currently removed from our data set as per our preferred backfill bias correction technique.

AM fees basis, active returns of recommended products for which AM have backfilled returns prior to their reporting date are on average 33.9 bps higher per quarter compared to the active returns of products for which no backfilling has occurred.¹²³ These findings strengthen our concerns that managers' backfilling practice and in particular the selective reporting of outperforming products, would expose the analysis to the risk of overstating product returns.

135. An additional concern is that our preferred approach to correcting for backfill bias incurs a substantial loss of information. That being said, we also note that despite discarding many observations, our approach does not further distort the ratings composition or the asset class mix of our data.
136. We have considered whether there are more efficient ways (in terms of information loss) in addressing backfill bias. We have therefore performed the following exercises:
 - (a) we have repeated our analysis using the FCA's baseline methodology;
 - (b) we have tested the sensitivity of our preferred approach and entirely removed products for which their inception date and the date they were listed on eVestment were at least two, three or four quarters apart.¹²⁴ The justification for this sensitivity is to relax the requirement for immediately reporting newly incepted products to eVestment (ie within the same quarter), acknowledging that a delay does not necessarily reveal managers' intentions selectively to report well performing products. However, the longer it takes an asset manager to report a new product to eVestment the more likely it is that they expect the product to prove outperformance before adding it to the eVestment universe.
137. The results of each of the sensitivities outlined in (a) – (b) are presented in columns (1) to (4) in Table A2.11. below.

¹²³Results are only marginally statistically significant (at the 10% level). As previously noted, the lack of statistical significance implies that the observed outperformance may be due to chance.

¹²⁴ For products added within n-1 quarters after their inception date (where n=2,3,4) only backfilled returns are dropped, as per FCA's methodology, whereas products that have been added at least n quarters after the inception date are entirely dropped from our sample.

Table A2.11: Alternative ways of dealing with the backfill bias

		<i>Net average active returns of 'buy-rated' products per quarter (%)</i>			
		(1)	(2)	(3)	(4)
<i>Time series</i>	<i>Newey West SE</i>	0.066 (0.409)	0.040 (0.620)	0.048 (0.548)	0.059 (0.459)
	<i>clustered SE (product)</i>	0.069* (0.059)	0.043 (0.255)	0.050 (0.174)	0.061 (0.101)
<i>Panel</i>	<i>Driscoll Kraay SE</i>	0.069 (0.398)	0.043 (0.620)	0.050 (0.549)	0.061 (0.460)
pval in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

138. Our results are robust to all these sensitivities for our preferred specifications. However, we do find some evidence of outperformance (at the 10% level of statistical significance) for our panel model with product-level clustered SE when using the FCA's backfill bias correction.

(g) Different time period

139. We have also performed our analysis for the years 2012 to 2015 in order to see whether AM product recommendations perform better outside times of extreme 'system stress' (ie a number of years after the financial crisis of 2007-8).
140. Our results across specifications, are summarised in Table A2.12. below.

Table A2.12: Results for the period 2012-2015

		<i>Average active returns of 'buy-rated' products per quarter, 2012-2015 (%)</i>	
		<i>Gross</i>	<i>Net</i>
<i>Time Series</i>	<i>(Newey West SE)</i>	0.273*** (0.004)	0.051 (0.515)
	<i>clustered SE (product)</i>	0.276*** (0.000)	0.055 (0.210)
<i>Panel</i>	<i>Driscoll Kraay SE</i>	0.276*** (0.004)	0.055 (0.483)
pval in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

141. On a gross of AM fees basis, we found that over the period considered, recommended products outperform their benchmarks by approximately 27 to 28 bps (depending on the specification) on average per quarter, compared to 23 bps when the entire time period for which data is available is considered. When accounting for AM fees, the active return of 'buy-rated' products was positive on average (5.1 bps to 5.5 bps per quarter depending on the specification, compared to 4.1 for the period 2006 to 2015), but not to a

statistically significant extent. The results of our sensitivity indicate that our analysis and findings do not understate investment consultants' ability to improve their customers' investment returns by recommending products that outperform the market as a result of the financial crisis.

142. In its response to our working paper, Mercer submitted a piece of analysis where the years 2007 and 2008 have been excluded from the data set to eliminate the distorting effects of the global financial crisis. Focusing on this period, Mercer finds some evidence (at the 10% level of significance) that recommended products outperform their respective benchmarks on a net of AM fees basis.¹²⁵
143. According to Mercer, this suggests that for at least seven of the ten years studied by the CMA, the results demonstrate the skill of investment consultants in identifying outperforming AM products.
144. Our concern regarding Mercer's approach is that the boundaries of a financial crisis are not clearly identifiable as their effects tend to linger and so the period 2009 to 2012 can also be seen as a period characterised by high systemic risk for international and, in particular, European financial markets. Mercer's analysis highlights that the choice of time period over which to estimate the performance of AM products is likely to have a material effect upon the results.

(h) Asset class breakdown

145. We also conducted our quantitative analysis for individual asset classes, using asset class data in the eVestment database.
146. Our headline results are summarised in Table A2.13.

Table A2.13: Asset class breakdown

<i>Net (discounted 'rack rates') average active returns</i>				
	Equities	Fixed Income	Hedge Funds	Alternatives
Buy	-0.029	0.167	0.879	1.550
	(0.093)	(0.051)	(0.850)	(0.769)

pval in parentheses

*** p<0.01, ** p<0.05, * p<0.1

147. We found that 'buy-rated' products in all asset classes (other than equities) are on average higher compared to the returns of their respective benchmarks, but not to a statistically significant extent. We note though that

¹²⁵ See Mercer's response to CMA's Asset Manager Product Recommendations working paper (paragraphs 2.36 to 2.40).

we have seen evidence in marketing materials, tender documents and information provided to customers that investment consultants claim to 'outperform' in a range of asset classes, including equities.

148. Relatedly, the observed variation in net active returns that is observed across asset classes suggests that, in order to be in a position to assess whether recommended products outperform the market, investors should have access to information on net active returns for all asset classes.
149. In terms of informing our conclusions, we observe that equities and fixed income assets, which jointly account for c.90% of assets in our data set, have the lowest returns relative to their benchmarks. As previously discussed (see paragraph 55 above) the asset class composition of our sample may have affected our results.

Risk

150. Several parties have told us that investment returns are not the only consideration relevant to trustees. Indeed, investors consider risk to be least as important, or more important, than returns.
- (a) WTW referred us to the results of the CMA Survey which shows that risk management was ranked above achieving improved returns;¹²⁶
 - (b) Aon told us that some investors' objectives don't focus on outperforming market returns but instead on minimising absolute or relative risk and therefore that our approach is biased because it does not exclude the latter strategies from the analysis.
 - (c) Aon submitted that our analysis fails to capture non-directly observable aspects of the value generated by AM product recommendations such as their due diligence on asset managers.¹²⁷
151. Whilst we recognise that the process of manager recommendations is only part of the overall service that investment consultants provide to their customers and that risk is indeed an important consideration for trustees we further note that:
- (a) manager recommendations is an area which potentially adds value to investors and can reasonably be measured;

¹²⁶ Willis Tower Watson response to CMA's working paper on asset manager product recommendations, dated April 20, 2018, paragraphs 1.17, 1.18.

¹²⁷ Aon response to CMA's working paper on asset manager product recommendations paragraphs 1.14, 5.2-5.6.

- (b) as is reflected in the information materials investment consultants share with their customers, achieving improved investment returns is indeed an important investment objective where claims are commonly made.
152. We have therefore decided to focus our quantitative analysis on studying the relationship between investment consultants' recommendations and returns relative to the market. As such, we have not pursued any further analysis on risk.

Conclusions

153. In this appendix we set out the methodology and present the results of the quantitative analysis we have conducted in order to assess whether investment consultants add value for their customers by recommending AM products that outperform their benchmarks and hence improve investors' returns.
154. We have conducted analysis on both a gross and net of AM fees basis. We placed more weight on the latter, as these are more representative of the actual gains accruing to investors.
155. The results of our aggregate quantitative analysis (ie across products and across investment consultants) indicate that over the period studied (2006 to 2015) and for the investment consultants in our sample (Aon, WTW, Russell Investment, Hymans, LCP, Redington, KPMG and Capita) 'buy-rated' products outperform their respective benchmarks on a gross of AM fees basis by approximately 23 bps per quarter, on average. These results are highly statistically significant. This is also true however for all the AM products in our sample regardless of their rating, which are also found to outperform their respective benchmarks albeit by a smaller margin (17.4 bps per quarter, on average).
156. Once we take into account AM fees, we find that recommended products continue to outperform the market though only by 4 bps per quarter on average. These results are no longer statistically significant. In other words, because of the variability in the net active returns of 'buy-rated' products in the data, the observed outperformance against their benchmarks may be attributable to chance.
157. As such, our quantitative analysis does not demonstrate, one way or the other, whether investment consultants, viewed collectively, add value through this service. We do however find some evidence that certain investment consultants in our sample add value for their customers by recommending outperforming AM products on a net of AM fees basis.

158. We have carefully considered the methodology points raised by the parties in response to our working paper. We have therefore conducted a number of additional exercises to address the points that we considered merited further work. Under our preferred methodology, our baseline results are robust to these sensitivities.
159. In interpreting our results in terms of our broader assessment of market outcomes, we note however that they are subject to a number of limitations. In particular:
- (a) The asset class mix of our sample is biased towards equities and fixed asset classes, which have the lowest net active returns. The asset class composition of our working sample is not representative of the asset class composition of pension schemes' mandates, which may have led us to understate the overall ability of investment consultants to identify AM products that improve their customers' investment returns.
 - (b) We note that that AM product recommendations is only one of the services investment consultants offer to their customers. Therefore, the results of our quantitative analysis cannot be interpreted as implying that investment consultants do not add overall value to their customers.
160. Furthermore, our quantitative analysis has identified several factors relating to how the performance of AM product recommendations is reported (gross vs net of AM fees performance, backfill bias, simulation bias, time period covered) that we consider make it difficult for trustees to assess investment consultants' ability to select products that outperform their benchmarks. These are considered in chapter 5, where we assess the information available to trustees on the performance of recommended products.

Appendix 3: Trustee Engagement

TPR codes of practice and guidance

1. In this section we cover TPR's codes of practice and related guidance and initiatives, that assist trustees in fulfilling their regulatory requirements and managing their scheme effectively. We focus in particular on code of practice 7, as this relates specifically to 'trustee knowledge and understanding'.

Codes of practice

2. TPR has produced 14 codes of practice, which provide practical guidelines on how to comply with the legal requirements of pension regulation.¹²⁸ In this sub-section we highlight particular aspects of the codes of practice which directly relate to trustee engagement.

Code of practice 7 – trustee knowledge and understanding

3. [Code of practice 7](#) recognises that the level of knowledge and understanding required of a trustee will vary depending on the type of scheme, their role and their level of expertise. Trustees may take into account, for example, the size and maturity of the scheme and whether there is an investment sub-committee.
4. To ensure that every trustee acquires the required level of knowledge and understanding, TPR has developed the [trustee toolkit](#). Code of practice 7 states that 'the regulator is of the view that this is required study for new trustees unless [trustees] can find an alternative learning programme which covers all the items in the scope guidance at a level relevant for them and within the timescale allowed'. It is 'strongly' recommended that trustees review their knowledge and understanding at least annually.
5. Regarding professional trustees, the code of practice states that they should be appropriately qualified to fulfil their role, and be fully conversant with scheme documents, from the date of appointment onwards. (Non-professional trustees have a period of six months to do so from the date of their appointment.) It is also stated that 'experience will clearly be required

¹²⁸ TPR notes (eg [COP 7, p.4](#)) that 'codes of practice are not statements of the law and there is no penalty for failing to comply with them. Nevertheless, codes have legal effect; they must be taken into account by the regulator, a court or tribunal, if they are relevant to what is being decided'.

[for professional trustees] and it is likely that a formal qualification will be expected’.

Other codes of practice

6. Code of practice 3 (‘funding defined benefits’) states that ‘trustees should have sufficient and appropriate knowledge and understanding to enable them to provide sound and prudent oversight of the investment strategy. This may require having investment and/or risk management expertise within the trustee board in order to critically evaluate and oversee the investment strategy and associated risks, particularly where more complex investment strategies or risks are undertaken’.
7. Code of practice 13 (‘the DC code’) states that the trustee board should have sufficient breadth of knowledge and understanding to ‘fully understand any advice they receive’ and to be able to ‘challenge advice they are given’. Trustees are also expected to ‘regularly monitor the performance of their service providers’.

TPR guidance

8. TPR has produced a series of guidance documents to help trustees comply with their legal requirements (several guides directly accompany the codes of practice). Here we highlight particular extracts that directly relate to trustees’ engagement with their advisors and/or their levels of knowledge and understanding.
9. The guidance on ‘[relations with advisers](#)’ recommends that trustees should ‘regularly assess whether the adviser is good value for money’. Trustees should also ensure that they have a clear understanding of the fees being charged; this includes understanding how and when fees may be increased, and assessing the reliability of advisers’ cost estimates.
10. The guidance on ‘[scheme management skills](#)’ (accompanying code of practice 13) states that DC scheme trustees should assess advisors’ and service providers’ performance ‘against documented targets, measures and/or objectives on a regular basis’. It also notes that ‘monitoring the performance of advisors and service providers is a core element of the legal requirement on many trustee boards to assess annually the value for members provided by their scheme’.
11. ‘[DB investment guidance](#)’ (accompanying code of practice 3) recommends that if trustees consider fiduciary management an option for their scheme, they ‘should commit sufficient time and resources to the process of selecting

and appointing a fiduciary manager. This includes taking appropriate advice and considering a suitably wide range of potential managers, as for any other investment management appointment'. It is also suggested that trustees may wish to appoint an independent third party to advise on the selection of a fiduciary manager, and the ongoing monitoring and evaluation of their performance.

21st Century Trusteeship

12. TPR's [21st Century Trusteeship](#) campaign is a targeted communications campaign to clarify TPR's expectations of the actions that trustees should take to meet their requirements and to manage their scheme effectively. Trustees are prompted to assess their governance across a core list of standards, and are signposted to new and existing resources to help them do so.
13. Within the documentation, trustees are advised to assess their knowledge, understanding and skills annually and to evaluate the decisions they have made over the past year. It is also suggested that scheme Chairs conduct individual performance appraisals and ensure that there is an annual evaluation of the board's overall effectiveness.

Levels of engagement – regression analysis

14. Table A3.1: Levels of engagement – investment consultancy services Table A3.1. presents the results of five separate regressions considering the factors that potentially influence whether a scheme (i) switched, (ii) switched or tendered, (iii) conducted an internal review of fees and/or quality, (iv) conducted an external review of fees and/or quality, or (v) undertook any of these actions. The data is based on the [CMA survey](#).

Table A3.1: Levels of engagement – investment consultancy services

	(1) <i>Switched</i>	(2) <i>Switched and/or tendered</i>	(3) <i>Internal review</i>	(4) <i>External review</i>	(5) <i>Any of these actions</i>
DB	-0.03	-0.08	-0.00	-0.03	-0.02
DC	-0.13**	-0.18**	-0.09	-0.10**	-0.08
Small	0.06	0.01	-0.08*	0.02	-0.04
Large	0.10**	0.05	0.04	0.02	0.08**
Inv. Sub-Committee	-0.08**	-0.07	0.08*	-0.01	0.06
3 largest	-0.19***	-0.14***	-0.05	-0.01	-0.11***
Between 3-5 services	0.01	0.02	0.07	0.06*	0.05
Between 6-7 services	0.04	0.06	0.16**	0.10**	0.10

	(1) <i>Switched</i>	(2) <i>Switched and/or tendered</i>	(3) <i>Internal review</i>	(4) <i>External review</i>	(5) <i>Any of these actions</i>
Actuarial services	-0.02	-0.04	0.03	-0.01	0.04
Fiduciary management Services	0.11**	0.12**	0.02	0.10**	0.04
Scheme administration	-0.07*	-0.03	-0.06	-0.05	-0.06
Constant	0.34***	0.51***	0.55***	0.12**	0.69***
Observations	783	783	783	783	783
R-squared	0.07	0.04	0.05	0.03	0.05

*** p<0.01, ** p<0.05, * p<0.1

Standard errors are omitted for brevity. Omitted categories are hybrid, medium, no investment subcommittee, fewer than 3 services, no additional (non-IC) services.

Source: CMA analysis of CMA survey

The fiduciary management switching process and costs

15. In this section we detail the process and costs for switching between fiduciary management providers. As noted in the main text, switching fiduciary management provider typically involves a considerable upfront revision to the client's investment strategy; this generally requires assets to be moved from one set of funds to another. Due to this revision, and the potentially costly transfer of assets, the switching process usually involves both a planning phase and an implementation phase.
16. We cover these two phases in turn.

Planning phase

17. There are several aspects of the planning phase, many of which can occur concurrently. Key amongst these are strategic planning, legal reviews and transition planning.
18. The overall timings involved in this phase depend on the complexity of the scheme's investment strategy, the level of negotiation required between the trustees and the provider, and the frequency of trustee board meetings. Responses from parties to our information request indicate that this process can take anywhere from a week to several months.

Strategic planning

19. The trustees and the destination provider need to agree suitable investment objectives and any constraints that will be placed on the provider. Based on this, an investment strategy will be developed which will determine the

structure of the proposed investment portfolio. This will be underpinned by detailed statistical analysis, including the modelling of asset and liability movements under different scenarios.

20. These overarching investment objectives, guidelines and strategy will be incorporated into the investment management agreement (IMA), which is the contract between the client and the provider.

Administration and legal reviews

21. There are a number of administrative tasks that need to be completed, including tax documentation and anti-money laundering ('know your client') checks. Most importantly, the client and provider need to agree upon the IMA – ie the underlying contract. This will involve a period of negotiation and review by legal advisors.
22. We have limited visibility into approximate legal costs, and they will vary on a client-by-client basis. Aon has submitted however that they have negotiated special rates with a number of law firms that have experience with their documentation.¹²⁹ They will provide legal reviews of the IMA at a [X].
23. Depending on the arrangements of the destination provider, some schemes will be required to appoint a custodian, and those with an incumbent custodian will be required to complete relevant documentation. Particularly if a new custodian is required, this could take several weeks.

Transition planning

24. The destination provider will need to collect details from the trustees on the current investment arrangements of the scheme, including detailed account information and portfolio holdings. Based on this information, the provider will devise a transition strategy to reallocate the client's assets into the new portfolio (agreed as part of the strategic planning).
25. The provider will assess, for example, whether current investments need to be redeemed for cash, or whether some of them can be novated or transferred directly ('in specie'). Some funds, such as private market funds or property, may have 'lock-in' periods, which prevent the client from withdrawing assets without heavy penalties.

¹²⁹ Aon response to CMA information requests.

Implementation phase

26. The implementation phase is the process of transferring the client's assets into the new portfolio. As noted by a number of providers, the timing and costs involved vary considerably on a case-by-case basis and depend, in particular, on the complexity and liquidity of the client's current portfolio.

The transition process and timings

27. The time taken to transition assets from one portfolio to another varies considerably on a case-by-case basis. Overall timings are particularly affected by:
- (a) The client's current portfolio. If a client is invested in highly illiquid assets (such as private market funds or infrastructure), there may be significant exit charges and lock-in periods. It may be cost effective to transfer such assets gradually, or in some cases to keep the assets in the current investment until the fund is wound down.
 - (b) The process for redemption and investment. In some cases, clients may be able to transfer assets directly ('in-specie') between providers. In other cases, existing assets must be sold for cash before being re-invested in new funds.¹³⁰ If assets can be transferred directly, this can occur within a matter of days. Disinvesting (for cash) and reinvesting in new funds can be on a timescale of weeks or months.
 - (c) Frequency of trading. If funds are traded daily, then assets can be redeemed from a fund within a few working days. Some funds only allow quarterly redemptions however, whilst some require several months' notice.
28. It is therefore difficult to generalise about the length of time taken to transfer assets from one portfolio to another. Cardano for example submitted that the transition process could take between a number of days and a number of months; they stated that this depends on the liquidity of the initial portfolio and specific redemption terms.¹³¹ River & Mercantile submitted that the bulk of assets could be transferred within two to six weeks, but less liquid assets could take longer.¹³² Russell Investments submitted that it takes between five and 90 days to disinvest from the portfolio held by the previous fiduciary

¹³⁰ As an example, [X] fiduciary management solution for clients with assets below £[X] is to invest in 'fruitition funds'; clients have a choice of investing in [X] pooled funds. [X].

¹³¹ Cardano response to CMA information requests.

¹³² River & Mercantile response to CMA information requests.

management provider and five to 30 days to invest in the Russell Investments arrangements.¹³³

29. Each of the major fiduciary management providers has an in-house team to oversee or assist with the process of transitioning assets from the current portfolio to the targeted portfolio. The cost of this service is typically incorporated into the overall fiduciary management fee, although in some cases clients may be charged extra for particularly complex transitions.
30. Alternatively, schemes can appoint an external 'transition manager'. This is most likely to be done when the portfolio is particularly complex, and there are potential risks and/or costs that can arise during the transition. As an indication of the cost of an external transition manager, Aon has negotiated rates of [£] with [£].¹³⁴ This implies a cost of £[£] for a client transferring £100 million of assets.

Transaction costs

31. In the absence of entry and exit charges applied to investment funds (discussed below), the main costs involved in transferring assets are 'transaction costs' which are ultimately paid to the banks and brokers that trade the securities.
32. Transaction costs vary considerably by asset class. BlackRock has provided the following estimates of transaction costs for a number of major asset classes, including both the 'sell cost' and 'buy cost'.¹³⁵ A scheme switching from one portfolio to another would typically be required to pay both of these transaction costs. These costs are not specific to BlackRock products but are based on typical pooled fund spreads observed in the market and exclude any transition management fees.

Table A3.2: Typical transaction costs by asset class

<i>Asset class</i>	<i>Sell cost (%)</i>	<i>Buy cost (%)</i>
<i>Equities</i>		
UK equities	0.05 – 0.10	0.55 – 0.60
International developed equities	0.10 – 0.20	0.10 – 0.20
Emerging market equities	0.30 – 0.40	0.30 – 0.40
<i>Bonds</i>		

¹³³ Russell Investments response to CMA information requests.

¹³⁴ Aon response to CMA information requests.

¹³⁵ BlackRock response to CMA information requests.

Government bonds	0.02 – 0.05	0.02 – 0.05
Corporate bonds	0.20 – 0.60	0.20 – 0.60

Source: BlackRock. The above costs are as a % of assets traded. The costs are not specific to BlackRock products but they are estimated and based on typical passive pooled fund spreads observed in the markets.

33. A scheme's total transaction costs will therefore depend on the mix of asset classes in its current and proposed portfolios. Further, these costs may be significantly lower in cases where assets can be transferred 'in specie'.
34. A number of providers have submitted estimates of the overall transaction costs that might be incurred by pension schemes switching from one provider to another:
 - (a) Mercer submitted that the transaction costs incurred when disinvesting from Mercer funds for a scheme with 50% in growth assets would typically not be more than [X]% of assets.¹³⁶ They noted that a client might incur similar costs if reinvesting the assets with another fiduciary management provider. This implies that overall transaction costs (based on an upper bound of [X]% of assets) could be around £[X] for a pension scheme with assets of £[X] million.
 - (b) WTW submitted that based on their experience, average transaction costs were around 0.25% of assets for clients with assets below £1 billion. This falls to 0.1% for those with assets above £1 billion.¹³⁷ For a pension scheme with assets of £100 million, this would imply total transaction costs of around £250,000.
 - (c) Goldman Sachs submitted that depending on the proportion of total assets that are 'rebalanced' and their structure, transition costs could be below 0.25% of total assets.¹³⁸ This could rise to up to 0.5-1% of total assets. If costs were to reach 1%, this would amount to £1 million for a pension scheme with assets of £100 million.
 - (d) Schroders submitted that typical transaction costs of investing for a new client would be equivalent up to 0.08% of assets.¹³⁹ This would imply total transaction cost of around £80,000 for a pension scheme with assets of £100 million. If a Schroder's existing client redeems assets to another provider, the typical transaction cost would be

¹³⁶ Mercer response to CMA information requests.

¹³⁷ WTW response to CMA information requests.

¹³⁸ Goldman Sachs response to CMA information requests.

¹³⁹ Schroders response to CMA information requests.

equivalent to 0.07% of assets. This would imply total transaction costs of around £70,000 for a pension scheme with assets of £100 million.

- (e) River & Mercantile submitted 3 case studies in which a client switched into their fiduciary management service from another provider. Although they were only able to provide approximations, transaction costs were in the range of 0.1% to 0.3% of assets.¹⁴⁰

35. To put these figures in context, we note that the [Ernst & Young FM Fees Survey 2017](#) estimates a median fiduciary management fee (excluding investment management costs) of around 0.2 to 0.3% of assets per year, and overall fees (including investment management costs) of around 0.5 to 0.7% per year (for clients below £250 million).
36. Depending heavily on the complexity of the initial portfolio, transaction costs in some cases could therefore represent approximately a year's worth of fiduciary management fees.

Entry and exit charges

37. Apart from transaction costs, it is our understanding that most funds do not incur explicit entry or exit charges. The main exceptions to this are highly illiquid asset classes such as private markets, infrastructure and property. Investments in these asset classes may also be subject to lock-in periods, potentially lasting many years. As noted above however, such investments would not typically affect the switching process as they could be retained until the fund winds down.
38. Some funds may apply 'anti-dilution levies'. The aim of these levies is to protect remaining investors from fluctuations in the value of their holdings due to the exit of an investor. Such levies are therefore more likely to apply to larger investments, which may complicate the exit of particular funds.
39. SEI Investments for example submitted that disinvestment from its manager of manager funds may be subject to a redemption fee if the redemption amount from any particular fund represent more than 5% of the total assets of the fund; this is designed to protect other shareholders from the transaction costs associated with large redemptions.¹⁴¹

¹⁴⁰ River & Mercantile response to CMA information requests.

¹⁴¹ SEI Investments response to CMA information requests.

Variation across clients

40. The overall switching process and timelines appear to be broadly similar for DC and DB schemes. There is an additional complication in the case of DC however in that individual members' investments are likely to be impacted by the change, which will require communication with members and records to be updated. As noted by Aon, 'the extent and type of communication will impact the expected timescales'.¹⁴² River & Mercantile also note that individual members continue to contribute to their DC 'pot' during the transition process, and therefore a 'blackout window' may need to be put in place.¹⁴³
41. Parties indicated that there is no substantial difference between switching fiduciary management providers and moving into fiduciary management for the first time. Similarly, there appears to be no fundamental difference between the switching processes for full and partial fiduciary management. In practice, switching may be quicker in the case of partial fiduciary management as clients will not typically need to undertake the detailed strategic planning phase.

¹⁴² Aon response to CMA information requests.

¹⁴³ River & Mercantile response to CMA information requests.

Appendix A4: Assessment of survey evidence

CMA survey of pension scheme trustees

1. As part of our evidence-gathering, we contracted IFF Research Ltd (IFF) to conduct a survey amongst trustees of UK occupational pension schemes (CMA survey).
2. IFF's report of the findings from the CMA survey was published on our case page [here](#), along with a [technical appendix](#) that includes the questionnaire used with respondents. The survey tabulations were published alongside the report.
3. This final report draws on the findings from the CMA survey where indicated. In some cases, the results presented reflect our further analysis of the survey findings rather than the results as reported by IFF; this is indicated where applicable¹⁴⁴ and described in more detail below.
4. This appendix presents our assessment of those aspects of the CMA survey that we consider relevant when interpreting the CMA survey findings. It should be read alongside the IFF reports that include details on the survey methodology and analysis.

General interpretation of survey findings

5. We conducted a sample survey from a population of interest of just over 7,100 pension schemes and achieved 966 interviews. Most of the survey results presented in IFF's report and throughout this report are being used as estimates for this population of schemes and, as such, are weighted to match the distribution of pension schemes in the population (as described in IFF's technical appendix). Unless indicated otherwise, results in this report are also population estimates and are, therefore, subject to sampling error; examples of typical expected error margins around the point estimates, taking into account the weighting effects, are provided in IFF's technical appendix, but are not included here explicitly.
6. The CMA survey sought as many interviews as possible in the time available, and the achieved sample size is adequate for our purposes in most respects. Nonetheless, some of the sub-groups of interest are less prevalent or it was harder to recruit trustees to participate and the numbers of interviews achieved were, therefore, relatively small. We generally consider that for

¹⁴⁴ Where the results presented in this report are based on our further analysis of the CMA survey dataset, we refer to this as **CMA analysis of CMA survey**.

findings to be given full evidential weight in our inquiries, one requirement is that estimates should have a base size of at least 100 respondents. However, we still present here results derived from smaller base sizes where they are relevant to the discussion.

Respondent's ability to speak on behalf of the trustee board

7. As described in IFF's reports, we sought to interview the chair of trustees, or another trustee, who would be able to speak on behalf of the entire trustee board about the pension scheme in question. At the screening stage this was specifically clarified and it was confirmed that the potential respondent would be able to do so. The script was written accordingly and, throughout the survey, respondents were reminded from time-to-time to speak on behalf of the board. Most of the reported findings were weighted to the population of schemes in scope for the survey, such that an analytical unit is a pension scheme and the results are, therefore, being treated as population estimates at the scheme/trustee board level.
8. We recognise, however, that the respondent's ability to answer on behalf of the trustee board, or their tendency to reflect their own, individual position may have varied according to a number of factors, for example:
 - (a) the number and type of trustees on the board;
 - (b) the respondent's own position on the board and trustee type;
 - (c) the respondent's length of experience as a trustee for the scheme in question;
 - (d) the respondent's past and current experience as a trustee of other schemes, and
 - (e) the type of question asked: for example, in some cases less factual questions seeking opinions or attitudes may have tended to elicit responses that were more relevant to the individual interviewee rather than the trustee board as a whole.

Respondent's recall/knowledge

9. The ability of the respondent to recall, or provide answers concerning, certain facts about the scheme's use of investment consultancy and/or fiduciary management services may have been related to a number of factors, including:

Elapsed time

- length of time over which the trustee board had used investment consultancy/fiduciary management services;
- length of time since a relevant event, such as purchase from a specific supplier, date of a tender process, last time a provider was formally monitored;

Extent of knowledge

- whether the respondent was on the board of trustees at the time of the event in question, such as switching provider for investment consultancy or fiduciary management services, when a tender process was undertaken, or when a third-party evaluator was last used;
 - the respondent's experience as a trustee with the sampled scheme and their role on the board;
 - the type of trustee interviewed and the number of schemes for which they act as a trustee;
 - the individual's own level of knowledge and capability.
10. All the survey questions included a 'don't know' response option. For some questions, the extent of 'don't know' responses may suggest a lack of recall or knowledge on the part of a material number of trustees.
11. Again, depending on the question being asked, and its response options, there may be different possible interpretations of 'don't know' responses and, consequently, different approaches to their treatment.
12. Except where stated otherwise, for reasons of consistency IFF have retained 'don't know' responses in the denominator of their calculations. In our analysis, we have made judgements on how to treat 'don't know' responses on a case-by-case basis. Therefore, in some instances the findings presented in this report differ from those in IFF's report at least in part due to a different treatment of the don't know' responses.

Number of times an individual trustee was interviewed

13. IFF's technical appendix details how the sample was prioritised and how trustees were recruited to take part and screened. The intention was to interview an individual only once, notwithstanding that they may have been a trustee for multiple schemes in the sample.

14. Following the completion of fieldwork and analysis, it became apparent that there were a number of occurrences where the same individual had, in fact, been interviewed more than once, as follows:
 - (a) Twenty-four people were interviewed twice (affecting 48 schemes);
 - (b) Six people were interviewed three times (affecting 18 schemes);
 - (c) Therefore, in total, 30 people were interviewed more than once (affecting 66 schemes).
15. IFF have provided an explanation of the ways in which this came about, as follows:
 - (a) In general, the sample was filtered to avoid any individual being listed more than once, however, in some cases, when submitting information to TPR regarding trustee names and details, individuals had used different phone numbers and/or email addresses, making it impossible to entirely eliminate duplicate individuals. Duplicate individuals were not eliminated by name alone, due to the possibility of false positives being detected using this method.
 - (b) And, more commonly, when recruitment for interviews took place, as had been agreed, IFF took referrals to trustees not listed on the sample, but who could reasonably be expected to be eligible to take part. When a referral took place, it was not possible to detect duplicate contacts in real time against the existing sample, nor against the identities of those that had already completed surveys.
16. In our view, this extent of duplication will not have had a material impact on the survey results or quality, as in each interview the respondent was asked to speak on behalf of the trustee board for the sampled scheme, all of which were unique in the final survey dataset. Nonetheless, we note that there are some attitudinal questions where the responses may have reflected the individual's own views (as discussed above) and where within-subject effects may, therefore, have had a small impact on the estimates obtained.

Potential for response bias

17. Response bias will have occurred if:
 - (a) The achieved sample was not representative of the population of interest in respect of certain characteristics (after the incorporation of design weights); and

- (b) these characteristics are associated with respondents providing particular answers to survey questions; and
 - (c) it has not been possible to identify and correct for this bias (through additional weighting).
18. An example is where those individuals who are relatively more engaged in a market (than the average for the target population) have a greater propensity to respond to a survey about that market and to then provide responses that demonstrate high levels of engagement, such as searching and switching. Without corrective weighting, this would produce biased population estimates that suggest there is more engagement in the market than is actually the case. In practice, it is often difficult to identify and correct for any such biases, as insufficient information is available about the group who have not responded to the survey.
19. For the CMA survey it is not possible to rule out some degree of response bias. It is conceivable that the pension scheme trustee boards covered by those trustees who were interviewed may not be representative of the target population (even after applying design weights) in respect of certain characteristics that could be expected to be associated with the distribution of responses for some questions.
20. It is important to note that, should such a bias exist, it could arise in a variety of ways, not just because those who are more engaged in the market may be more likely to take part. It could be that, for example, those with a particular view of investment consultancy or fiduciary management services as a whole, or of their own provider(s), might be particularly likely to respond and to provide answers that bias the population estimates in a particular direction.
21. The dataset provided by TPR as the sampling frame for the CMA survey contained limited information to inform a comparison of the schemes responding to the survey with all schemes in scope. The TPR dataset didn't include variables likely to be associated with the trustee board's level of engagement or capability and, although it included a variable to record use of investment advisers, we had been advised by TPR that this was provided to them by schemes on a non-compulsory basis and unlikely to be a reliable measure of use of investment consultancy services for our purposes. Differences in distribution across scheme type and size bands were already corrected using design weights. We compared scheme-specific variables between the weighted achieved sample and the population, where available in both datasets; these didn't provide any compelling evidence that the

weighted achieved sample was not representative of the population, in respect of these variables.¹⁴⁵

22. We also compared the survey response dataset with client data provided by the parties to inform our investigation, in part to examine measures of engagement. We note that this was not a like-for-like comparison, that only limited relevant variables were available in a useable form across the various client datasets and that the quality and completeness of the client data was mixed. Variables looked at related to:
- (a) whether the scheme had an investment sub-committee;
 - (b) value of AUM;
 - (c) length of time the scheme had bought investment consultancy/fiduciary management services (from current provider[s]);
 - (d) switching, tendering and inviting proposals in the last five years;
 - (e) whether first fiduciary management provider was also an investment consultant at the time;
 - (f) tendering on first move to fiduciary management.
23. Notwithstanding the limitations highlighted at the paragraph above, we note that we did not find strong or consistent indications from the above comparisons that schemes participating in the survey appeared to be more engaged on average than the parties' clients. Whilst amongst surveyed schemes, tendering as part of the process for switching investment consultancy was higher and fewer schemes appointed the incumbent investment consultant as their first fiduciary manager (compared with parties' clients), fewer surveyed schemes had an investment sub-committee and other measures of switching and tendering were broadly similar.

Providers of investment consultancy and fiduciary management services

24. Trustees were asked during the interview if they used investment consultancy services and/or fiduciary management services and, if so, which provider(s) they used for each service bought and which were their main provider(s). Also, where applicable and for investment consultancy services only, which provider they had most recently switched from.

¹⁴⁵ Variables compared were: scheme status ('Closed', 'Open', 'Paid Up', 'Winding Up'); whether Master Trust (only applicable to DC schemes); number of trustees.

25. It was necessary for a survey conducted by telephone and that needed to elicit a high level of response to keep read-out text concise and avoid lengthy descriptions. It was also necessary to define investment consultancy services and fiduciary management services and we recognised that these terms would be less familiar to some trustees than others. The draft questionnaire was consulted on, tested through cognitive interviews and piloted, and a balance reached on how comprehensive we could make the definitions, and of fiduciary management services in particular.
26. The questionnaire was, of necessity, finalised at an early stage of our investigation and we provided lists of providers of investment consultancy services and of fiduciary management services known to the CMA at that time for interviewers to code responses against, together with the option of 'other – specify'.
27. Our subsequent analysis of the responses to questions where trustees were asked to name investment consultancy and/or fiduciary management providers highlighted that some trustees had cited companies that were either known not to be providers of investment consultancy services or fiduciary management services (as appropriate), or that we did not know whether or not the named company was a provider of the services in question.¹⁴⁶ Where a respondent had named such a company, this could mean that:
- (a) the company had been named correctly as a provider, but we had not found sufficient evidence during our market testing that it offered the services;¹⁴⁷ or
 - (b) investment consultancy or fiduciary management services were in fact purchased by the scheme, but we had confirmed the company which was named did not offer the services; or
 - (c) the scheme did not, in fact, purchase the services and the respondent had been confused by the meaning of investment consultancy or fiduciary management and given an incorrect response at the earlier question that asked what services were bought by the scheme (and had

¹⁴⁶ We are also including within this category the possible outcome whereby a respondent had correctly named a provider, but the interviewer had not recorded it correctly, either against the pre-code list we provided or as a free-text entry following an 'Other (specify)' response.

¹⁴⁷ However, in some cases we were able to map what was recorded on the survey dataset to existing providers where, although the names did not match perfectly they were so close that it was considered highly likely that the discrepancy arose due to imperfect recall or recording of names; in these cases we treated the response as being a provider of the investment consultancy or fiduciary management services.

subsequently been asked all the questions that assumed they bought the services).

It was not feasible to distinguish between the scenarios at (a), (b) and (c) above.

Providers of investment consultancy services

28. As discussed above, some companies named by survey respondents as providers of investment consultancy services were not known to the CMA as providers of these services. However, the proportion of such responses was relatively low, and we recognised that because of the nature of advisory services it is particularly difficult to rule out, without additional research on a case-by-case basis, the possibility that a named company does in fact provide investment consultancy services.
29. In view of this, we decided to assume, for the purposes of analysis of survey data, that all companies named by respondents as providers of investment consultancy services did provide these services to the schemes which cited them.

Providers of fiduciary management services

30. It was more common for companies not known to the CMA to be named in response to questions about providers of fiduciary management services than in response to questions about providers of investment consultancy services. This is likely to reflect, in part, that fiduciary management services are less widely used and understood and, therefore, less familiar amongst trustee boards. There are a number of different ways that fiduciary management services may be described and it is also possible to have a 'partial mandate' arrangement that may have added to confusion amongst some trustees.
31. We refer to a company that we have confirmed does provide fiduciary management services to be a 'confirmed provider of fiduciary management services'. It is possible that this group excludes some valid providers of fiduciary management services named by trustees that are not known to the CMA. However, for certain analyses, we chose to take the approach that minimised the risk that results would be distorted by the inclusion of cases that didn't purchase fiduciary management services.
32. A total of 71 companies were named in the survey as being a main provider of fiduciary management services (though only a small minority of schemes said they used more than one provider for fiduciary management services).

However, in terms of the proportion of the 279 schemes (26% of all schemes) that said they bought fiduciary management services, the 15 confirmed providers of fiduciary management services (cited by survey respondents) cover 50% of these schemes. If all schemes that named a non-confirmed provider of fiduciary management services as their main provider were considered not to buy fiduciary management services at all, then we would estimate that 145 schemes (or 13% of all schemes) buy fiduciary management services.¹⁴⁸

33. Some of our internal analysis included sensitivity testing to establish whether different treatment of cases where non-confirmed providers were cited produced materially different findings. The way responses were treated in the analysis presented in this report varied depending on the survey questions being used to inform the analysis and whether or not the results were sensitive to different approaches. Generally speaking, analysis based on questions that could be expected to be reliably answered only by those that bought fiduciary management services included only those cases where a confirmed provider of fiduciary management services had been named by the respondent.
34. This means that some results presented in this report differ from apparently similar measures in IFF's report, at least in part for the above reason; there may also be differences within this report, depending on the analysis undertaken and its purpose.

Respondents' views on ease of monitoring of existing providers and of assessing bids

35. Where we consider that it is the most appropriate approach to take, we only report the percentage claiming to find aspects of monitoring and assessment to be 'very easy'. However, where both 'very easy' and 'fairly easy' responses are included, we report them separately; this reflects our view that, in this case, combining these categories to form an 'easy' category (which is an approach often taken in reporting survey findings) is less transparent and more likely to be open to misinterpretation.
36. Overall, high proportions of trustees stated that they found a range of aspects of monitoring and assessment to be 'very easy' or 'fairly easy'. While there are significant differences between some sub-groups for particular questions, these are often relative to high average proportions.

¹⁴⁸ The numbers and percentages of schemes buying fiduciary management services are scheme-weighted, consistent with the presentation throughout our final report.

37. We consider that the claimed levels of ease of monitoring and assessment do not necessarily imply that information provided by investment consultants and fiduciary managers is consistently clear, regular and comparable, nor that trustee boards are necessarily demonstrating widespread capability in the market. Rather, we consider that the 'very easy' and 'fairly easy' responses are likely to reflect a mix of:
- (a) clear and comparable information being assessed by engaged and capable trustees;
 - (b) clear and comparable information being assessed by trustees who are less engaged and/or capable; and
 - (c) less clear and/or comparable information being assessed by trustees who are less engaged and/or capable.
38. In support of the above view and to aid interpretation of these results, we note the following:
- (a) Information provided to trustee boards by providers, or potential providers, is highly variable, for many reasons. For example, information provided may depend on characteristics of the scheme, trustee board and services bought/offered; different methodologies and technical assumptions used by providers may mean that the information presented is not as clear or comparable as trustees assume. Trustee boards surveyed will generally only have access to those documents relevant to their own scheme(s) and will not have been assessing information on a 'like-for-like' basis, and some 'very easy' or 'fairly easy' responses may reflect trustees not knowing 'what good looks like'.
 - (b) As discussed above, we cannot rule out the potential for a degree of response bias in our survey. This could have occurred, for example, if those schemes with more engaged or capable trustee boards were more likely to respond to the survey and so were over-represented in the achieved sample (even after weighting). If this were the case, we would reasonably expect such a sample to find monitoring and assessment tasks easier than average in the target population as a whole.
 - (c) We purposefully prioritised interviewing the trustee who was most able to speak knowledgeably on behalf of a pension scheme trustee board, more often than not the chair. These respondents may, typically, also be more experienced in tasks associated with monitoring and assessment and, therefore, find them easier. Even though respondents were asked to answer on behalf of the board as a whole, it is

conceivable that in some cases the individual may not have done this for attitudinal questions of this type.

- (d) Furthermore, questions concerning the ease of understanding and comparing proposals were asked only of those who had engaged in the market by tendering and, in some cases, switching provider, so these responses reflect the views of relatively more engaged trustee boards.
- (e) The question about ease of monitoring aspects of the existing main provider's offering was, intentionally, asked before the question that sought to establish the types of monitoring that had actually been undertaken within the last three years. Some trustee boards had undertaken none of the specific types of monitoring activity we asked about. It is likely that some responses regarding claimed ease of monitoring may have been less informed than others, for example where they were not based on actual experience.
- (f) Other evidence we have collected to inform our investigation indicates that there is considerable variation in the level of detail and clarity in information provided and that in some communications with trustee boards information from providers on fees, performance and quality is not clear, regular and comparable. This is consistent with the view expressed above that the levels of ease of monitoring and assessment claimed by survey responses do not necessarily imply that information provided to trustee boards is consistently clear and comparable.

39. In relation to our assessment of survey quality, we note the following:

- (a) We purposefully conducted a large-scale quantitative survey that would primarily provide robust estimates of factual information to inform our investigation.
- (b) In doing so, we recognised that responses to some attitudinal questions would be harder to interpret, including where they were limited to rating-scale response options. They reflect perceptions rather than facts and we interpret the findings accordingly. Also, responses to such questions may be more likely to reflect the attitudes of the individual respondent than the trustee board as a whole.
- (c) Following the CMA survey, we conducted some further trustee engagement, including with groups of trustees who had responded to the survey, to complement our survey findings by examining some aspects in more depth than had been possible in the survey script. This included exploring trustees' views on the information provided by

investment consultants and fiduciary managers to trustee boards as part of an existing relationship or a tender.¹⁴⁹

- (d) In our report, we consider the survey findings alongside other types of evidence, in the round.

Consultation on the proposed survey methodology and draft questionnaire

40. We invited comments from stakeholders to our investigation on the proposed survey methodology and a draft of the questionnaire between 16 and 20 October 2017. This coincided with IFF's cognitive testing of the survey script, but preceded the pilot stage of fieldwork, which didn't begin until 9 November. This timing meant that we were able to give consideration to stakeholders' input alongside IFF's feedback from their cognitive interviews.
41. In total, we received responses from 10 parties to the investigation; from TPR and the FCA; and from one other stakeholder. We reviewed all comments and suggestions received and made a number of revisions to the questionnaire as a result, ahead of fieldwork.
42. Amongst the submissions received were a number of requests to include additional questions or extensions to existing questions. At the stage when we consulted on the questionnaire, we already knew that existing questions would have to be prioritised and some cut to keep the average interview lengths within recommended ranges. In most cases, we decided not to add completely new questions (or to significantly lengthen existing read-out questions) in response to comments received; this was mainly because we did not consider the suggested additions to be higher priority for our purposes than existing questions.

Parties' responses to working papers

43. In responding to our working papers, notably the papers on 'information on fees and quality', 'trustee engagement' and 'supply of fiduciary management services by investment consultancy firms', some parties commented on methodological aspects of the CMA survey or on our interpretation of the results in our emerging findings. Comments of this nature made by one or more parties included the following (which are grouped by topic area and presented in summary):

¹⁴⁹ [Summary of roundtable with Pension Trustees](#) held on 1 and 2 May 2018 and [summary of roundtable with Pension Trustees held on 3 October 2018](#).

- (a) A number of parties commented on the high proportion of respondents who stated that they found aspects of monitoring to be 'very easy' or 'easy', for example, in respect of the information on fees and quality they receive from their providers. Some parties submitted that there is not sufficient evidence, including from the CMA survey, to justify our emerging findings concerning information on fees and quality.

CMA response:

- (i) Paragraphs 36 to 40 above provide our comments on the results from the CMA survey in relation to claimed ease of monitoring of providers and of assessing bids; these are intended to aid interpretation of these results.
- (b) The question on conflicts was leading and may have biased, or otherwise affected, the objectivity of the results.

CMA response:

- (i) When designing and consulting on the questionnaire, we considered this aspect, but decided that we wanted to seek views on specific potential conflicts that had been identified and that it was, therefore, important to ask the question in a prompted way. In order to mitigate the potential for leading the respondent, we looked very carefully at the wording of each part of the question and the response options and both randomised the order of the sub-questions and reversed the response scales for half the sample.
- (ii) We also asked about the market in general, not the respondent's own service providers (if any) and asked the question at the end of the questionnaire to avoid it possibly causing the respondents to have potential conflicts in mind when answering other questions. Nonetheless, we are aware that some respondents may have been led to think about specific potential conflicts at this question, where they may not otherwise have had them in mind.
- (iii) Overall, we consider that the CMA survey provides useful evidence on trustees' attitudes concerning potential conflicts in the markets for investment consultancy and fiduciary management services, especially when viewed alongside other evidence that we have collected to inform our investigation.
- (c) The survey was unbalanced in the topics it focused on.

CMA response:

- (i) When designing and consulting on the questionnaire, we considered all submissions made on content and structure. As explained above, it was necessary to prioritise topics and individual questions for inclusion to include those of most relevance to our investigation; in doing so, we recognise that other topics that we or others considered desirable could not be included.
- (d) Alternative interpretations can be drawn if results are presented in different ways (eg how different response categories are combined, or how 'don't know' responses are treated).

CMA response:

- (i) We are aware of the potential for this to happen and these points have been addressed above or in IFF's report. In general, we have sought to present the survey results transparently throughout and in the way most appropriate to the analysis being undertaken.

Appendix A5: Quantitative analysis of investment consultancy and fiduciary management prices

Introduction

1. In this appendix, we set out our full quantitative analysis to understand whether there is a link between customer engagement and investment consultancy and fiduciary management price levels. This underlies the material presented in chapter 10 in the main report.
2. To assess the link between engagement and price, we have conducted a quantitative analysis using data provided by several providers of investment consultancy and fiduciary management services. In particular:
 - (a) For our analysis of investment consultancy, we include the following 13 providers: Aon, Barnett Waddingham, Cambridge Associates, Cardano, Hymans, JLT, KPMG, LCP, Mercer, Redington, River and Mercantile, Russell Investments, and WTW.
 - (b) Our analysis of fiduciary management prices includes the following IC-FM providers: Aon, JLT, Mercer, River and Mercantile, and WTW. Following comments from some parties regarding the representativeness of our sample (following the provisional decision report), we also expanded the dataset to include 4 FM-only providers. Collectively, the providers in our analysis make up the vast majority of the fiduciary management market in revenue terms.¹⁵⁰
3. We have also conducted a more qualitative assessment of market outcomes which also uses other sources of evidence; this is set out in Appendix 6. The same appendix contains our full analysis of quality parameters.
4. This appendix is structured as follows:
 - (a) First, we set out the context surrounding the key concepts and parameters for this analysis, focussing on what we mean by 'engagement' and 'price'; how we measure these two variables; and what is the scope of this assessment.

¹⁵⁰ Mercer submitted that the total revenues implied from the summary statistics we present for the included firms made up less than 50% of the total fiduciary management revenues we set out in the Competitive Landscape analysis in chapter 4. (Mercer's Response to the Gains from Engagement Working Paper, p7). We have increased the total revenue in our sample relative to the data used at the provisional decision report, however we note that we do not have full data on all schemes at these providers. As such the total revenue of the included schemes differs from the total revenues of each provider.

- (b) Second, we explain the economic framework we have applied to construct a meaningful comparison of scheme prices. We also outline the methodology used for our quantitative comparison.
 - (c) Third, we provide a description of our data and key variables.
 - (d) Fourth, we provide summary statistics as well as key descriptive statistics for important variables.
 - (e) Fifth, we show the results of our quantitative analysis for investment consultancy and fiduciary management and discuss our interpretation of these.
5. We then summarise our conclusions, which are set out in full in chapter 10.

Key context

6. In this section, we briefly explain in more detail relevant background to our treatment of:
- (a) Price, the dependent variable of interest.
 - (b) Engagement, our key independent variable of interest.

Price as the dependent variable

7. Our dependent variable in this analysis is price. We use the following approach to measuring price:
- (a) In investment consultancy, prices are often charged on an hourly basis. We therefore analyse price as implied spend per hour, calculated from parties' data.
 - (b) In fiduciary management, prices are almost always charged at least in part as a fraction of assets under management. We therefore analyse price as spend per unit of asset management, expressed in basis points (that is, percentages multiplied by 100). We calculate this using data provided by the parties on spend and AUM.¹⁵¹
8. Three parties said that price is a relevant parameter of competition for analysis of market outcomes, amongst others. Russell Investments said that

¹⁵¹ For our analysis of schemes' transition into fiduciary management, we analyse spend rather than price. This is explained further in paragraph 36.

‘fees are a suitable metric for assessing client outcomes’,¹⁵² WTW said that ‘fees paid to providers are a relevant dimension on which competition takes place’,¹⁵³ and Redington said that ‘we would expect that good engagement with Investment Consultants also benefits [non-price outcomes] as well’.¹⁵⁴

9. Nevertheless, several parties questioned our decision to conduct in-depth analysis of the link between market outcomes and engagement focussing on price.
10. Aon said that analysis which ignores non-price measures of scheme outcomes was largely meaningless,¹⁵⁵ and even if analysis did reliably link higher prices to lower levels of engagement, Aon noted that higher prices could reflect higher returns or higher quality.
11. We consider that for this to be true in general, less engaged schemes would need to be provided with higher quality services. However, there do not appear to be strong reasons to expect that this is the case.¹⁵⁶ Where performance fees are used, prices can reflect higher returns. We therefore omit schemes that use performance fees in some of our models.
12. LCP said that non-price gains from engagement, such as asset management fee discounts, risk-adjusted returns on assets, and quality of service factors, ‘may be substantially higher than the gain from any reduction in [the] investment consultancy fee’.¹⁵⁷ Aon,¹⁵⁸ Mercer,¹⁵⁹ WTW,¹⁶⁰ and Russell Investments,¹⁶¹ also highlighted various other non-price parameters.
13. We consider that price is an important market outcome in itself: although prices may appear relatively low when expressed as a percentage of scheme assets for example, they still represent significant monetary amounts in themselves.¹⁶²

¹⁵² [Russell Investments response to the Gains from Engagement Working paper](#), p1; Russell Investments said that target returns would be suitable metrics for assessing return outcomes.

¹⁵³ [WTW’s response to the Gains from Engagement Working Paper](#), p3. Although they said that price was a relevant parameter, WTW also stressed that they considered an exclusive focus on price to be inappropriate.

¹⁵⁴ [Redington’s response to the Gains from Engagement Working Paper](#), p1.

¹⁵⁵ [Aon’s response to the Gain’s from Engagement Working Paper](#), p2.

¹⁵⁶ It is conceivable that engagement on these measures could be associated with schemes’ focussing more on price than on quality, and consistent with this receiving low prices but low quality. We do not consider this likely however. For example, one piece of contrary evidence is that our qualitative review of internal documents (see Appendix 6 indicates that improvements rather than worsening of quality is likely to be associated with engagement.

¹⁵⁷ [LCP’s response to the Gains from Engagement Working Paper](#), p3.

¹⁵⁸ Aon’s response to the Gains from Engagement Working Paper, p2-3

¹⁵⁹ Mercer’s response to the Gains from Engagement Working Paper, p5

¹⁶⁰ WTW’s response to the Gains from Engagement Working Paper, p3

¹⁶¹ Russell Investments’ response to the Gains from Engagement Working Paper, p1

¹⁶² Further, it is less clear that they are small when compared with the additional (risk-adjusted) return generated by the provider above the level which the scheme could generate by itself, which is the relevant benchmark.

14. Furthermore, the mechanisms through which more engaged schemes may receive better 'price' terms (for example, through trustee led negotiation and providers responding to actions such as tendering) are also those mechanisms through which they could achieve better 'quality' terms.¹⁶³ Therefore, our analysis of price could be indirectly informative of quality outcomes.
15. There are also practical considerations: prices can be more accurately measured than quality (which has many dimensions, not all of which are observable). As a consequence, we can have confidence that our analysis of price includes accurately measured variables, which would not necessarily be true of a quality analysis.
16. Nevertheless, we recognise that quality is a very important part of these services and we consider this further in Appendix 6.

Measuring engagement

17. By engagement, we mean the extent to which trustees can assess the value for money of providers, and (where necessary) act on the outcome of that assessment.¹⁶⁴ In this section we explain how we measure engagement and present some key descriptive statistics for this variable.
18. To test whether engagement by trustees affects the price they obtain, we need to have a measure of engagement. However, we cannot directly observe engagement.
19. In our analysis of the level of trustee engagement, our approach is based around whether schemes exhibit *indicators* of engagement. For this analysis we focus on formal tendering as the sole indicator of engagement.
20. We consider the use of a formal tender to be the best indicator of market engagement as schemes which have performed a formal tender have undertaken a process to evaluate those providers who submitted a response to a tender to supply them with investment consultancy or fiduciary management services and selected what they consider to be the best option. This indicates that a scheme is 'engaged', as the scheme is looking to ensure that it is getting the best possible offer from its provider.
21. In the provisional decision report we used a broader measure of engagement. We defined engagement as running a formal tender and/or

¹⁶³ Identifying a price relationship may therefore proxy for a broader effect covering non-price factors

¹⁶⁴ See chapter 6.

having a professional trustee and/or using a TPE. We have since refined our definition to focus on tendering as the sole indicator of engagement. For completeness, we present results using the provisional decision report measure of engagement in the FM Static Analysis.

22. In our view it is more meaningful to focus on tendering rather than the (broader) provisional decision report measure of engagement. In the provisional decision report, we found that only tendering was statistically significant (in the fiduciary management analysis) when we looked at each indicator separately.¹⁶⁵ The results in the provisional decision report were therefore in fact primarily driven by tendering.
23. Further, it is unsurprising that different measures of engagement have different impacts on scheme outcomes. Our results below indicate that a 'stricter' measure of engagement (ie a formal tender) has a more significant impact on prices than a broader measure. We therefore focus our analysis and sensitivities on the impact of formal tendering.
24. For fiduciary management clients, we divide schemes into two groups depending on whether they were Internally Acquired or Externally Acquired; that is, whether the scheme previously used the fiduciary management provider for investment consultancy or not.
25. Whilst some forms of engagement, for example tendering, are more likely to be effective than other forms, we acknowledge that there are many different ways in which schemes could apply pressure to their providers. Aon,¹⁶⁶ Mercer,¹⁶⁷ WTW, and KPMG¹⁶⁸ told us that this way of measuring engagement was too narrow and that we should include other measures.
26. We accept that other forms of engagement could lead to improved outcomes. However, as noted above, we cannot perfectly observe engagement and have therefore focused on indicators of engagement. We consider the use of a formal tender to be the best indicator of market engagement.
27. Aon also told us that engagement is complex and nuanced, rather than a binary concept.¹⁶⁹ We acknowledge this, however it is common practice in quantitative analysis to measure continuous variables in discontinuous ways, provided that the measure is interpreted correctly. Our analysis is not

¹⁶⁵ Appendix 5 of the provisional decision report, tables 25 and 26.

¹⁶⁶ Aon's response to the Gains from Engagement Working Paper, p1.

¹⁶⁷ Mercer, Response to the Gains from Engagement Working Paper, p4.

¹⁶⁸ KPMG, Response to the Gains from Engagement Working Paper, p5.

¹⁶⁹ Aon's response to the Gain's from Engagement Working Paper, p1.

intended to imply that schemes which have not formally tendered are entirely disengaged.

28. We consider that schemes which have tendered are more likely to have higher engagement levels, than schemes which have not. We therefore refer to schemes with this indicator as 'more engaged', and those with no indicators as 'less engaged', in what follows.
29. We acknowledge that this approach of proxying engagement will prevent us from perfectly measuring the underlying concept in our analysis.¹⁷⁰ Whilst the direction of any bias arising is difficult to assess exactly, we do not think there is any particular reason that the bias would more likely overstate 'gains from engagement' than understate it.

Methodology

30. In this section, we explain the methodologies we used to compare prices by engagement. The section is structured as follows:
 - (a) First, we explain our approach in terms of the high-level methodologies and parameters of our analysis.
 - (b) Second, we introduce our econometric model.

Our approach

31. For both investment consultancy and fiduciary management, we have undertaken analysis of 2016 prices (the most recent full year before this inquiry began). We term these the Static Analysis, for each type of scheme.¹⁷¹
32. We have focussed on DB and Hybrid schemes. This is primarily because our dataset does not include schemes which paid comparatively low levels of

¹⁷⁰ In particular, it will introduce proxy error (the indicators we have chosen are imperfect proxies for engagement, because there are other ways of engaging with the market not captured in these variables, even if perfectly measured), and potentially also measurement error (some more engaged schemes may be recorded as less engaged if, for example, the Parties had no record of the scheme having tendered).

¹⁷¹ We generally exclude schemes which had been with their investment consultancy or fiduciary management provider for less than a year, because the total fees they pay will be incomparable to schemes paying for a full year. Their fees could include some 'set up' costs, and could only be for a few months' work. We also exclude schemes for which we did not know the join date, because some of these schemes may have joined in the last year.

fees. Because this is more common for DC schemes, we cannot be confident that the DC schemes in our data are representative.¹⁷²

33. Within the above scope, we have undertaken a regression analysis, which in simple terms is a statistical technique which allows us to model price and spend in terms of several hypothesised drivers of spend (eg engagement) whilst holding potentially confounding factors (eg size) constant.
34. For fiduciary management, we construct an additional analysis which uses information on prices paid by the same scheme at earlier points in time.¹⁷³ In particular, we compared price changes for schemes which moved from investment consultancy into fiduciary management with the same provider. We term this the Transition Analysis.
35. The logic to the Transition Analysis is as follows. There is a large amount of complexity within schemes that does not change over time. This complexity causes variation that cannot be completely controlled for in our Static Analysis. By analysing the change in spend when moving from IC to FM we remove the effect of this variation.
36. To test whether engagement is associated with improved outcomes we compare how the change in price differs between the two groups based on whether they tendered when transitioning into FM. We measure the change in spend when moving into fiduciary management as the ratio of fiduciary management spend to investment consultancy spend (we refer to this below as the 'spend ratio').¹⁷⁴ For example, a scheme which pays twice as much in fiduciary management as it did for investment consultancy services will have a spend ratio of two.
37. We construct this ratio by using the average fiduciary management spend in all years in our data after a scheme has transitioned, and the average

¹⁷² Requests to four parties included a cut-off in revenue terms of £30,000 in 2016. Requests to other parties included a cut-off in revenue terms of £20,000 in 2016. Schemes which paid less than these values were excluded from the scope of the request to reduce the number of clients on which the Parties had to provide data. This threshold is sufficiently low to mean that our analysis is generally informative, although we remain cautious in extrapolating findings to the very smallest schemes.

¹⁷³ We have not considered it productive to design and conduct an analysis which uses data on investment consultancy spend or prices through time. This is because we do not have access to data on number of hours spent providing schemes with services, except for 2016. Number of hours is a key confounding factor. Further, in contrast to the case for fiduciary management, there is no obvious price discontinuity to exploit for a difference-in-differences estimation, as we have used in the fiduciary management Transition Analysis. Parties' did not propose any such analysis in response to consultation on the Gains from Engagement Working Paper.

¹⁷⁴ Because we do not have historical data on AUM for key parties and therefore cannot construct price per unit of AUM through time. For this reason, we consider spend increases. This means that the Transition Analysis is not fully comparable with our analysis of price in terms of, for example, the coefficients in the regression. Nevertheless, they address the same issue.

investment consultancy spend in all years in our data prior to the scheme's transition.

38. Mercer submitted that when one takes the ratio of the period immediately before and after a transition, the results of our FM Transition Analysis are not statistically significant.¹⁷⁵ This method for calculating the spend ratio is less preferable than the method we use, because our approach of taking an average helps to 'smooth out' random variation in spend. The periods immediately before and after a transition for example are more likely to be affected by temporary spend that is directly related to the transition into FM (rather than reflecting the 'true' spend on each service).
39. Because we consider only schemes which transitioned with the same provider,¹⁷⁶ we have a smaller number of schemes we can analyse than in the static model.¹⁷⁷ We exclude the spend for the year the scheme transitioned.¹⁷⁸ Therefore, this analysis has greater limitations in terms of sample size.

Econometric Model

40. In analysing the gains from engagement, we have run OLS regressions of the following form:

$$\log(M_i) = \alpha + E_i'\beta + C_i'\gamma + \varepsilon_i$$

41. Where subscript i denotes an individual scheme. Our dependent variable is denoted by M : in the fiduciary management Static Analysis, this is the implied price per pound of assets under management of the scheme;¹⁷⁹ in the fiduciary management Transition Analysis it is the IC-FM spend ratio; and in the investment consultancy analysis it is implied price per hour.

¹⁷⁵ Mercer response to provisional decision report Annex 1: Market outcomes, P5

¹⁷⁶ Due to data limitations which created very significant challenges matching together schemes across providers' historical data, we are not in a position to compare reliably investment consultancy and fiduciary management prices for schemes which moved into fiduciary management with a provider other than their investment consultancy provider. We therefore draw conclusions from this analysis primarily in relation to Internally Acquired schemes.

¹⁷⁷ Due to the data requirements of the outcome measure, we base the analysis only on schemes which transitioned between 2011 and 2016, and for which we had sufficient data to compute pre- and post- transition average spends.

¹⁷⁸ This is because if Scheme A transitioned in January of a given year, whilst scheme B transitioned in December, the two schemes would have very different spends in investment consultancy and fiduciary management for that year for reasons unrelated to our variables of interest, and including this year of spend would therefore introduce a confounding factor we would have to control for.

¹⁷⁹ Because prices are generally expressed as a percentage of the value of assets under management, we calculate implied prices as total spend divided by assets under management, and multiply the resulting figure by 10,000 to express the price in basis points as is conventional.

42. E' denotes a vector of engagement-related dummy variables:
- (a) In the fiduciary management static approach, we use two dummy variables derived from the client's acquisition type: (i) one denoting whether the scheme is Internally Acquired and engaged (ie has formally tendered), and a second denoting whether the scheme was Externally Acquired.¹⁸⁰
 - (b) In the fiduciary management transition approach, we use one dummy variable indicating whether the scheme is engaged.¹⁸¹
 - (c) In the investment consultancy analysis, we use one dummy variable indicating whether the scheme is engaged.¹⁸²
43. C' denotes a vector of control variables to account for the drivers of log price which are potentially correlated with the engagement dummies. The set of controls used varies slightly between analyses. We provide a full description of control variables below.
44. The error term, ε , captures other factors that affect the log of price which are not captured by the explanatory variables.
45. The effects of primary interest are in the coefficient vector β . That is, we are interested in the coefficient on our measures of engagement. γ' represents another vector of coefficients for the control variables. These are of interest only insofar as is useful to establish the reliability of our estimate of the abovementioned effects. α denotes the constant.
46. We take the log of the dependent variable because we expect that any increase or decrease in spend will vary with the level of the price. That is, we consider that the regression is non-linear in price but is likely to be linear in the log of price.
47. We are mindful of potential limitations in interpreting our results, although on balance do not consider that any present serious challenges to our analysis.
- (a) We discuss the possibility for measurement and proxy error for engagement and the associated footnote above.

¹⁸⁰ The base category is therefore less engaged Internally Acquired schemes. We do not include a dummy for less engaged Internally Acquired schemes to avoid multi-collinearity.

¹⁸¹ The base category is therefore less engaged Internally Acquired schemes. There are no Externally Acquired schemes in this analysis.

¹⁸² The base category is therefore less engaged schemes. The concept of Internally and Externally Acquired clients is not relevant to investment consultancy, given how we have defined these terms.

- (b) It is also possible that whilst high engagement reduces prices, high prices might increase engagement.¹⁸³ That is, simultaneity could result in bias to the coefficients. Aon told us that to assess the direction of simultaneity bias, we would need to conduct an instrumental variables analysis.¹⁸⁴ This technical concern is limited in this case, as we are generally measuring outcomes *after* engagement took place rather than concurrently (ie prices paid after a scheme formally tendered). In any event, there does not appear to be a clear argument that our analysis is more likely to overstate 'gains from engagement' than understate them.
- (c) We might have omitted variables from the analysis which determine prices and are correlated with engagement, conditional on all other covariates. This could lead to bias. We discuss parties' specific challenges with respect to these variables in the interpretation of our results.

Dataset

- 48. This section describes the data used in this analysis, and also for other analyses relying on Parties' data. For our data on investment consultancy customers this represents 1,341 schemes from 13 providers. In fiduciary management our data covers 409 schemes from nine providers. In this section we describe the characteristics of the data. In particular:
 - (a) First, we describe the content of this data, and key points about our data cleaning approach.
 - (b) Second, we provide a description of key control variables used to control for confounding factors.
- 49. We note that we are in a position only to analyse data submitted by the parties rather than the CMA survey and other data sources because matching rates are below the necessary level. This would produce a sample

¹⁸³ At least for tendering, we think there are good reasons why the issue is not likely to be very concerning for our analysis of fiduciary management schemes. This is because we consider whether the mandate was acquired through tender, and assess prices post-acquisition. As such, high fiduciary management prices from the scheme's current provider will not have led to tendering as measured. Usage of TPEs to evaluate the move into fiduciary management is unlikely to be a function of post-transition prices, but the usage of TPEs to monitor the fiduciary management provider post transition could be. The same could be true of professional trustees. However, given that a high proportion of schemes in our data have been using fiduciary management for only a few years, we do not consider this to be likely to have a big effect.

¹⁸⁴ Aon's response to the Gains from Engagement Working Paper, p13.

too small to undertake reliable analysis due to challenges in matching these data sources.¹⁸⁵

Description of the data

50. Several parties submitted data for all pension schemes which purchased either investment consultancy or fiduciary management from them in 2016. We have not updated this analysis for more recent years as, for the reasons below, such an update would not be practicable and would be unreliable. We note that 2016 was the last full year before the beginning of the present investigation. After 2016, it is likely that there are some short-term changes in behaviour exhibited by market participants which will only be present until the investigation ends.
51. Using parties' 2016 data submissions, we merged data submitted across different templates by using client IDs. Each of the parties' merged data was then appended together to form a combined dataset.¹⁸⁶
52. As part of this process, we undertook data cleaning to address inconsistencies in responses to our standardised data templates. This required some assumptions. We undertook relatively extensive follow-ups with a number of parties to increase the proportion of usable data as much as possible.¹⁸⁷
53. We combined the advisory and fiduciary mandates for each client where clients were recorded as receiving each service. We did this by aggregating revenues together across the different mandates. We treated these clients as receiving fiduciary management.
54. We also removed a number of extreme values. For example, some schemes appeared to have spent a very high multiple of 'normal' spend levels. We are concerned that data points in this variable as well as others,¹⁸⁸ may reflect data entry errors. Even if they do not, they may represent schemes which have very different characteristics to most schemes in ways we do not observe, and from which we should not draw conclusions.¹⁸⁹

¹⁸⁵ The low coverage of valid external IDs such as HMRC scheme identifiers has meant that it is not possible to combine the parties' data with the survey to conduct analysis using both datasets jointly.

¹⁸⁶ In conducting this merging, we omit schemes which paid less than £20,000 per year in 2016 for consistency.

¹⁸⁷ The underlying data analysis code was disclosed and reviewed through a confidentiality ring during the CMA's disclosure processes.

¹⁸⁸ Chiefly spend, number of hours and AUM

¹⁸⁹ Defining what is an extreme value and what is a regular but large value is not always straightforward. Our method of ignoring outliers depends on the specific case. Our preference is to use a conventional method where we ignore observations which have values further away than three standard deviations from the mean. However,

55. In analysing the effect of transitioning into fiduciary management we built on the data used in the fiduciary management snapshot analysis by merging this to timeseries data submitted by the parties. The timeseries data contains information on a subset of the variables listed above, most notably spend and services purchased. This allows us to track schemes who move from investment consultancy to fiduciary management with the same provider.¹⁹⁰
56. This data was used to calculate the increase in spend moving from investment consultancy to fiduciary management as a ratio of the initial spend. Our data set covers most schemes which transitioned from investment consultancy to a fiduciary management relationship with the same provider.

Control variables

57. We used a range of control variables across different specifications. Our approach to collating the relevant data was informed by a number of early discussions with parties. Further, various hearings, submissions and roundtables with key participants provided us with a greater understanding of the key drivers of pricing, and informed our decision about which aspects were very important to control for.
58. We define the control variables here for clarity:
 - (a) **Hedging:** A dummy variable which takes 1 if the scheme purchases bespoke liability hedging, and 0 otherwise. Bespoke liability hedging appears to be an expensive service (albeit one which appears to have brought significant benefits to pension schemes in recent years). We have found that hedging is disproportionately purchased by engaged schemes, and therefore it is important to control for this.
 - (b) **Value of assets:** The log of scheme assets under management/assets under advice. Fiduciary management/investment consultancy prices generally fall with the level of assets invested with the fiduciary manager. As such, we include a measure of this. We take logs because the effect of scheme size is likely to be nonlinear.

where we remain concerned that extreme outliers could affect our analysis (for example, if a value is so extreme that it inflates the standard deviation such that it is not captured by the above method), we resort to alternatives such as dropping the largest 5% of values.

¹⁹⁰ Although we received some 'external' ID variables, such as tax code information, from providers which could have allowed us to link together the same pension scheme across providers, we found that the data quality provided was insufficiently high to allow us to do this. We therefore cannot identify schemes which moved into fiduciary management with a provider other than their investment consultant.

- (c) **Partial/full fiduciary management:** A continuous variable which indicates the proportion of scheme assets which are delegated.¹⁹¹ Schemes which have lower levels of delegation are likely to be charged less, all being equal.¹⁹²
- (d) **Number of asset managers:** The log of the number of asset managers used to manage the scheme's assets. We consider this will help control for differing complexity in the implementation of advice across schemes. We include the variable in logs to account for likely nonlinearities in the effect of this measure.
- (e) **Provider indicators:** A set of variables for each provider, which takes 1 if the service has been provided by that firm and 0 otherwise. These variables can help to account for the possibility of systematic differences in providers' (i) complexity of services (ii) coding approaches in providing data to us.
- (f) **Performance fees:** A dummy variable for schemes which have performance fees. Engaged schemes are disproportionately likely to have performance fees. Schemes with performance fees will pay more on average if performance has been strong, and less otherwise.
- (g) **Actuarial services:** We include a dummy for whether the investment consultancy provider received revenues for actuarial services. Bundling may reduce costs, or could be associated with higher prices if it captures any additional scheme complexity or residual disengagement.
- (h) **Hours of service purchased:** For investment consultancy, we have reasonably good data on the number of hours service provided to each client. We control for this as a proxy for complexity. We do not have usable data for fiduciary management.

Summary statistics

59. In this section we describe the composition of the data used in our gains from engagement analysis. We present tables which detail the mean, median, standard deviation, minimum and maximum values.

¹⁹¹ Our data is not fully continuous, taking values of 0, 1-29%, 30-49%, 50-69%, 70-99%, 100%. We take the midpoints of these ranges. Arguably, a theoretically better specification would be to include this variable in nonparametric form by including dummy variables. We have not taken this approach in our baseline model for pragmatic reasons: we do not have a large number of observations and as such face practical limits on the number of variables we can include. Nevertheless, we undertake a robustness check including this information in a set of dummies, and find the results do not change our conclusions.

¹⁹² We note that some of this effect will be captured in the AUM variable. Nevertheless, there may be additional factors specific to the proportion of assets delegated which can influence prices. We control for these.

60. We then go on to draw out some key descriptive statistics relating to engagement, our main dependent variable of interest.

Investment consultancy static approach

61. Table A5.1. shows the mean, median, standard deviation, minimum and maximum values of continuous variables in our investment consultancy data. The table shows there is a skewed distribution in AUM and spend with a large deviation between means and medians.

Table A5.1: Summary statistics for investment consultancy snapshot – continuous variables.

<i>Statistic</i>	<i>Number of Observations</i>	<i>Mean</i>	<i>Median</i>	<i>Standard deviation</i>	<i>Minimum</i>	<i>Maximum</i>
Scheme AUM (£ Millions)	1273	482	152	772	0	3,953
Total investment consultancy Hours spent on customer	1109	540	335	677	79	7,226
Spend per hour	1114	298	276	113	34	696

62. Our analysis includes two ‘dummy’ variables, which take only value zero or one. Table A5.2. shows summary statistics for these variables.

Table A5.2: Summary statistics for investment consultancy snapshot – dummy variables.

<i>Variable</i>	<i>Number of Observations</i>	<i>Percentage of schemes</i>
Tendered	1341	51%
Bespoke Liability hedging	1341	56%

Fiduciary management static approach

63. Table A5.3. shows summary statistics for continuous variables in our snapshot data. The table shows there is a skewed distribution in AUM and (to a lesser extent) spend, with a deviation between means and medians.

Table A5.3: Summary statistics for fiduciary management 2016 data – key variables.

<i>Statistic</i>	<i>Number of Observations</i>	<i>Mean</i>	<i>Median</i>	<i>Standard deviation</i>	<i>Minimum</i>	<i>Maximum</i>
Scheme AUM (£ Millions) ¹⁹³	406	396	90	1811	0	31,814
Implied basis points ¹⁹⁴	393	24	22	15	0.1	82

64. Table A5.4. shows the percentage of schemes in the data which possess a dummy variable in our snapshot.

Table A5.4: Summary statistics for fiduciary management 2016 data dummies.

<i>Variable</i>	<i>Number of Observations</i>	<i>Percentage of schemes</i>
Tendered	409	33%
Bespoke Liability hedging	409	44%
Partial fiduciary management	409	38%

Fiduciary management transition approach

65. Table A5.5. shows the mean, median, standard deviation, minimum and maximum values of continuous variables in our data. The table shows there is a wide distribution in the increase in spend with the median scheme spend increase being 3.4 times whilst the largest is a 21.4 times increase.

Table A5.5: Summary statistics for fiduciary management transition data

<i>Statistic</i>	<i>Number of Observations</i>	<i>Mean</i>	<i>Median</i>	<i>Standard deviation</i>	<i>Minimum</i>	<i>Maximum</i>
Increase in Spend as a ratio of investment consultancy spend	127	5	3.4	54.7	0.9	21.4
Scheme AUM (£ Millions)	182	405	99	1,222	2.2	13304

66. Table A5.6. shows the percentage of schemes in the data which possess a dummy variable in our timeseries. Notably there is a larger proportion of

¹⁹³ Excluding those whose value falls outside of three standard deviations of the mean.

¹⁹⁴ Excluding those whose value falls outside of three standard deviations of the mean.

schemes which buy partial fiduciary management in our Transition Analysis dataset than in the snapshot.

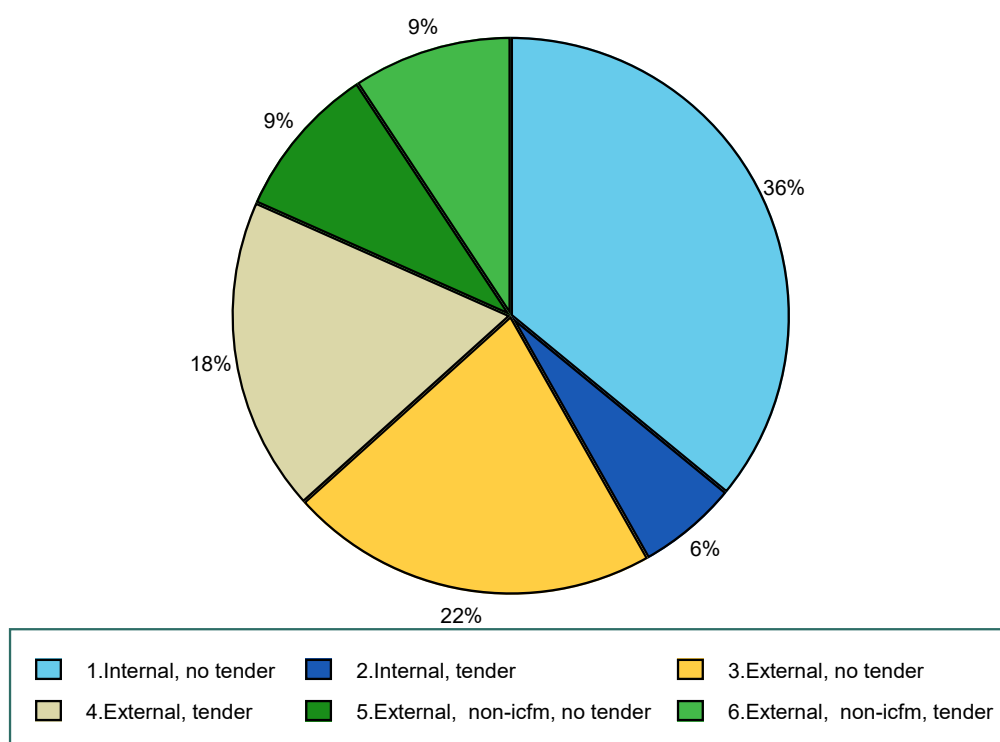
Table A5.6: Summary statistics for fiduciary management transition data dummies.

<i>Variable</i>	<i>Number of Observations</i>	<i>Percentage of schemes</i>
Formally Tendered	181	17%
Bespoke Liability hedging	181	28%
Partial fiduciary management	181	48%

Variation in engagement

67. In our static (2016) analysis, we find that over half (51%) of all schemes purchasing investment consultancy services have undertaken a formal tender. In contrast, we find that a third (33%) of schemes undertake a formal tender when purchasing fiduciary management services.
68. In fiduciary management analysis, we have also categorised schemes by whether they were Internally or Externally Acquired. In our fiduciary management analysis engagement is more complex because of this. The proportions of each scheme by engagement and acquisition type in our 2016 data is set out in Figure A5.1 below.

Figure A5.1: Pie chart of fiduciary management schemes in this analysis by engagement type.



Source: CMA Analysis, Parties' Data.

69. Figure A5.1. shows that, of the schemes in our sample, 42% were Internally Acquired and 58% of schemes were Externally Acquired. Most of those that were Internally Acquired did not run a formal tender, and almost half of those that were Externally Acquired ran a formal tender.
70. Mercer¹⁹⁵ submitted that we should not compare Internally Acquired schemes and formally tendered to those Internally Acquired which did not formally tender as 'the benchmark group is less than 3% of the market'. We believe that comparisons between these two groups are valid for the following reasons:
- (a) The Internally Acquired-tendered group represents 6% of the overall sample which, whilst relatively small, is a reasonable portion of the sample for statistical analysis.
 - (b) Schemes which formally tendered represent around 15% of all Internally Acquired schemes. The group is therefore a reasonable size relative to the 'base' category in the regression analysis.
 - (c) In a regression framework the information from all observations is used to produce the estimated results.
 - (d) The sample was expanded after the provisional decision report to reflect comments that we had not covered a sufficient share of the overall FM market. In doing so we added FM-only providers, which necessarily reduced the overall proportion of Internally Acquired schemes (including those that tendered).¹⁹⁶

Analysis and Results

71. In this section, we set out our analysis and regression results. In particular:
- (a) First, we set out our analysis of schemes in investment consultancy.
 - (b) Second, we set out our analysis of schemes in fiduciary management, beginning with the Static Analysis before discussing the Transition Analysis.

¹⁹⁵ Mercer response to 'Market Outcomes: Updated Results' working paper.

¹⁹⁶ We run a sensitivity to account for excluding FM-only schemes in our regression results.

Investment consultancy

72. In this section we discuss the results of gains from engagement in investment consultancy. To assess this, we tested to see if those who are more engaged (schemes which have formally tendered) pay significantly less than those who are less engaged (schemes which have not formally tendered). Our measure of price in this analysis is measured as spend per hour.
73. We restricted our regression to only those schemes which purchase strategic asset allocation and manager recommendations to rule out cases of project work from our analysis, which might be incomparable with retained work.
74. Our baseline model controls for size as a log of AUM and the purchase of bespoke liability hedging (which, as noted, appears to add appreciable cost). We show sensitivities to this specification in other columns.¹⁹⁷

Table A5.7: Baseline and core sensitivities for the investment consultancy analysis

	(0)	(1)	(2)	(3)	(4)
	<i>Baseline</i>	<i>Add Actuarial dummy</i>	<i>Remove service restriction</i>	<i>Addition of number of services</i>	<i>Addition of provider fixed effects</i>
Tender (dummy)	-0.12*** (0.00)	-0.12*** (0.00)	-0.09*** (0.00)	-0.12*** (0.00)	-0.02 (0.41)
AUM (logs)	0.18*** (0.00)	0.17*** (0.00)	0.12*** (0.00)	0.17*** (0.00)	0.13*** (0.00)
Buys Liability Hedging (dummy)	0.03 (0.37)	0.04 (0.29)	0.01 (0.78)	-0.05 (0.20)	0.06 (0.23)
Hours spent by consultant (logs)	-0.39*** (0.00)	-0.39*** (0.00)	-0.35*** (0.00)	-0.39*** (0.00)	-0.35*** (0.00)
Buys Actuarial services (dummy)		-0.04 (0.22)			
Number of services				0.04*** (0.00)	

¹⁹⁷ Unlike our analysis of fiduciary management, we did not use asset manager information as a control variable because we either did not receive this data or received data which it was not possible to process sufficiently, for some providers in the investment consultancy sample, which considers a wider range of providers.

	(0)	(1)	(2)	(3)	(4)
	Baseline	Add Actuarial dummy	Remove service restriction	Addition of number of services	Addition of provider fixed effects
Provider fixed effects	No	No	No	No	Yes
Constant	4.60*** (0.00)	4.64*** (0.00)	5.36*** (0.00)	4.49*** (0.00)	5.42*** (0.00)
Observations	965	965	1126	965	965
Adjusted R-squared	0.387	0.387	0.313	0.393	0.514

p-values in parentheses *

p<0.10 ** p<0.05 ***

p<0.01

Source: CMA Analysis; Parties' Data

75. Our baseline specification in column (0) shows that more engaged schemes pay around approximately 12% less per hour than their less engaged counterparts.¹⁹⁸
76. The control variables indicate that a higher number of hours provided by the consultant is associated with lower spend per hour, and larger schemes on average have a higher spend per hour.¹⁹⁹ The coefficients for hedging and actuarial services are statistically insignificant.
77. In isolation, these results did not change in response to adding additional control variables or changing the specification. In particular, we identified a significant and negative effect of engagement when we:
- (a) controlled for the purchase of actuarial services in column (1).
 - (b) considered schemes which did not purchase strategic asset allocation or manager recommendations in column (2).
 - (c) controlled for the number of services a scheme purchased in column (3).
78. In column (4) we present a model which introduces provider fixed effects. Provider fixed effects are a set of binary (dummy) variables for each

¹⁹⁸ For ease of reference to the tables, we have applied the approximation that logged variables can be interpreted as percentages. This approximation is very close (with an error of less than 1 percentage point) for small values, up until around 15%. The non-approximated value is 11.3%.

¹⁹⁹ The latter result is slightly surprising. This could arise because larger schemes purchase more complex advice, or because larger schemes tend to use particular providers which charge more per hour.

provider. The dummy variable for Firm A takes value 1 if the scheme buys investment consultancy from Firm A, and 0 otherwise.

79. Including these fixed effects may be advantageous because it allows us to control for the average provider price holding other variables constant. This controls for pricing differences across providers. Intuitively, the results from this type of regression show the effect of different variables on price at the same provider.
80. Column (4) shows that, once we add provider fixed effects, the results are no longer statistically significant. This could be consistent with a selection mechanism where cheaper providers are providing to more engaged schemes. Consistent with this, we find that providers with lower (conditional) prices have a higher percentage of engaged customers.²⁰⁰
81. KPMG submitted that 'it is reasonable to assume that there will be some price difference across providers, [and] ...If there are also differences in the share of "engaged" customers across providers, but provider fixed effects are not controlled for, the model may incorrectly infer a relationship between the price and engagement variables which is actually due to provider differences.'²⁰¹
82. We consider this could explain some of the difference in the results. This could demonstrate that more engaged customers select cheaper providers, demonstrating gains from engagement. When we include provider fixed effects, we are controlling for a 'selection effect' which is in fact relevant. If true, this could imply that the model without fixed effects captures more ways in which 'gains from engagement' could arise.
83. For both specifications, several parties raised additional potentially confounding factors we had not controlled for across these analyses. Potential omitted variables cited were staff experience; complexity; asset capacity constraints, perceived performance quality, active or passive fund usage, asset class mix, pricing model and performance targets.
84. For variables such as staff experience and perceived performance quality, it is not clear why less engaged schemes would receive better service than

²⁰⁰ We calculate this by correlating the provider fixed effects from our baseline regression with the percentage of customers that are engaged.

²⁰¹ KPMG's Response to the Gains from Engagement Working Paper p4. KPMG also noted that the regressions including provider fixed effects explain a significantly higher proportion of variation in prices, since the R-Squared values are higher. Given that we present the 'overall' and not the 'within' statistics for the fixed effect regressions, this is consistent with providers having different average prices.

more engaged schemes.²⁰² We have at least partially controlled for complexity by including controls for additional services. To the extent that other confounding factors remain, we are mindful of this in our interpretation of the results.

85. Considering this evidence in the round, we find that there is evidence that schemes which are more engaged pay lower prices. In particular, we find evidence of gains from engagement across, but not within, providers.²⁰³

Fiduciary management analysis

86. We now turn to our analysis of fiduciary management. We have undertaken two different approaches to analysis of schemes purchasing this service, a 'static' analysis of 2016 prices, and a 'transition' analysis of the price changes for schemes moving from investment consultancy into fiduciary management. We discuss these in turn.
87. In our main econometric specification, we regressed price on a set of dummy variables which identify schemes which are Internally Acquired and more engaged, Internally Acquired but less engaged, and Externally Acquired respectively.²⁰⁴
88. Our key test of interest is whether less engaged Internally Acquired schemes (schemes which did not formally tender) pay more than Internally Acquired but engaged schemes (schemes which formally tendered). We also test whether Externally Acquired schemes pay less than either type of Internally Acquired schemes.
89. We control for a range of confounding factors including size; hedging; whether the scheme has a performance fee; the number of asset managers used by the client (as a proxy for complexity of investments); and the provider used by the scheme. We include provider fixed effects in this analysis.²⁰⁵

²⁰² [88].

²⁰³ This is because we find a statistically significant effect of tendering when provider fixed effects are not included, but do not find a statistically significant effect of tendering when provider fixed effects are included.

²⁰⁴ We noted earlier that Externally Acquired schemes have demonstrated some form of engagement in that they have switched provider when moving into fiduciary management. For this reason and given the limited number of observations in our data, we have not generally distinguished between 'more engaged' and 'less engaged' externally acquired schemes in our econometric analysis, although we do split them out in one sensitivity discussed below.

²⁰⁵ We have undertaken the same sensitivities used in A5 of the provisional decision report on our updated analysis. Our results are robust to these sensitivities

90. The results are set out in Table A5.8. below. Our baseline regression results are in column (0). We also report the results of six core sensitivities. The dependent variable is log of implied price. Figures are rounded to two decimal places.²⁰⁶

Table A5.8: Baseline results and core sensitivities for the fiduciary management static approach

	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	<i>Baseline</i>	<i>provisional decision report model specification</i>	<i>Baseline excluding FM-only providers.</i>	<i>Omitting delegation level</i>	<i>Omitting delegation & schemes with performance fee.</i>	<i>Addition of structured bidding process</i>	<i>Alternative measure of engagement 1.</i>	<i>Alternative measure of engagement 2.</i>
Engaged, Internally Acquired (Dummy)	-0.22** (0.04)	-0.03 (0.78)	-0.19* (0.07)	-0.12 (0.19)	-0.26* (0.05)	-0.22* (0.05)		-0.20* (0.07)
All Externally Acquired (Dummy)	0.01 (0.90)	0.02 (0.83)	-0.00 (1.00)	0.07 (0.29)	0.03 (0.67)	0.00 (0.96)		
No tender, use of a SBP, internally acquired (dummy)						-0.03 (0.84)		
Tendered, dummy							0.02 (0.72)	
Engaged, Externally Acquired (Dummy)								0.07 (0.33)
Not Engaged, Externally Acquired (Dummy)								-0.03 (0.72)

²⁰⁶ In these tables, and their summary versions above, we always use heteroskedasticity robust standard errors as calculated by stata.

	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Baseline	provisional decision report model specification	Baseline excluding FM-only providers.	Omitting delegation level	Omitting delegation & schemes with performance fee.	Addition of structured bidding process	Alternative measure of engagement 1.	Alternative measure of engagement 2.
Client buys hedging (Dummy)	0.45*** (0.00)	0.43*** (0.00)	0.45*** (0.00)	0.54*** (0.00)	0.46*** (0.00)	0.45*** (0.00)	0.41*** (0.00)	0.44*** (0.00)
Performanc e fee (Dummy)	0.37** (0.03)	0.35** (0.03)	0.37** (0.03)	0.32** (0.04)		0.37** (0.03)	0.35** (0.04)	0.37** (0.03)
Number of AM Firms (Log)	0.12*** (0.01)	0.14*** (0.00)	0.13*** (0.00)	0.10*** (0.01)	0.13*** (0.00)	0.12*** (0.01)	0.13*** (0.00)	0.12*** (0.00)
AUM (Logs)	-0.39*** (0.00)	-0.42*** (0.00)	-0.42*** (0.00)	-0.41*** (0.00)	-0.42*** (0.00)	-0.39*** (0.00)	-0.40*** (0.00)	-0.39*** (0.00)
Percent assets in FM	0.00 (0.72)	0.00 (0.84)	0.00 (0.78)			0.00 (0.73)	0.00 (0.79)	0.00 (0.74)
Provider Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	10.23*** (0.00)	10.87*** (0.00)	10.76*** (0.00)	10.63*** (0.00)	10.92*** (0.00)	10.23*** (0.00)	10.41*** (0.00)	10.26*** (0.00)
Observatio ns	298	258	258	326	253	298	298	298
Adjusted R- squared	0.604	0.618	0.621	0.626	0.607	0.603	0.600	0.604

p-values in parentheses * p<0.10 ** p<0.05
*** p<0.01

Source: CMA Analysis; Parties' Data

91. In our baseline specification, Internally Acquired engaged schemes receive prices which are approximately 20%²⁰⁷ lower than Internally Acquired schemes that are not engaged.²⁰⁸ This effect is statistically significant at the 5% level.
92. The interpretation of the effects of the control variables in our baseline model is that on average and holding all else constant: schemes which purchase liability hedging face higher prices compared to those which do not; schemes with performance fees face prices which are higher than those which do not;²⁰⁹ an increase in the number of asset management firms in the schemes' portfolio (a proxy for complexity) is associated with prices being higher; higher AUM size is associated with lower prices; the percentage of assets in FM is not statistically significant.
93. Table A5.8. also shows other models which test for the effect of engagement under different sets of assumptions. In particular:
- (a) In column (1) we show the results when we use the measure of engagement that was used in the provisional decision report (the use of a TPE and/or PT and/or formal tender). We do not find evidence of significant gains from engagement using this broader measure.
 - (b) In column (2) we restrict our sample by excluding FM-only providers.²¹⁰ The impact of engagement (again measured by formal tendering) is statistically significant in this model.
 - (c) In column (3) we remove the variable that controls for the percentage of assets in FM. We do not find evidence of gains from engagement in this model. We note that whilst this variable is not statistically significant in our baseline model, we believe that it is important to include this variable as it is expected to influence price and the other controls in the regression.²¹¹
 - (d) In column (4) we replicate the model in column (3) but omit schemes which have a performance element to their fee. We again observe statistically significant gains from engagement. We consider that this

²⁰⁷ This percentage effect is given as the exponent minus one of the coefficient times by a hundred. This differs slightly from the standard approximation applied to the coefficient which is simply the coefficient times a hundred.

²⁰⁸ Note that we measure both Internally Acquired and Engaged schemes, and Externally Acquired schemes, relative to Internally Acquired, Less Engaged schemes. We do not include a variable for these schemes to avoid problems with multicollinearity.

²⁰⁹ This is logical in the context of reasonably strong performance of the included providers' fiduciary management portfolios in recent years

²¹⁰ By FM only we mean that a provider has not seen customers transition from investment consultancy to fiduciary management in the dataset.

²¹¹ We note for example that this variable is highly significant in the Transition Analysis.

restriction is relevant because performance fees add an additional layer of complication to the model, which it is difficult to properly control for. The relationship between engagement and prices is also more complex for schemes that use performance fees, as price is (positively) related to performance: more engaged schemes may get better performance and therefore pay higher prices.

- (e) In column (5) we add a variable for those who had undertaken a structured bidding process²¹² to our baseline model. Mercer submit that using a structured bidding process or use of a third-party evaluator could have a similar impact to tendering.^{213,214} We find significant gains from tendering but not structured bidding processes.
- (f) WTW submitted that we could use a specification with one dummy variable for any of the engagement indicators used in the provisional decision report.²¹⁵ When we undertake this specification under our updated engagement indicator we do not find gains from engagement—column (6). The problem with this model is that it constrains the effect of engagement to be the same for both the Internal and External groups. Our baseline model is more flexible and does not indicate that this restriction is appropriate
- (g) Some parties suggested that the we spilt the indicator for externally acquired schemes into two separate indicators. When we do this we still find gains from engagement - column (7).

94. We therefore consider that our baseline model is robust to a number of reasonable sensitivities. In its response to our updated working paper on market outcomes, WTW stated that ‘unless the CMA systematically explores the different possible combinations of sensitivities, it runs the risk of running into the multiple hypothesis testing problem. This arises where one engages in so-called “forking path” reasoning and makes multiple combinations of choices about model specification in one go rather than exploring all the possible combinations of these choices. This can increase the chance of finding a statistically significant result even if in reality there is no effect (i.e. a false positive finding)’.²¹⁶

95. In our view, that criticism does not apply in this case. In particular, our baseline indicator of engagement is running a formal tender. Neither the

²¹² The nature of structured bidding process is that it is a form of engagement which is less formal than a formal tender, we therefore include schemes who have undertaken an ‘informal process’ in our definition of structured.

²¹³ Mercer response to Market Outcomes: Updated Results working paper. Paragraph 2.4

²¹⁴ We investigate the effect of these engagement indicators in sensitivities of our Static Analysis.

²¹⁵ WTW response to the Provisional Decision Report.

²¹⁶ WTW response to the updated working paper on market outcomes, paragraph 4.8.

wider measure of engagement used in the provisional decision report nor structured bidding processes form part of our baseline measure of engagement: we are testing whether or not there are gains from engagement as measured by a formal tender. We therefore do not need to show every combination of results that measure engagement in these alternative ways.

96. Further, there are good reasons for including the FM-only providers in the analysis. This increases the sample size and can improve the precision of the estimates. Whilst we test the sensitivity of our baseline model to omitting these schemes (column (2)), we consider that in general they should be included in the model.
97. In its response to our updated working paper on market outcomes, Mercer stated that on the basis of the CMA's data, trustees do not achieve materially lower average prices if they run a formal tender.²¹⁷ It submitted that there is no statistically significant difference in FM price linked to a formal tender compared to other ways of engaging and challenging FM prices.
98. We have shown in column (6) above that there is no statistically significant effect of running a formal tender when we do not distinguish between Internally Acquired and Externally Acquired schemes. We consider that it is relevant to make this distinction as we are particularly interested in outcomes for 'disengaged' schemes that stayed with their existing provider of investment consultancy services.²¹⁸ Further, it is difficult to interpret the coefficient for Externally Acquired schemes, as we do not know what their appropriate counterfactual is (see chapter 10). This further justifies analysing the effect of tendering separately for these two groups of schemes.
99. We interpret our results carefully with this point in mind however – ie our evidence shows that tendering lowers prices amongst Internally Acquired schemes only.
100. Several parties raised additional potentially confounding factors we had not controlled for across these analyses. Potential omitted variables cited were staff experience; complexity; asset capacity constraints, perceived performance quality, active or passive fund usage, asset class mix, pricing model and performance targets.
101. For variables such as staff experience and perceived performance quality, it is not clear why less engaged schemes would receive better service than

²¹⁷ Mercer response to the updated working paper on market outcomes.

²¹⁸ Our baseline model is more flexible than the model presented in column (6) as it 'allows' the effect of tendering to vary depending on whether or not the scheme was Internally Acquired or Externally Acquired.

more engaged schemes. Further, we have partially accounted for performance targets and pricing models by including a dummy variable for performance fees, and complexity by including variables such as the number of asset managers used and service-level controls.

102. It is possible that additional confounding factors remain (and for this reason we have gone on to conduct the Transition Approach). However, we note that for most of the above variables, we have some degree of control already in the model.
103. Overall, our view from the Static Analysis is that more engaged schemes pay significantly lower fees than less engaged schemes when moving into fiduciary management with the same provider they had used for investment consultancy.

‘Transition’ Approach

104. We also considered the evolution of prices at the same scheme (with the same provider) before and after a transition into fiduciary management.²¹⁹
105. In our main regression specification, we regressed the (log of the) IC-FM spend ratio for each scheme on a dummy variable indicating whether the scheme is engaged or not.²²⁰ The spend ratio is the average fee paid in FM divided by the average fee paid in IC.
106. We controlled for whether the scheme purchases bespoke liability hedging; scheme size; and the percentage of assets delegated (which will be 100% for full fiduciary management schemes).²²¹ We restricted our sample to those who are likely to have not undertaken project work.²²²

²¹⁹ As set out above, due to the limited number of data points, the Transition Analysis is based on all scheme types including DC except where noted. Mercer said that ‘including DC schemes creates ... uncertainty about the reliability of the results given the very different nature of DC schemes and their fee structures’. (Source: Mercer’s response to the Gains from Engagement Working Paper, p10). We have included a sensitivity test where we exclude DC schemes.

²²⁰ Whilst regression analysis is again unlikely to be fully robust given the low sample size, it allows us to analyse the entire set of data available, controlling for confounding factors, rather than analysing several different and very small cuts of data independently of each other. We take logs of the dependent variable to avoid violating the assumption in OLS regression that the model is linear in parameters. We allow the effect of any given independent variable to be lower as levels of spend increase. For example, doubling scheme size is likely to have more of an effect when schemes are small.

²²¹ Because we compute the multiple separately, and analyse data where one row represents one scheme, the model is cross-sectional in structure. We consider this has advantages over a timeseries structure (for example, a model of spend because we can allow the increase in spend to vary according to scheme characteristics more easily. Arguably, it is also more intuitive.

²²² In our baseline we restrict our sample to only those who purchased two or more services in IC before moving into FM.

107. The advantage of this analysis is that we assessed the *change* in fees for the same scheme. This means that the effects on fees from unobserved factors which do not vary over time are removed.
108. For this analysis, our baseline regression results are in Table A5.9, column (0). Our baseline includes fewer control variables than in the static approach. The reason for this is that we have substantially fewer data points, and therefore face greater risk of overfitting the data if we include more controls. We test the sensitivity of the analysis to using the baseline approach, as well as five other sensitivities which: (1) introduce a variable controlling for the effect of performance fees; (2) control for the purchase of actuarial services; (3) introduce provider level fixed effects; (4) omit the scheme's size; (5) use an alternative indicator to identify non-project work.²²³

Table A5.9: Fiduciary management Transition Analysis, baseline and core sensitivities, full table

	(0)	(1)	(2)	(3)	(4)	(5)
	<i>Baseline</i>	<i>Performance fee control.</i>	<i>Actuarial service controls</i>	<i>Introduction of fixed effects.</i>	<i>Omitting AUM</i>	<i>Alternative non-project tag</i>
Tender	-0.42** (0.03)	-0.42** (0.03)	-0.36** (0.05)	-0.41** (0.04)	-0.36* (0.06)	-0.43** (0.02)
% Delegation (cont, pp)	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.01)	0.01*** (0.01)	0.01*** (0.00)
AUM (logs)	0.11 (0.12)	0.12* (0.10)	0.07 (0.31)	0.13* (0.09)		0.10* (0.09)
Client buys hedging (dummy)	0.69*** (0.00)	0.64*** (0.00)	0.51** (0.01)	0.60** (0.03)	0.70*** (0.00)	0.55*** (0.00)
Performance fee (dummy)		0.22 (0.30)				
buys actuarial services (dummy)			0.45** (0.01)			
Provider fixed effects	No	No	No	Yes	No	No

²²³ In this sensitivity schemes are restricted to those which purchased strategic asset allocation advice or manager recommendations.

	(0)	(1)	(2)	(3)	(4)	(5)
	<i>Baseline</i>	<i>Performance fee control.</i>	<i>Actuarial service controls</i>	<i>Introduction of fixed effects.</i>	<i>Omitting AUM</i>	<i>Alternative non-project tag</i>
Constant	-1.62 (0.21)	-1.85 (0.17)	-1.08 (0.40)	-2.05 (0.14)	0.50** (0.01)	-1.48 (0.19)
Observations	66	66	66	66	66	93
Adjusted R-squared	0.412	0.410	0.456	0.411	0.388	0.331

p-values in parentheses *

p<0.10 ** p<0.05 ***

p<0.01

Source: CMA Analysis; Parties' Data

109. Our baseline regression shows that schemes which tendered faced spend increases (when moving from IC into FM) which were around 34% less²²⁴ than schemes which did not. The size of this effect is of similar magnitude (and statistically significant) across all of the columns.
110. The control variables are generally significant and have the expected signs: a scheme buying liability hedging is associated with larger spend increases, an increase in a scheme's AUM is associated with larger spend increases (although this effect is only statistically significant in some models), and an increase in the percentage of assets in FM is associated with larger spend increases.
111. Some parties have submitted reasons why they believe the Transition Analysis is not reliable.
112. WTW submitted that we should omit schemes which have a spend ratio above 10 as these schemes are outliers.²²⁵ As noted above, we already remove outliers from our dataset before we undertake the analysis, so we consider that it is not appropriate to remove additional outliers. Furthermore, we have found that small changes to the proposed cut off again leads to statistically significant gains from engagement. We therefore do not consider that this is a weakness in the analysis.
113. Aon stated that 'the spend ratio the CMA uses in its transition analysis may in fact measure the opposite of what the CMA seeks to gauge'.²²⁶

²²⁴ This is calculated as the exponent of the coefficient minus one times one hundred.

²²⁵ WTW response to the provisional decision report.

²²⁶ Aon response to the provisional decision report.

114. The rationale for this critique is that both a *lower* FM fee and/or a *higher* IC fee will reduce the spend ratio.²²⁷ Therefore, if we find that engaged schemes paid lower fees, this could either be because they paid lower FM fees – or because they paid higher IC fees.
115. In our view this critique does not undermine the validity of our results. We note that we are defining engagement in this analysis based on whether the scheme ran a tender for their FM (not IC) service. This is therefore more likely to be driving the FM fee (which is negotiated during the tendering process) rather than the historical IC fee.
116. It is possible that such schemes were also more likely to have been ‘engaged’ in IC, and therefore received a better deal in IC as well as FM. Yet this would increase the spend ratio, making it less likely that we find a significant impact of tendering – ie this effect ‘biases’ the coefficient towards zero. The effect of this is a bias that any results are likely to understate the benefit of being engaged.
117. Mercer stated that the Transition Analysis relies on ‘a single firm [which] drives the results’.²²⁸ We acknowledge that this is correct as removing one particular provider from the sample removes the statistical significance.
118. However, the provider being referenced has one of the largest market shares and there are only five providers relevant to this analysis. In assessing a sample with a small number of providers it is not unexpected that providers with larger shares are more important to the analysis.
119. Additionally, model 3 introduces provider fixed effects to our model. This controls for the (conditional) mean spend ratio for each provider. This model shows that controlling for the providers in this way produces results which are not materially different from our baseline. This demonstrates that the analysis is robust to controlling for differences across providers.
120. As such, we do not consider that this argument weakens the analysis undertaken.
121. Overall, our view from the Transition Analysis is that more engaged customers have a significantly lower relative increase in fees than less engaged customers when moving into fiduciary management with the same provider they had used for investment consultancy.

²²⁷ This is because the spend ratio is defined as the spend in FM divided by the spend in IC.

²²⁸ Mercer response to the provisional decision report.

Conclusions

122. In summary, we find that: in investment consultancy, there is some evidence that less engaged schemes pay higher prices than more engaged schemes; and in fiduciary management, there is evidence that less engaged schemes pay significantly higher prices than more engaged schemes, when they use the same provider they had used for investment consultancy.

Appendix 6: Market outcomes

Introduction

1. In this appendix, we set out additional analysis on market outcomes. This underlies the material presented in chapter 10 in the main report, where our conclusions on these issues can also be found.
2. This appendix primarily contains analysis of quality factors, with the exception of the qualitative analysis of internal documents and responses (item c below) which covers both price and quality. We consider the following:
 - (a) First, a quantitative analysis of asset management fees and discounts paid by investment consultancy and fiduciary management providers, assessing the importance of discounts; whether providers achieve higher discounts for their clients than trustees could achieve alone; and whether discounts achieved vary significantly in response to engagement.
 - (b) Second, analysis of asset allocation advice, assessing how far the level and sophistication of work conducted by providers is consistent with the claims made by firms; the extent to which the analysis is tailored; and whether there are indicators that providers have given effective asset allocation advice.
 - (c) Third, analysis of responses and internal documents to assess whether more engaged clients are likely to receive different levels of value for money (in terms of higher prices, lower quality or both) than others – and whether there is evidence that this has in practice occurred.
 - (d) Fourth, analysis of broader quality measures, focussed on satisfaction and trustee-perceived quality of service, to understand how well the market is working in these terms, and whether there is a relationship between overall quality of service and market success.

Asset management fees: impact of investment consultants and fiduciary managers

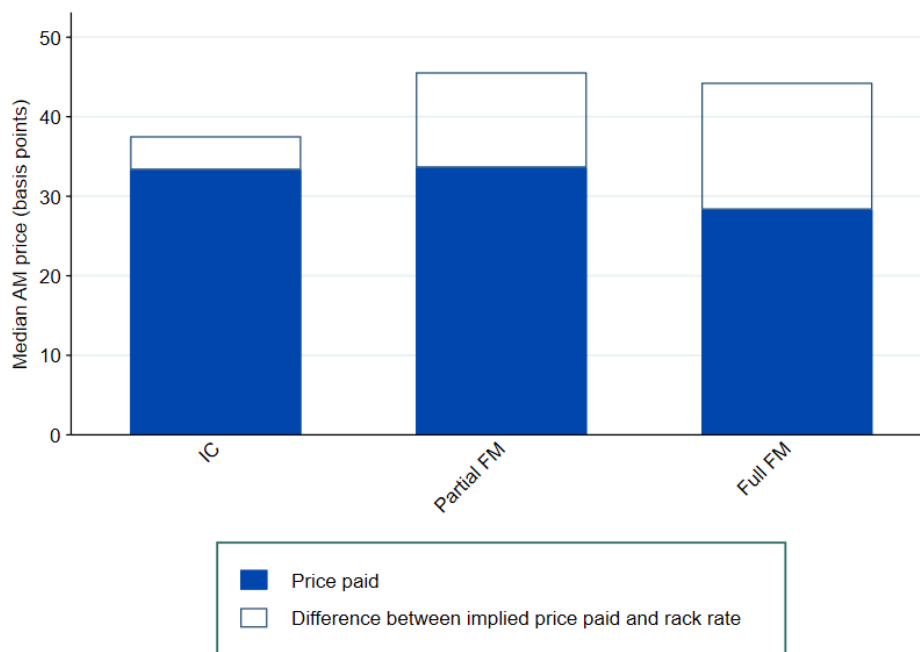
3. Asset management fees are important costs for pension schemes.²²⁹ Investment consultants and fiduciary managers influence the level of asset management fees actually paid by clients. They may do this in several ways.
 - (a) First, because asset managers list (rack rate) prices depend upon the volume invested, providers can access lower rack rates by aggregating together their clients' assets.
 - (b) Second, and related to this, providers can negotiate discounts from the rack rate prices.
 - (c) Third, because providers' recommendations are influential in where their clients invest their assets, and because their recommendations typically account for price at least to a degree, they can encourage restraint in pricing.
4. In some cases, investment consultancy and fiduciary management providers make explicit claims to clients about the discounts they are able to achieve.
5. We have therefore undertaken analysis of the effectiveness of providers' roles in reducing asset management fees. We have focussed on price deviations from asset managers' 'rack rate' fees – ie providers' roles in achieving discounts.

Background

6. As a starting point, we undertook analysis to understand the prevalence of discounting overall for pensions scheme clients of asset managers (whether or not these discounts are attributable to investment consultancy and fiduciary management providers).
7. Figure A6.1. below shows the median fees actually paid by investment consultancy clients and by clients in both partial and full fiduciary management across all of their investments. The chart uses data provided by the Parties on their clients' asset management products, and shows these fees relative to rack rate prices.

²²⁹ See Figure 20, chapter 10.

Figure A6.1: Median overall implied asset management prices across clients, comparing the prices actually paid and the implied rack rate price.



Source: CMA Analysis, Parties' Data

8. Figure A6.1. shows that actual asset management prices paid by clients differ substantially from the rack rate asset management prices, particularly for fiduciary management clients. The overall 'discount' (relative to rack rates) across all investments added up to just over 15% in investment consultancy and just over 30% in fiduciary management.²³⁰
9. In addition, our analysis showed that:
 - (a) Discounts are material in value: comparing simple averages, the median investment consultant client's total annual saving across all products is equivalent to just under £38,000 whilst in fiduciary management it is even higher at around £90,000.
 - (b) Discounts are common: in our data, the clear majority of investment consultancy clients and almost all fiduciary management clients received a discount of at least 10% on at least one product.
 - (c) There is significant variation in discounts across clients, implying that some may not be receiving a good deal.

²³⁰ Taking the median values across clients of the overall discount percentage.

10. Both asset managers and investment consultancy/fiduciary management providers supported the view that discounting is an important characteristic of the industry.²³¹
11. We considered how rack rate prices and discounts are determined.
12. Asset manager 'rack rate' prices are generally calculated as a percentage of the underlying assets under management, and expressed in basis points. Asset manager prices can vary significantly, for example between passive and active products,²³² the method of accessing the product,²³³ the asset class of the product, and the asset manager chosen.²³⁴
13. For the same product, prices decline with amounts invested, and there is some evidence that fees in some asset classes have been falling in recent years for new clients.²³⁵ Variations in price will reflect differences in the underlying cost of providing the products, as well as the degree of competitive constraint faced by the asset manager.
14. Investment consultancy and fiduciary management providers told us that drivers of discounts include whether the fund is nearing a capacity limit,²³⁶ the newness of a fund; the prestige of an opportunity, whether there have been certain recent changes at the asset manager (eg underperformance, change of staff); and the level of investment in the fund.
15. Providers also told us that they were often able to achieve greater discounts than clients would be able to alone (although both might leverage the characteristics above in their negotiations).
16. We therefore considered how negotiations take place.
17. There were differences in the way that investment consultancy and fiduciary management providers described their approach. However common themes included supporting individual clients in their negotiations (for example, by

²³¹ [Summary of roundtable with Asset Managers: 12 February 2018](#), paragraph 9.

²³² The 2017 Ernst and Young Fiduciary Management Fee Survey shows, for global equity products, a median fee of under 10 basis points for passive products, whilst a median fee of around 50 basis points for actively managed products. P10 [http://www.ey.com/Publication/vwLUAssets/EY-2017-fiduciary-management-fees-survey/\\$FILE/EY-2017-fiduciary-management-fees-survey.pdf](http://www.ey.com/Publication/vwLUAssets/EY-2017-fiduciary-management-fees-survey/$FILE/EY-2017-fiduciary-management-fees-survey.pdf)

²³³ LCP's investment management fee survey 2017 (p16) shows that DC platforms have generally been able to negotiate some fee discount from asset managers and pass these onto to their clients.

²³⁴ On average over 80% of the total fund cost is the asset management charge, with the remaining fund cost potentially comprising of factors such as fees to custodians and fees to legal advisers. We have focussed on the asset manager charges. LCP's investment management fee survey 2017, p11 and p29.

²³⁵ LCP's investment management fee survey 2017 states on p10 that 'of the 22 major strategies ... covered, only 8 have seen rises in the average fee rate whilst 13 saw falls This means a new investor today is typically coming in at a lower fee rate. If existing investors have not recently asked for a fee reduction, they could be paying more than other clients of the asset manager.'

²³⁶ A defined amount of investments above which the fund becomes too large to execute its chosen investment strategy.

providing them with fee surveys), negotiating on individual clients' own behalf, and negotiating on behalf of several clients to leverage the combined value of assets under advice or management at the investment consultancy and fiduciary management provider.

18. Indeed, using the combined assets across clients is a strategy used by several investment consultancy firms to increase the level of investments being leveraged in negotiations. For example, [X], [X] and [X] are investment consultancy-only firms which told us they have previously achieved success taking this approach. This approach may be particularly effective in fiduciary management.
19. Investment consultancy and fiduciary management providers emphasised that discount negotiations were typically closely linked together with their manager recommendations services and teams.²³⁷ For example, [X] told us that 'fee and terms and conditions negotiations will typically take place as part of the client manager selection process. In most cases [X] will conduct this negotiation on the client's behalf';²³⁸ and [X] told us that 'when proposing or advising on a new investment strategy or product, fees are part of the discussion from the outset'.
20. Several providers said that clients are able to, and do, negotiate discounts on their own behalf. For example, [X] told us that 'in some cases, our clients (typically the larger ones) will choose to negotiate their own commercial terms and keep this confidential'.²³⁹ Nevertheless, a majority of providers told us it was very common for them to negotiate on a clients' behalf, and some said they did so whether a client explicitly asked them to or not.²⁴⁰

Methodology

21. In order to understand whether activity by investment consultancy and fiduciary management firms helps their clients to achieve materially higher discounts than those clients could achieve by themselves, we compared discounts achieved by clients who use manager recommendations with

²³⁷ These services are purchased, potentially implicitly, by a large majority of schemes in fiduciary management as a consequence of delegating decision making to the fiduciary management provider.

²³⁸ At least, 'where an asset manager has not entered into a specialist [X]'. Paragraph 86.2 of [X] response to the Market Questionnaire.

²³⁹ Consistent with this, [X] told us that 'If the client is a [X], we are constrained by auditor independence rules and can't negotiate the fee on their behalf. We will encourage the client to negotiate fees for themselves and can provide them with anonymised information on fee levels achieved by other clients or offered by other providers for the same service to help them in their negotiations'. Source [X] response to the market information request.

²⁴⁰ [X] told us 'for our smaller clients it is often unrealistic to expect to be able to negotiate a discount; ... we do only do this if in the individual consultant's judgement the likelihood and size of any fee saving is justified by the additional expense of our time carrying out the negotiations'. Source: [X] response to the Market Information Request.

those who don't. This should broadly represent the group of clients for whom investment consultants negotiate with asset managers.

22. There are two potential problems with making this comparison, although we do not consider either undermines our analysis. We set these out below.
23. Firstly, our use of schemes which do not purchase manager recommendations as a comparator group relies on the assumption that purchasing manager recommendations²⁴¹ is a good proxy for whether a scheme's investment consultancy negotiates on their behalf. In practice, some clients purchasing manager recommendations may do their own negotiations. On the other hand, some clients who don't purchase recommendations may rely on their investment consultant's support or resources in negotiations.
24. From what parties have told us, we expect these 'mismatches' to constitute a minority of the data. Further, we expect that many schemes which do not purchase manager recommendations from the provider are either larger schemes capable of undertaking this work themselves, or purchase the service from another provider. These factors could mean that the average discount for the comparator group is higher than it would be if we could perfectly identify schemes which received no assistance in negotiations, and therefore may understate the true impact of having investment consultant or fiduciary manager support.
25. Second, we expect customers who do not purchase manager recommendations to benefit from 'spillovers' from customers who do purchase the manager recommendations service: that is, they will likely invest in at least some of the same asset managers as those customers who do purchase negotiations, and where investment consultants leverage the total value of their customers' investments with particular asset managers, these negotiated discounts could be passed on.
26. However, we expect investment consultancy and fiduciary management providers to focus their negotiating effort on those asset managers (and products) in which higher proportions of customers paying for the service are invested. Any spillovers would again inflate the discount achieved by schemes which do not receive investment consultant support, and therefore cause an understatement in the effect identified.

²⁴¹ It also relies on the scheme level data provided by various parties being sufficiently consistently coded across clients.

Dataset

27. Our analysis relies on a very similar dataset to that used in our analysis of investment consultancy and fiduciary management fees, discussed in Appendix 5.²⁴² The key difference is that here we make use of data which is at customer-investment level, where in the analysis of investment consultancy and fiduciary management fees we conducted analysis at customer level.²⁴³
28. In particular, our main dataset contains information on the investment product chosen by the customer, the date they invested, the fee they actually paid, the percentage by which this fee was lower than the rack rate fee (the Implicit Discount), the asset class,²⁴⁴ the asset manager they used,²⁴⁵ the investment consultancy or fiduciary management provider they used, as well as a set of customer characteristics imported from the gains from engagement dataset such as the scheme type and the mix of services they purchased.
29. We relied on providers to calculate the implicit discount and to provide the rack rate that would have applied for particular customers. The implicit discount could reflect not only effectiveness of negotiating down from the rack rate, but also the effect of aggregating together assets to achieve lower rack rate starting points.
30. We present some key summary statistics for this data in Table A6.1 below.

²⁴² Our dataset contains data from Aon, Barnett Waddingham, Cardano, Hymans, KPMG, Mercer, Redington, River and Mercantile and WTW.

²⁴³ We conduct some analysis on data which is re-aggregated to customer level data where this makes more sense in that context.

²⁴⁴ We created the asset class variable by an algorithm which reads in the names of the investment products used, and looks for key indicators of whether the product is, for example, a bond product. We do not believe that the algorithm will have correctly classified all products in all instances; nevertheless, since we are only using the resulting variable as a control in an indicative regression, we do not consider that any mis-categorisation could have any fundamental impact on our results.

²⁴⁵ Likewise, our creation of a consistent asset manager ID variable relied on a similar algorithm, and could either group together a small number of asset managers who should not be grouped, or not group together some which should be grouped. For the same reasons, we do not consider this to be concerning.

Table A6.1: Summary statistics on our asset manager data

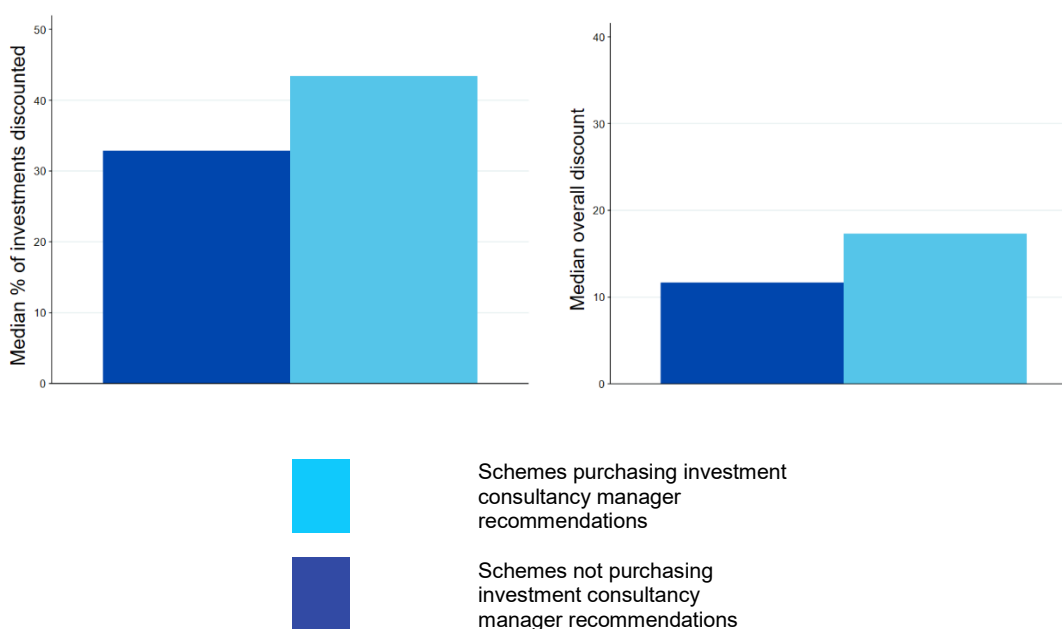
<i>Variable Name</i>	<i>Obs</i>	<i>Mean</i>	<i>St.Dev.</i>
Implicit Discount (%)	10,957	24	26
Investment Fee (£)	10,957	61040	126915
Client Investment (AUM, £m)	10,957	20	46
Price paid (implied basis points)	10,956	53	99
Firm-AM combined Investment (AUM, £m)	10,957	6564	9533
Number of years ago investment made	10,818	6	3

Source: CMA Analysis; Parties' data²⁴⁶

Results

31. We begin by comparing the median discounts achieved across each group. Considering the distribution of clients, we compared the median percentage of investments which had achieved at least a 10% discount, and also the median overall discount achieved. These two comparisons are set out in Figure A6.2. below.

Figure A6.2: Median percentage of investments with a significant discount, and overall discount achieved



Source: CMA Analysis, Parties' Data

²⁴⁶ Figures rounded to 0 decimal places.

32. We found that customers using manager recommendations have an overall discount rate of 17%, compared to 11% for those not using manager recommendations. We also find that they have a greater proportion of material discounts. The median discount increases with the size of the provider's investments, both in investment consultancy and fiduciary management. This indicates that a strategy of aggregating together assets is effective in increasing discount rates.
33. We found that the level of discount was correlated with the combined value of both investment consultant and fiduciary management providers' customers' assets. Taking the level of combined assets as a given, we found that fiduciary management customers received very similar discounts, whereas investment consultancy customers received highly varying discounts.
34. However, there are a range of potentially confounding factors which could influence discount rates. We therefore use a regression approach to help control for these issues.²⁴⁷
35. For our main results, in order to test whether purchasing investment consultancy or fiduciary management services leads to higher discounts, we compared the discount rates received by customers *invested with the same firm and asset manager*. That is, we included provider-asset manager fixed effects. This strips out a number of possible confounding factors, such as the asset manager's preparedness to offer discounts at all. We controlled for the asset class; whether the scheme is a hybrid rather than a DB scheme; and the level of the customer's individual investment.
36. Our variables of interest divide schemes into six 'buckets' depending on the services purchased and whether they have at least one engagement indicator. We treat schemes which have no engagement indicators and purchase neither fiduciary management nor investment consultancy manager recommendations as the base group: all discounts are therefore measured relative to this group.
37. Specification (1), our main results, considers schemes purchasing both fiduciary management and investment consultancy together in the same regression.
38. However, doing so constrains the effect of all control variables to be the same regardless of whether the scheme is in IC or FM. Specifications (2)

²⁴⁷ For our main regressions, we exclude schemes in partial fiduciary management for simplicity, although include them in a robustness check reported below. We find our results are not sensitive to this treatment.

and (3) account for this by focussing on IC schemes only; they differ in that (2) allows engagement to influence discount rates for schemes which do not purchase manager recommendations, whereas (3) constrains schemes not purchasing manager recommendations to have the same discount rate regardless of whether they are engaged or not. We show the results of this regression analysis in Table A6.2. below.

Table A6.2: Main results for our analysis of asset manager discounts

	(1) <i>Both</i>	(2) <i>IC only</i>	(3) <i>Simple IC</i>
FM, engaged	24.10*** (0.00)		
FM, not engaged	24.63*** (0.00)		
IC Mgr, engaged	4.34** (0.02)	2.94* (0.05)	5.03*** (0.01)
IC Mgr, not engaged	-0.74 (0.80)	-0.99 (0.53)	1.09 (0.52)
No Mgr, engaged	-1.06 (0.69)	-2.46 (0.33)	<i>Combined into one base category</i>
No Mgr, not engaged	<i>Base</i>	<i>Base</i>	
Client investment (AUM - Logs)	0.57 (0.47)	0.56 (0.66)	0.56 (0.65)
Hybrid Dummy	-3.43** (0.05)	-3.13** (0.02)	-3.14** (0.01)
Investment in bonds	6.29** (0.02)	4.01** (0.03)	4.03** (0.03)
Investment in equity	8.74*** (0.00)	8.96*** (0.00)	8.96*** (0.00)
Investment in LDI	0.36 (0.93)	-2.25 (0.33)	-2.13 (0.34)
Investment in property/infrastructure	-11.14** (0.01)	-6.13*** (0.01)	-6.12*** (0.01)

	(1) <i>Both</i>	(2) <i>IC only</i>	(3) <i>Simple IC</i>
Provider-Asset Manager Fixed Effects	YES	YES	YES
Constant	7.63** (0.02)	11.55*** (0.00)	9.45*** (0.00)
Observations	9241	5272	5272
Adjusted R-squared	0.556	0.306	0.306

p-values in parentheses * p<0.10 ** p<0.05 *** p<0.01

Source: CMA Analysis, Parties' Data

39. For investment consultancy, specifications (1) to (3) show that investments made by customers which purchase manager recommendations are associated with discount rates which are two to five percentage points higher than schemes which do not purchase manager recommendations, but this was only true for more engaged schemes.²⁴⁸
40. For fiduciary management, specification (1) shows that schemes receive discount rates which are around 24% points higher than schemes in investment consultancy which do not purchase manager recommendations.²⁴⁹ The discount rates are also significantly higher than investment consultancy customers which do purchase manager recommendations. This appears to be the case regardless of engagement.
41. The effects are economically and statistically significant. These results imply that purchasing investment consultancy is likely to help schemes achieve greater discounts than they could themselves, but only if the scheme is engaged. Purchasing fiduciary management appears also to be associated with higher discounts, regardless of engagement indicators.
42. The effect demonstrates that low trustee engagement could have adverse effects in ways other than investment consultancy and fiduciary management pricing, as discussed in Appendix 5.²⁵⁰

²⁴⁸ Further, being engaged but not purchasing manager recommendations does not appear to be associated with higher discounts.

²⁴⁹ Although our data contains some schemes which are not indicated as purchasing asset manager selection, this seems to us a key part of the fiduciary management offering. We therefore have not used these schemes as a comparator group in case these arise due to anomalies or special cases in the data provided to us. We consider that schemes not purchasing manager recommendations in investment consultancy are a good alternative comparator group and have therefore used that.

²⁵⁰ Our dataset contains a relatively high proportion of observations from [X]; however our conclusions were not sensitive to excluding that firm.

- (a) We undertook a range of sensitivity tests to understand the robustness of the above analysis. In particular, we tested whether the results were sensitive to:
- (b) Including partial fiduciary management schemes in the dataset.
- (c) Including schemes' funding levels, which might account for differing investment profiles of schemes.
- (d) Including the number of years ago the investment was made.
- (e) Using the discounted price per unit of AUM as the dependent variable, rather than the discount rate.
- (f) Omitting provider - asset manager specific controls (that is, including only controls relating to each separately rather than in combination).²⁵¹
- (g) As for (e) but applied to the simple IC model (specification (3) above).

43. We present each of these sensitivities in turn in Table A6.3. below.

Table A6.3: Asset manager discount sensitivities

	(4)	(5)	(6)	(7)	(8)	(9)
	<i>Include Partial FM</i>	<i>Include PC Funded</i>	<i>Include Year Invested</i>	<i>Price is Dependent Variable</i>	<i>Exclude Provider-AM Dummies</i>	<i>IC Simple only, Exclude Provider-AM Dummies</i>
FM, engaged	18.36***	32.60***	24.71***	-0.29	19.00***	
	(0.00)	(0.00)	(0.00)	(0.15)	(0.00)	

²⁵¹ We do this because there is a risk that including fixed effects, or individual control variables which control for providers' choice of asset manager suffers from the 'bad control' trap; ie because the choice of asset manager and the combined level of assets with that asset manager is an outcome of choosing fiduciary management or investment consultancy, *controlling* for that outcome in a regression in which we test the effect of purchasing fiduciary management or investment consultancy could cause the regression to understate the effect of purchasing these services. We find that our analysis of investment consultancy is not robust to this change of specification, but the results for fiduciary management do not change much.

	(4)	(5)	(6)	(7)	(8)	(9)
	<i>Include Partial FM</i>	<i>Include PC Funded</i>	<i>Include Year Invested</i>	<i>Price is Dependent Variable</i>	<i>Exclude Provider-AM Dummies</i>	<i>IC Simple only, Exclude Provider-AM Dummies</i>
FM, not engaged	19.40*** (0.00)	32.86*** (0.00)	25.25*** (0.00)	-0.35* (0.09)	19.70*** (0.00)	
IC Mgr, engaged	4.65** (0.01)	9.91** (0.04)	4.98** (0.01)	0.12 (0.28)	1.16 (0.72)	4.58** (0.01)
IC Mgr, not engaged	-0.48 (0.87)	3.25 (0.54)	-0.08 (0.98)	0.23** (0.04)	-3.48 (0.35)	0.57 (0.73)
No Mgr, engaged	-0.32 (0.89)	4.23 (0.38)	-0.62 (0.84)	0.22* (0.08)	-3.12 (0.31)	<i>Combined into one base category</i>
No Mgr, not engaged	<i>Base</i>	<i>Base</i>	<i>Base</i>	<i>Base</i>	<i>Base</i>	
Percentage Funded	0.16 (0.82)	1.17* (0.08)	0.53 (0.52)	-0.05*** (0.00)	0.80 (0.28)	0.40 (0.74)
Number of years since investment	-3.53* (0.07)	-7.05*** (0.00)	-3.35* (0.06)	0.13*** (0.01)	-3.00* (0.07)	-2.99** (0.03)

	(4)	(5)	(6)	(7)	(8)	(9)
	<i>Include Partial FM</i>	<i>Include PC Funded</i>	<i>Include Year Invested</i>	<i>Price is Dependent Variable</i>	<i>Exclude Provider-AM Dummies</i>	<i>IC Simple only, Exclude Provider-AM Dummies</i>
Client investment (AUM - Logs)	7.27**	4.54	6.53**	-0.53***	6.64***	4.20**
	(0.04)	(0.11)	(0.02)	(0.00)	(0.01)	(0.02)
Hybrid Dummy	8.15**	9.40***	8.90***	-0.24**	9.43***	9.83***
	(0.02)	(0.00)	(0.00)	(0.03)	(0.00)	(0.00)
Investment in bonds	3.40	1.72	0.35	-0.39***	3.22	-0.31
	(0.54)	(0.71)	(0.94)	(0.00)	(0.47)	(0.90)
Investment in equity	-12.38***	-10.15**	-11.28**	0.52***	-12.58***	-7.31***
	(0.01)	(0.03)	(0.01)	(0.00)	(0.00)	(0.00)
Investment in LDI		0.07**				
		(0.03)				
Investment in property/infrastructure			-0.06			
			(0.70)			

	(4)	(5)	(6)	(7)	(8)	(9)
	<i>Include Partial FM</i>	<i>Include PC Funded</i>	<i>Include Year Invested</i>	<i>Price is Dependent Variable</i>	<i>Exclude Provider-AM Dummies</i>	<i>IC Simple only, Exclude Provider-AM Dummies</i>
Provider-Asset Manager Fixed Effects	Yes	Yes	Yes	Yes	No	No
Provider Fixed Effects	No	No	No	No	Yes	Yes
Asset Manager Fixed Effects	No	No	No	No	Yes	Yes
Constant	9.66*** (0.00)	-6.51 (0.37)	7.44** (0.01)	3.65*** (0.00)	19.79*** (0.00)	21.06*** (0.00)
Observations	10889	8083	9107	9207	9241	5272
Adjusted R-squared	0.569	0.580	0.556	0.757	0.514	0.263

p-values in parentheses * p<0.10 ** p<0.05 *** p<0.01

Source: CMA Analysis; Parties' Data

44. These sensitivity tests show that schemes in fiduciary management have higher discount rates than schemes in investment consultancy, regardless of whether those schemes purchased manager recommendations, across all models testing this, ie specifications (4) to (8). More engaged schemes in fiduciary management always had similar discount rates to less engaged schemes. Specification (4) shows that this effect persists even when we include partial fiduciary management schemes.
45. More engaged schemes who purchase investment consultancy manager recommendations are also associated with greater discount rates across specifications (4) to (7) and (9). The effect did not hold for (8), in which we replaced provider-asset manager combined fixed effects with a set of

separate provider fixed effects and asset manager fixed effects in the baseline model.²⁵²

46. Including percentage funded as a control in specification (5) increases the discount rates but no key variable changes significance.²⁵³ We found no robust evidence when we use discounted prices paid by the scheme as the dependent variable in specification (7), but we note that this is less likely to account for potentially higher quality products which have higher prices.
47. For investment consultancy, where we identify an effect of engagement, we have tested whether this effect varies depending on whether we use individual measures of engagement rather than the combined measure. This analysis is shown in Table A6.4. below. For simplicity, we exclude all fiduciary management customers as well as customers in investment consultancy who do not purchase manager recommendations.

Table A6.4: Effect of individual engagement measures on asset management discounts

	(12) <i>Tender</i>	(13) <i>TPE</i>	(14) <i>PT</i>
Tender	4.08*** (0.00)		
TPE		-2.45* (0.08)	
PT			-1.62** (0.03)
Client investment (AUM - Logs)	0.49 (0.70)	0.66 (0.62)	0.65 (0.62)
Hybrid Dummy	-3.24*** (0.00)	-2.97** (0.01)	-2.88** (0.01)
Investment in bonds	4.19** (0.03)	3.99** (0.03)	4.03** (0.03)

²⁵² We also did this in specification (9) where the results did not change much, the difference between (8) and (9) being that (9) constrains schemes not purchasing manager recommendations to have the same discount rate regardless of whether they are engaged or not.

²⁵³ We do not take this as our base case despite percentage funded being significant because there is a concern that the level of the discount of the schemes' investments could influence funding levels – this endogeneity concern reduces the weight we can place on this specification. Nevertheless, we consider that it useful as a sensitivity test because it allows us to proxy for the type of investment the scheme might chose, aside from the simple dummy variables for asset classes.

	(12)	(13)	(14)
	<i>Tender</i>	<i>TPE</i>	<i>PT</i>
Investment in equity	9.43*** (0.00)	9.33*** (0.00)	9.30*** (0.00)
Investment in LDI	-2.28 (0.32)	-2.60 (0.27)	-2.62 (0.25)
Investment in property/infrastructure	-5.63** (0.02)	-5.92** (0.01)	-6.08** (0.01)
Provider-Asset Manager Fixed Effects	YES	YES	YES
Constant	11.63*** (0.00)	13.66*** (0.00)	14.39*** (0.00)
Observations	4936	4936	4936
Adjusted R-squared	0.305	0.299	0.300

p-values in parentheses * p<0.10 ** p<0.05 *** p<0.01

Source: CMA Analysis

48. In these regressions, TPEs and PTs are associated with a negative effect on discount rates when considered in isolation, and are cases where our analysis appears less robust. However, schemes which tendered are associated with greater discount rates. This is consistent with our view that tendering is likely to be a stronger form of engagement.
49. In its response to the provisional decision report, WTW stated that ‘schemes that the CMA has classified as ‘disengaged’ are typically smaller in scale and therefore less well placed to secure significant fee discounts from asset managers when negotiating individually’.²⁵⁴
50. In our regression results above, we have controlled for the size of the client’s investment in the relevant asset management products. These results therefore demonstrate the impact of engagement, conditional on scheme size.
51. As an alternative way to control for scheme size, in Table A6.5. we have included a variable which categorises schemes as small (AUM < £100

²⁵⁴ WTW response to the provisional decision report (paragraph 4.16 (d) (i)).

million), medium (£100 million < AUM < £1 billion) or large (AUM > £1 billion).

52. The results confirm that larger clients receive higher discounts on average. However, this alternative model has no material impact on our results regarding engagement: in investment consultancy, customers that purchase manager recommendations receive higher discounts than customers that do not purchase manager recommendations, but this is only true for the more engaged schemes.

Table A6.5: Asset manager discount sensitivities (based on client size)

	(1) <i>Both</i>	(2) <i>IC only</i>	(3) <i>Simple IC</i>
FM, engaged	24.28*** (0.00)		
FM, not engaged	24.46*** (0.00)		
IC Mgr, engaged	4.90*** (0.02)	4.51** (0.00)	5.12*** (0.01)
IC Mgr, not engaged	0.472 (0.84)	1.979 (0.12)	2.59 (0.16)
No Mgr, engaged	-0.397 (0.86)	-0.720 (0.77)	
No Mgr, not engaged	<i>Base</i>	<i>Base</i>	<i>Combined into one base category</i>
Client size:			
Small	<i>Base</i>	<i>Base</i>	<i>Base</i>
Medium	0.258 (0.87)	2.021 (0.55)	2.03 (0.55)
Large	8.284** (0.01)	13.36*** (0.01)	13.38*** (0.01)
Observations	9308	5332	5332
Adjusted R-squared	0.565	0.346	0.346

p-values in parentheses * p<0.10 ** p<0.05 *** p<0.01

Source: CMA Analysis; Parties' Data. Note: all of the control variables in the baseline regression are also included but have been omitted for brevity.

Analysis of Asset Allocation Advice

53. This section contains our analysis of asset allocation. We proceed in this order:
- (a) First, we assess the relative importance of asset allocation and manager recommendations.
 - (b) Second, we explain our approach as regards the effectiveness of asset allocation advice.
 - (c) Third, we detail the quantitative and qualitative analysis we have undertaken on tailoring.

Asset allocation vs manager recommendations

54. Numerous parties told us that asset allocation is the key driver of returns, and is more important than manager recommendations. For example, Mercer said that ‘as the primary driver of risk and return, asset allocation is the most important decision an investor can make’;²⁵⁵ Redington said that ‘performance of manager recommendations, whilst more easily measurable, are not the key driver of member outcomes’.²⁵⁶
55. Several parties, including Redington, IC Select, LCP and Mercer, highlighted papers in the academic literature suggesting asset allocation determines around 90% of performance.²⁵⁷
56. However, a range of other research papers find that a significant amount of variation in performance is determined by factors other than asset allocation, such as manager selection. In particular:
- (a) Ibbotson (2010) concludes: ‘the time has come for folklore to be replaced with reality. Asset allocation is very important, but nowhere near 90 percent of the variation in returns is caused by the specific asset allocation mix...’;²⁵⁸ and
 - (b) Hensel, Ezra and Ilkiw (1991) concludes that ‘...relative to a naïve diversified mix, any specific asset allocation policy may have a sizable

²⁵⁵ [Mercer's response to the Issues statement.](#)

²⁵⁶ [Redington's response to the Issues statement.](#)

²⁵⁷ Most made references to the paper ‘*Determinants of Portfolio Performance*’ by Brinson, Hood and Beebower (1995).

²⁵⁸ Ibbotson, R. (2010), ‘*The Importance of Asset Allocation*’. CFA Digest, 40(2), p20

impact on total return, but nothing like the dominance frequently (and erroneously) attributed to it.’²⁵⁹

57. The CMA survey showed that almost all trustees consider both services are either very important or fairly important to meeting the scheme’s objectives.²⁶⁰ We therefore consider that the effectiveness of both asset allocation and manager recommendations is important. We have discussed manager recommendations separately in Appendix 2.

Analysis of the effectiveness of asset allocation

58. We considered whether it was appropriate to undertake a large scale quantitative analysis into how far investment consultancy and/or fiduciary management providers’ asset allocation advice improved scheme-level returns or risk.
59. We asked Parties to comment on the feasibility and methodology to undertake this work. Most parties told us that bespoke quantitative work in this area would not be feasible, or at least would present significant challenges, particularly for investment consulting. For example, WTW told us that ‘by its nature the quality of asset allocation advice is very difficult to assess given that there is no obvious single counterfactual’.²⁶¹
60. These parties generally told us that we should instead consider the historical performance of their full fiduciary management customers to understand outcomes for both fiduciary management and investment consultancy services. This is discussed in chapter 10. Parties did not propose other methodologies.
61. Additionally, although some providers such as Hymans, Redington and LCP maintain internal ‘ratings’ of asset classes to provide guidance to consultants in their asset allocation advice,²⁶² we noted that there is no one set of consistent asset class definitions, and therefore constructing a comparable dataset of asset class ratings (where these exist) and performance would be extremely challenging.
62. We therefore concluded that it would not be pragmatic to conduct such a large scale quantitative analysis. We considered whether there was higher level, qualitative evidence that parties’ asset allocation advice had improved

²⁵⁹ Chris R. Hensel, D. Don Ezra and John H. Ilkiw, *The Importance of the Asset Allocation*, Decision Financial Analysts Journal, Vol. 47, No. 4 (Jul. - Aug, 1991), pp. 65-72.

²⁶⁰ CMA analysis of CMA survey.

²⁶¹ [WTW Response to the Issues Statement](#), paragraph 4.16.

²⁶² Hymans, MI Response Q13; Redington, MI Response Q17; and LCP’s MI response.

customers' returns, which might be indicative of the quality of this service. Advice in respect to hedging is one such indicator. We note in chapter 10 that providers' asset allocation advice with respect to hedging decisions may have produced value for their customers.

63. We are however not in a position to assess the extent in general to which asset allocation has improved customers' returns.

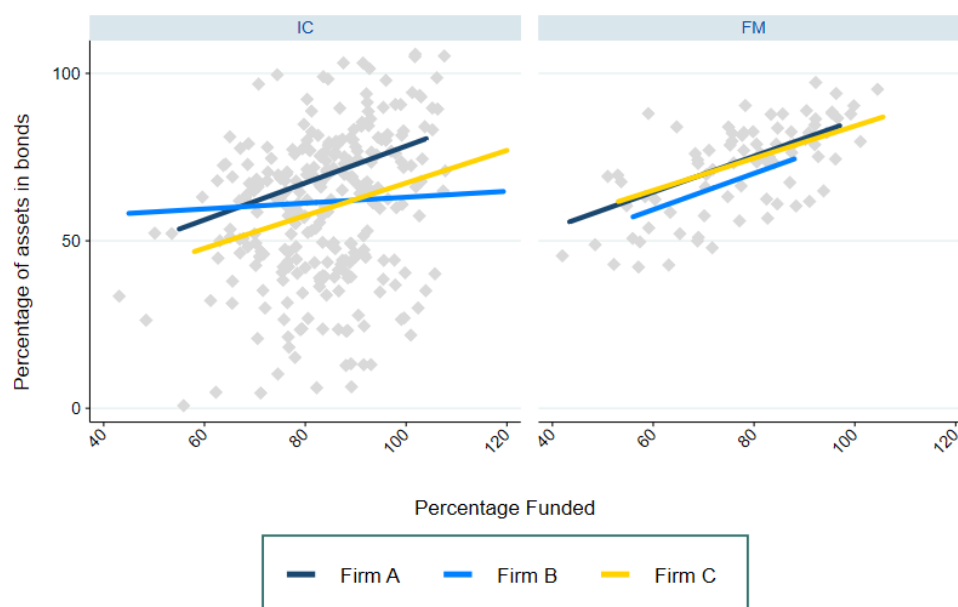
Analysis of tailoring in asset allocation

64. Parties told us that asset allocation advice is highly scheme-specific, in that advice is tailored based on factors such as the strength of the employer covenant; investment risk appetite; funding position; scheme maturity; the level and profile of contributions; cash flow demands and liquidity; correlation of asset class returns with sponsor health; and schemes' appetite for and tolerance of complexity. Parties also told us that asset allocation is often arrived upon as part of a conversation with trustees.
65. We undertook analysis to verify this point of view. If we found evidence that asset allocation advice were 'one size fits all', this would indicate that market outcomes for this service are comparatively poor.
66. We were not able to observe the *advice* given to schemes, but considered their final asset allocation positions to represent a reasonable proxy for the advice given, particularly in fiduciary management. We focussed on the bond/equity ratio (expressed as the percentage of assets in bonds, out of all assets allocated into either equity or bonds). Our main analysis focussed on four significant providers of IC and/or FM services: Aon, Mercer, WTW and Hymans.
67. Our analysis relied on the dataset created for our analysis of investment consultancy and fiduciary management prices. Our dataset for this analysis contained information on asset allocation positions, and some characteristics such as funding levels.
68. As for our analysis of other outcome parameters, we were unable to match data on all customers between all data sheets provided by the Parties. As a consequence, we analysed only a subset of customers. We consider that even if the analysis is not fully representative of firms' customer base,²⁶³ it is a sufficiently good cross-section of the Parties' customer base to allow us to draw general if indicative conclusions.

²⁶³ Excluding as it does most of the smallest customers as well as for most analyses all DC customers,

69. Our analysis is relatively straightforward. We considered the variation in asset allocation positions overall, and then controlled for one key driver of asset allocation (funding level). We make this comparison individually for each firm, split also by the type of customer (investment consultancy or fiduciary management).²⁶⁴
70. We focussed on the bond/equity ratio (expressed as the percentage of assets in bonds, out of all assets allocated into either equity or bonds).²⁶⁵ Our main analysis focussed on the largest three IC-FM providers, but the results were similar when we used data from another significant investment consultancy provider (Hymans).
71. The analysis is shown in Figure A6.3 below. This is a scatter chart showing the different bond-equity positions of each scheme against their funding levels²⁶⁶ as well as the fitted relationship between these two variables.

Figure A6.3: Asset allocation positions compared to funding levels



Applying a 10 percentage point disturbance to the scatter; omitting data outside the 0-100% interval
Excluding all assets not invested in bonds or equities

Source: CMA Analysis; Parties' Data

²⁶⁴ For this analysis we exclude customers in partial fiduciary management because these customers may have particularly high asset allocations within these mandates to particular asset classes. As such, we might not have sufficient coverage of their full strategic asset allocation.

²⁶⁵ Given challenges in allocating assets into particular classes and concerns about the representative nature of the data submitted, we consider that lower level asset allocation analysis could provide misleading results. By contrast, we do not expect there to be much ambiguity about what is an equity and what is a bond.

²⁶⁶ We have introduced a disturbance around each funding position to reduce identifiability concerns in this chart. The data underlying the trend in our analysis of the relationship is the actual data, not the disturbed data.

72. Our analysis showed a clear relationship between funding level and a tilt towards bonds in fiduciary management, and similar evidence for at least three of four providers in investment consultancy.
73. The relationship between funding level and bond equity ratio implies that asset allocations are tailored to give lower returns and less risk for highly funded schemes, which is evidence of tailoring to scheme characteristics. Further, that there is significant variation around the average (even in full fiduciary management) implies that a range of other scheme-specific factors are considered in determining asset allocation positions.
74. As a further sense check, we analysed an additional set of data provided by TPR and the PPF, which contained information on schemes' asset allocations. This analysis also supported the conclusions drawn from our primary asset allocation analysis.
75. This dataset contained data on (schemes' self-reported) percentage of assets in equities provided through their scheme returns to TPR. The data contained around 4,000 schemes; we dropped schemes not in the PPF index, all DC and Hybrid schemes; and schemes which appeared to have potentially invalid or complex data (such as proportions of assets across all asset classes which did not sum to one).
76. Considering pension schemes as a whole,²⁶⁷ we allowed bond-equity positions to vary according to the following: scheme size (measured in 5 dummy variables); funding ratios (defined as total assets divided by total *protected* liabilities); the percentage of members who were active (ie non-pensioners); scheme status (measured in four dummy variables: open / closed / frozen and winding up) and scheme maturity (measured by the percentage of the schemes' liabilities which related to active members joining between 1997 and 2009).
77. We found a statistically significant relationship between each scheme characteristic variable and bond-equity positions in almost all cases.²⁶⁸

²⁶⁷ We note that this analysis will have included schemes which do not purchase investment consultancy or fiduciary management services (and relatedly, we could not conduct analysis separately for investment consultancy and fiduciary management services). However, the vast majority will purchase at one of these services, therefore we do not think this is a fundamental issue.

²⁶⁸ Specifically, we used both a linear OLS and a fractional regression with a logit link to assess the relationship between the percentage of schemes' assets in bonds (out of all assets in bonds or equities) and the variables mentioned above. All coefficients for named had effects which were statistically significant at the 5% level, except for where mentioned in what follows. The percentage of scheme members who were active had a marginally significant effect in both regressions. The same was true of the dummy variable representing schemes being 'open'. The dummy for schemes being 'Paid up (frozen)' was not significant at any conventional level. The dummy on 'Winding up' was significant indicating an association with higher bond/equity ratios, and 'closed' schemes were the omitted category. We also included the percentage of liabilities relating to members who had joined between 1997 and 2009 but were *deferred*, but the effect was not statistically significant at conventional levels. We note that these are just associations, and do not interpret any causality in either direction.

Where coefficients were significant, they had the expected sign. However, even controlling for these factors, a large amount of variation remained. Both of these facts support the proposition that asset allocation advice is likely to be tailored to scheme characteristics.

78. Our conclusions in relation to asset allocation are set out in chapter 10.

Analysis of responses and internal documents

79. We have undertaken analysis of parties' responses to our Market Information Request and internal documents. Our review has sought to identify whether investment consultancy and fiduciary management firms monitor levels of engagement; whether price and service factors are negotiated or personalised to individual schemes; and whether there is evidence that demand side engagement can and does influence price and service levels.
80. Our review has considered views from the spectrum of parties who responded to our Market Information Request. Our review of internal documents focussed on the largest three IC-FM providers, namely Aon Hewitt, Mercer and WTW, though we have received only limited evidence from [X].
81. Whilst in the main body of this report, we split the results of this analysis between price and quality (see chapter 10 for the analysis of price and quality), we have presented both together in this Appendix.

Parties' submissions

82. In their responses to the Market Information Request, Parties told us that improvements in terms or discounts may be based on specific characteristics of the service purchased, for example a discount based on the size of the schemes' assets or a discount for purchasing multiple services.
83. In addition to this, although many have standard fees, investment consultants appeared prepared to negotiate on fees in order to secure appointments, and will revisit fees for existing schemes. These negotiations appear to be initiated both by Parties and by schemes.

84. [X] for example told us that ‘clients are able to, and have in practice, exerted downward pressure on fees.’²⁶⁹ They provided a number of examples of occasions when schemes had managed to do this:

Table A6.5: Examples of occasions where [X] customers have exerted downward pressure on fees

Client	[X] Example
Client A	‘The client negotiated aggressively on fees during the sales process, [X]’
Client B	‘...The client had benefitted from a negotiated discount on our fees which was due to expire, i.e. the fees were about to revert to higher levels. [X]’
Client C	‘The client [X] We offered a set of options for the client to choose between...’

Source: [X] internal documents.

85. [X] told us in the context of its investment consultancy services that ‘we believe our prices are competitive in the market... that said we operate in a commercial environment and will negotiate with new or existing schemes on charge out rates or project costs related to the scope of work to be undertaken’²⁷⁰
86. [X] told us that ‘we periodically review the level of fees we charge all schemes and approach any outliers to reduce their fee basis. ... Of course, we are also approached to review fee levels by schemes and/or their independent advisers as well’²⁷¹
87. Other providers also said they negotiate fees, other aspects of service provision, or both together including at schemes’ requests. These included [X],²⁷² [X],²⁷³ and [X].²⁷⁴
88. It appears to be reasonably common for discounts to be given on an ‘in-kind’ basis, rather than as a reduction in the retainer fee. For example, [X] told us that ‘[X] we decided to offer [X] data base access for free for the first year [X]’²⁷⁵

²⁶⁹ [X].

²⁷⁰ [X].

²⁷¹ [X].

²⁷² [X].

²⁷³ [X].

²⁷⁴ [X].

²⁷⁵ [X].

89. It also appears to be reasonably common for firms to use write-offs where scheme trustees are unhappy with general fee levels or the quality of services they have received.
90. The firms' responses appear to indicate that negotiations can improve the offering given to schemes. Therefore, at least some of the variation in fees between schemes for a given level of service quality can be attributed to negotiation. Where negotiations occur surrounding service quality, this may also be improved. If negotiations are less frequent or less successful where schemes are less engaged, a weak demand side may mean that competition may not be functioning effectively.

Parties' internal documents and processes

91. The evidence set out above is consistent with that which we find in internal documents. It appears that several parties carefully monitor existing schemes, and record information on who they consider to be 'at risk' of switching provider.²⁷⁶ It appears that this process is linked to firm-led negotiations on fees, targeted improvements in service quality, and other efforts to improve outcomes for such schemes. There were references in the documents to concerns that otherwise these schemes would switch.
92. If more engagement leads clients to be more likely to be considered 'at risk' and therefore to receive better outcomes, this implies that schemes which are less engaged (or which face barriers to engagement) may receive comparatively less favourable outcomes.
93. We set out a summary of the evidence on this monitoring process, and potential links to market outcomes.
94. [X] told us that they maintain a 'Clients at Risk' register which is regularly reviewed for progress by leaders within the business,²⁷⁷ including at [X].²⁷⁸ Reasons for including schemes mostly relate to service issues, but also include upcoming tenders and reviews.²⁷⁹
95. Actions to manage risk generally tend [X]. For example, [X].²⁸⁰

²⁷⁶ In a more general way, investment consultants and fiduciary managers generally told us that they undertake client surveys and interview processes in order to understand schemes' perceptions of the service qualities and value for money that they are receiving. Some parties conduct these anonymously, others in an attributable way.

²⁷⁷ [X].

²⁷⁸ [X].

²⁷⁹ [X].

²⁸⁰ [X].

96. In the register presented (for fiduciary management schemes) [X], schemes are assigned a rating of Red, Amber or Green. Red means [X].²⁸¹
97. Reasons for being 'at risk' appear to include [X].²⁸² [X].
98. [X] appeared to conduct a similar process, at least for its fiduciary management schemes. A presentation to the [X] contained a list of fiduciary management schemes each with a 'risk status' ranging from red to green.²⁸³ Several of the 'red' and 'amber' risk schemes have notes mentioning that trustees intend to conduct reviews or tenders. In at least one case²⁸⁴ customer engagement appeared to be linked to improvements in customer outcomes.
- [X]: 'Trustees looking for savings, largely driven by [X], Company advisors' and noted the action 'fiduciary management fee was due to rise from [X] to [X] after 3 years (ie start of 2015), but we have agreed to retain a [X] fee'.²⁸⁵
99. [X] also told us that they 'actively collate feedback from schemes and carry out [regular] [X] reviews. These involve approx. [X] customer interviews per year in the UK'.²⁸⁶ [X] provided us with the results of these surveys.
100. Overall, the interviews indicate that, whilst [X] generally monitors and responds to concerns about its service levels, it monitors the engagement of its customers particularly closely. In some instances, [X] appears to have taken actions to improve its offering to customers in response to this engagement.²⁸⁷

²⁸¹ [X].

²⁸² [X].

²⁸³ [X].

²⁸⁴ [X].

²⁸⁵ [X].

²⁸⁶ [X].

²⁸⁷ [X].

Table A6.6: Examples of [X] taking action to improve its offering to customers in response to engagement.

Customer ID	Column from which information copied	Quote
[X]	How to Mitigate the issues	They had said they wanted something that was fairly generic and based on data and information we already had. They were staggered to be quoted £4k although this had been reduced to £3.5k when they had pushed back
[X]	SWOT Analysis - Threats ²⁸⁸	Robust tender process will happen in 2019? retention action plan required for next 18 months
[X]	SWOT Analysis - Weaknesses	(Linked to a point in an earlier part of interview: where scheme is noted to have 'severe financial constraints and [be] carefully looking at all fees') We have time to find a way to address their fee issue (and perception).
[X]	SWOT Analysis – Opportunities	Avoid competitive tender by urgently reviewing team, scope, fees and offering some level of investment to demonstrate our commitment.

Source: [X] internal documents

101. From these documents, it was also clear that prices were not the only relevant factors: [X] also improved or sought to maintain quality in response to engagement. They monitor customers and have acted to improve the quality of service provision to schemes which are going to tender.²⁸⁹ Specifically, [X] stated plans to improve team proactivity, identify areas of weakness, provide innovation risk management, and invest time to better understand changes to the scheme.
102. In a small number of cases, [X] appeared to be preparing the ground with trustees for future tender processes by discussing how to give trustees

²⁸⁸ [X].

²⁸⁹ [X].

control over the tender process and suggesting that, at least in the past, other firms have proposed low prices which were not credible.²⁹⁰

103. The survey often noted cross-selling opportunities, often in the ‘SWOT Analysis – Opportunities’ column. Sometimes, these opportunities appeared to be linked to whether a customer was perceived as loyal. [X].
104. [X] told us that they have ‘established a separate team ... to have oversight of client satisfaction and provide more pre-emptive action where a client appears at risk.’²⁹¹ Results from this program are reported up to the Investment Executive Committee. The information is used to identify trends or themes and deal with these on a wider basis, and also to address issues specific to these schemes.
105. However, [X] did not provide us with the internal documents relating to this team/programme, so we have not had the opportunity to review them to understand whether this ‘pre-emptive action’ involves substantially improving its offering.

Analysis of overall quality of service factors

106. We set out our assessment of trustee perceived quality in chapter 10 of the main report. In this subsection, we set out further detail.

Analysis of satisfaction

107. In chapter 10 of the main report, we noted that the CMA survey showed high satisfaction rates. We provide additional discussion here.
108. There are a number of potential benefits from considering satisfaction measures. In particular, ratings which take into account quality as it matters to customers, rather than potentially less central aspects. It is also relatively easy to measure. As a result, customer satisfaction ratings are widely used as measures of overall service quality.
109. However, there remain challenges with taking these statistics at face value. We set out some general points about interpreting the survey in Appendix 4 which apply here. Furthermore:

²⁹⁰ [X].

²⁹¹ [X].

- (a) If high satisfaction relates more to relatively low expectations than it does to the quality perceived by trustees, this would cause the responses to be somewhat misleading.
 - (b) Further, low expectations could be driven by low customer engagement.
 - (c) Customers may lack information on the full range of options available in the market, and the value for money that could be achieved elsewhere.
110. Overall, we place some weight on satisfaction as an indicator of the extent to which investment consultancy and fiduciary management providers are performing. In particular, we found that:
- (a) In investment consultancy, a substantial proportion (56%) of schemes were very satisfied with their provider and 94% of schemes were either very satisfied or fairly satisfied.²⁹²
 - (b) For fiduciary management, we observed very similar proportions: 59% of schemes were very satisfied with their provider, and 97% were either very satisfied or fairly satisfied.²⁹³
111. These statistics indicate trustees consider that they are receiving positive outcomes.

Analysis of quality and market shares in investment consultancy

112. As set out in the main report (chapter 10), we have analysed a measure of quality provided by Greenwich Associates. This analysis covers the investment consultancy market only.
113. Here, we explain further our interpretation of this measure, and additional robustness checks to our headline analysis. This includes our response to a series of comments made by parties on the analysis presented in the provisional decision report.
114. Within a well-functioning market, we would expect providers which have higher quality of service (on a reasonably objective and consistent metric) to have high or growing market shares, all else being equal.
115. We have analysed this using data on service quality provided by Greenwich Associates (GA). GA's quality of service research is based on in-depth

²⁹² CMA analysis of CMA survey, question J1 (Investment Consultancy).

²⁹³ CMA analysis of CMA survey, question O4 (Fiduciary Management).

interviews of the largest institutional funds in the UK^{294,295} to produce the Greenwich Quality Index (GQI).

116. Before proceeding to the results of our empirical analysis, we first discuss the GQI variable and its suitability for these purposes. In doing so we respond to comments made by parties in response to the provisional decision report.

Measuring quality

117. The relative quality of each provider (as captured by the GQI score) is determined through a series of questions on aspects of service provision. Each client evaluates their investment managers using a 5-point Likert scale, ranging from 'poor' to 'excellent,' on the individual measures of investment capabilities and client satisfaction. The qualitative evaluations provided by the respondents are then summarised using a Rasch model into a single score. This score is normalised and transformed to a scale from 0 to 1,000, with a mean score of 500 and a standard deviation of 166.7
118. As for our analysis of satisfaction in the [CMA survey](#), discussed above, there are challenges in interpreting customers' views on the quality of providers. Similar considerations may hold for the GQI, although in our context we consider that they are less severe. We note in particular that:
- (a) The measure is targeted to individual aspects of services (ie it asks about specific service aspects rather than requiring an overall judgement). Responses may therefore be more targeted and higher quality.
 - (b) The measure asks about performance of the scheme against particular metrics, rather than about satisfaction. It is therefore possible for schemes to have high expectations but feasibly still rank a service as either 'poor' or 'excellent' in terms of quality.
 - (c) The GQI is well respected across the investment consultancy industry as a survey to monitor the quality of competitors. A range of substantial players in the market, including Aon,²⁹⁶ WTW,²⁹⁷ LCP,²⁹⁸ Redington²⁹⁹

²⁹⁴ Institutional investors with over £100 million in assets under management.

²⁹⁵ Institutional funds include Corporate pension, Local Authority Pension and other institutional funds.

²⁹⁶ Aon MIR Q60, paragraph 60.5.

²⁹⁷ WTW MIR Q30, paragraph 30.3.

²⁹⁸ LCP MIR Q34.

²⁹⁹ Redington MIR Q34.

and Cardano,³⁰⁰ participate in and access the survey. Its wide usage by Parties implies that it communicates valuable information.

119. In its response to the provisional decision report, Mercer made several points regarding the suitability of the GQI measure for the purposes of our statistical analysis.³⁰¹ Mercer submitted that:
- (a) [REDACTED].
 - (b) [REDACTED].
 - (c) Given the small sample sizes and subjective questions, the non-linear weighting scale used in the GQI creates further uncertainty.
 - (d) Almost all observations are within one standard deviation of the population mean. Any difference from the average could therefore be entirely due to chance.
120. In similar vein, WTW submitted that ‘while the Greenwich Associates survey can be a helpful tool for comparing how firms score within each component, the overall quality score is not a robust measure of quality and should not be relied upon for statistical testing’.³⁰²
121. We recognise that [REDACTED]. This is particularly true for smaller firms. We therefore treat these results with caution.
122. As noted in above however, we emphasise that the GQI score is used widely across the investment consultancy industry. Of particular relevance here, many providers use the overall GQI score to evaluate their quality of service and/or benchmark their competitors. Cardano for example submitted that they monitor the overall quality of their service using the Greenwich Associates survey (amongst other sources).³⁰³ The overall GQI score of investment consultancy firms was analysed in a WTW Executive Committee meeting in April 2017.³⁰⁴
123. The evidence therefore indicates that the industry considers it relevant to compare the overall GQI score of competing providers, as an indicator of the quality of service they offer. Greenwich Associates has also stated to us that

³⁰⁰ Cardano MQ p13.

³⁰¹ Mercer response to the provisional decision report.

³⁰² WTW response to the provisional decision report.

³⁰³ Response to CMA market questionnaire.

³⁰⁴ Internal documents received in response to CMA information requests.

it is appropriate to compare the overall GQI scores of different providers – both in the cross-section and over time.³⁰⁵

124. Finally, we show below that there is a clear negative correlation between market share and quality (as measured by the GQI score) in every year of our sample. In each of the last 4 years, this correlation is statistically significant (see paragraph 129 below). Therefore, we consider that this relationship is not purely down to chance.
125. In its response to the provisional decision report, WTW submitted that ‘the CMA’s analysis fails to take account of the heterogeneous needs of customers’.³⁰⁶ It stated that, by using a single hybrid quality score, the CMA ‘imposes the assumption that all customers would benefit to the same degree from a service with features that score more highly on the basis of the precise weightings that the GQI assumes’.
126. We recognise that it is not possible to perfectly capture all aspects of quality, and the quality of investment advice is particularly hard to measure. We note however that the GQI score aggregates responses from clients on several aspects of service provision, including investment capabilities and client satisfaction (see paragraph 119 above). The methodology is designed so that the aspects of quality that are most important to clients are given the most weight in the construction of the overall quality score.
127. We therefore consider that the GQI score conveys useful information on the quality of competing providers. We recognise however that it is not possible to perfectly measure quality, and [X]. We interpret the results cautiously with these caveats in mind.

Simple statistical analysis

128. We have tested the correlation between market share and quality (as measured by the GQI score) for each year that we have data (2010-2017). A negative correlation means that higher market share is associated with lower quality. These correlations are shown in Table A6.7 below.
129. The table shows that higher market share is associated with lower quality in all 8 years. In each of the last 4 years, this relationship is statistically significant.³⁰⁷

³⁰⁵ Response to CMA information request.

³⁰⁶ WTW response to the provisional decision report.

³⁰⁷ This is based on a test of the pairwise correlation coefficients in each year.

Table A6.7: yearly correlation of GQI with market shares for each year

Year	Correlation	Observations
2010	-0.31	10
2011	-0.15	13
2012	-0.27	13
2013	-0.29	12
2014	-0.61**	14
2015	-0.53*	12
2016	-0.62**	11
2017	-0.55*	12

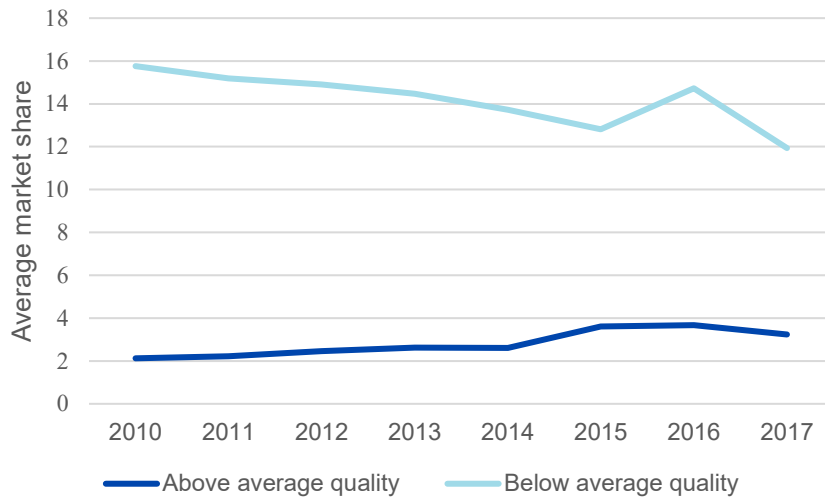
Source: CMA Analysis; Greenwich Associates Data; Parties' Data

* p<0.10 ** p<0.05 *** p<0.01.

130. To monitor changes over time, we have also analysed how the market shares of 'above average quality' and 'below average quality' firms have changed over the period. This is shown in Figure A6.4, in which we plot the average market shares of these two groups.³⁰⁸
131. The figure shows that the below average quality group of firms had a considerably higher market share than the above average quality group in each year. This disparity has reduced over time: the below average quality group's average share for example declined from almost 16% in 2010 to around 12% in 2017.
132. Even in 2017, however, there was still a considerable gap in the average market shares of the two groups of firms.

³⁰⁸ Average quality is calculated as firm specific mean relative to the sample mean. Therefore, if a firm has below average quality in any single year but across the sample has above average quality, we treat them as an above average quality firm. We do not have data on all firms for all years, so some year-on-year differences in the analysis could be a result of a sample composition effect.

Figure A6.4: Average market share over time, split by quality levels



133. In its response to the provisional decision report, Aon submitted that the CMA should consider changes in the *combined* market shares of the two groups of firms above, rather than the *average* market shares.³⁰⁹ It stated that below average quality firms observed a decline in their combined market share over the period, which has been captured by the above average firms.
134. We agree that the convergence in the market shares of the two groups is stronger when analysing combined rather than average shares. Over 2010-2017, the combined share of the above average quality firms increased from 11% to 29%. The combined share of the below average quality firms declined from around 79% to 60%.
135. In our view however, it is more meaningful to compare changes in the average share of each group, as this is less susceptible to changes in the number of firms in each year. On this measure, the gains in market share made by the below average quality firms over the period are more modest (Figure A6.4).
136. Further, we note that [X]. The impact of this single firm on the results is less pronounced when analysing the average (rather than combined) market share of the two groups.
137. Our analysis does not include every investment consultancy firm. In its response to the provisional decision report, Mercer stated that ‘in several years, more than 10% of the market is missing from the analysis. Smaller

³⁰⁹ Aon response to the provisional decision report.

firms being omitted are also those that, on average, are growing market share'.³¹⁰

138. The total market share of all the firms included in our analysis is largely constant over time however. In both 2010 and 2017 for example, the total market share of all firms in our sample was 89%. Hence, we do not find that the market share of 'excluded' firms has been growing over time. Further, we have no information on the quality of these firms, and so cannot say how their inclusion would affect the results of our analysis.
139. In its response to the provisional decision report, WTW stated that 'the CMA's analysis does not control adequately for price and other similar factors'.³¹¹
140. We note however that 'Reasonable Fees' and 'Keeping to Budget Estimates' are two components of the quality measure itself, and therefore the GQI may already account for varying prices.
141. Further, if price were to explain the *negative* correlation between market share and quality, we would expect price and quality to be *positively* correlated: higher quality firms may have lower market share because they charge higher prices. However, using information on the average revenues per hour of each investment consultancy firm in 2016 (as a measure of price), we find a negative but statistically insignificant correlation between price and quality. There is therefore no indication that price is a relevant omitted factor in the relationship between quality and market share.³¹²
142. In its response to the provisional decision report, WTW submitted that the CMA classified firms as being above or below average quality, using a simple average across firms' GQI scores.³¹³ It stated that 'in this case, firms with fewer respondents will be overrepresented in the metric, while firms with more respondents will be underrepresented'.³¹⁴ It stated that the calculation

³¹⁰ Mercer response to the provisional decision report.

³¹¹ WTW response to the provisional decision report.

³¹² This reasoning was disputed by parties in response to our updated working paper on market outcomes, on the grounds that the calculation of 'omitted variable bias' is more complex than this. We note however that if price and quality are the only two relevant factors affecting market share, the two variables must be correlated for the exclusion of price to cause any bias. We accept that, in theory, there could be bias in a more complex regression of market share on quality plus other factors. It is not clear what these other factors would be however (if quality is sufficiently broad), and if price and quality are not positively correlated, it is unlikely that the exclusion of price would lead to a negative and significant coefficient on quality. There is no reason to believe that this is the case here.

³¹³ WTW response to the provisional decision report.

³¹⁴ WTW response to the provisional decision report.

should instead be based on the average across respondents (rather than firms).³¹⁵

143. In our view, it is more meaningful to use a simple average across firms, as we are only interested in the relative quality of each firm. It is not clear why larger firms should be given more weight in the calculation of average quality. In practice, this alternative calculation has no impact on our results, as it does not reallocate any firm from being below average to above average, or vice-versa.

Regression analysis

144. In order to test the statistical significance of the relationship between market share and quality, we ran some simple regressions. The results are shown in Table A6.8.
145. Column (1) shows our baseline which uses pooled OLS and year fixed effects.³¹⁶ Column (2) uses the log of market shares as the dependent variable; and column (3) logs both market shares and quality.
146. Columns (4) – (6) assess whether higher quality is associated with gains in market shares. Column (4) includes firm fixed effects to do this; column (5) uses the year-on-year change in market shares as the dependent variable; and column (6) considers both change in market shares and change in quality.

Table A6.8: Regression results: quality and market shares.³¹⁷

	(1)	(2)	(3)	(4)	(5)	(6)
	<i>Baseline</i>	<i>Log MS</i>	<i>Log MS, Log Quality</i>	<i>Firm FEs</i>	<i>ΔMS</i>	<i>ΔMS, ΔQuality</i>
Quality	-0.04* (0.06)	-0.01** (0.01)	-3.16** (0.03)	0.02 (0.61)	0.00 (0.25)	0.00 (0.44)
Observations	97	97	97	97	82	82
R-squared	0.07	0.11	0.09	0.02	-0.06	-0.09

p-values in parentheses * p<0.10 ** p<0.05 *** p<0.01

Source: CMA Analysis; Greenwich Associates Data; Parties' Data. Year fixed effects are included in all columns. The adjusted R-squared is shown in all columns except (4), which shows the 'within R-squared'.

³¹⁵ The suggested approach is equivalent to calculating a 'weighted average' across firms. This gives more weight to larger firms in the calculation of the average. Our approach is to calculate a 'simple average', which weights all firms equally.

³¹⁶ The year fixed effects control for the possibility that quality is systematically higher or lower in any given year, allowing us to focus on the relative differences between firms.

³¹⁷ For each regression we have clustered standard errors at the firm level.

147. Models (1) to (3) show that higher quality firms are associated with lower market shares, and that this relationship is statistically significant at either the 5% or the 10% level.
148. Models (4), (5) and (6) show that there is no evidence that higher quality firms have been gaining market share at conventional levels of significance.
149. In its response to the provisional decision report, Aon stated that the CMA's regressions are not robust and are not correctly specified.³¹⁸ Mercer stated that the regression models have poor fit.³¹⁹ WTW stated that the regressions are based on limited data, there is little variation in year-on-year market shares, and the regressions are underspecified and so likely to suffer from bias.³²⁰
150. We recognise that the regressions in Table A6.8. have 'poor fit', as indicated by the low R-squared in each column. Given the low number of observations, and the limited variation in market shares and quality over time, it is not surprising that the more complex models (such as the fixed effects models in column (4)) do not find significant results. Given these limitations, we place little weight on these regression results.

³¹⁸ Aon response to the provisional decision report.

³¹⁹ Mercer Annex 1 to the response to the provisional decision report.

³²⁰ WTW response to the provisional decision report.

Appendix A7: Financial and profitability analysis

Introduction and role of profitability analysis

1. In this appendix we explain the analysis we carried out on the profitability of investment consultancy and fiduciary management providers. We also discuss the issues in assessing the profitability of investment consultancy and fiduciary management providers.
2. The purpose of profitability analysis is to understand whether the levels of profitability (and therefore prices) achieved by firms are consistent with levels that would be expected in a competitive market. A situation where profitability of firms representing a substantial part of the market has exceeded the cost of capital over a sustained period could be an indication of limitations in the competitive process.³²¹
3. When reaching a view concerning the functioning of a market, we consider the outcomes of the competitive process in that market: including prices and profitability, product quality and range, and levels of innovation.³²² While profitability analysis provides a framework for assessing the level of prices, broader financial analysis can provide insight into the various factors affecting the performance of firms and hence the competitive dynamics of the sector.
4. We do not regard 'excess' profitability in itself to be a problematic feature of any market, but instead a market outcome that provides an indicator that competition problems may exist. In other words, excess profitability is one of the possible symptoms of, rather than a cause of, ineffective competition. Profitability findings may also be used in the context of determining the scale of the consumer harm or detriment that might arise, for example in the form of higher prices.
5. In reaching our findings, profitability is only one of the outcomes of the competitive process we consider.

Our usual approach

6. In measuring profitability, our approach is often to start with accounting profit produced in line with UK Generally Accepted Accounting Practice (GAAP).³²³

³²¹ [Guidelines for Market Investigations: Their role, procedures, assessment and remedies](#), April 2013, adopted by the CMA, (CC3 Revised), paragraph 118.

³²² Ibid, paragraph 103.

³²³ Now likely to be International Financial Reporting Standards (IFRS) for most of the parties.

We then make adjustments to arrive at an economically meaningful measure of profitability, usually in terms of rates of return on capital, where the capital base is valued accordingly,³²⁴ and compare the economic profit to the cost of capital of the firms involved.³²⁵ It is necessary to obtain an appropriate value for capital employed, and we may consider adjustments to accounting data produced in line with UK GAAP for example relating to the difference between historical cost and replacement cost, and relating to the inclusion of certain intangible assets where certain criteria are met.³²⁶

Scope of our assessment

7. Consistent with our terms of reference (see chapter 1), we examined the profitability of the provision of investment consultancy and fiduciary management services separately, by examining the relevant revenues, costs, and capital base of investment consultancy and fiduciary management providers. We have not presented financial information on investment consultancy or fiduciary management-only providers, consistent with our theory of harm concerning incentives of IC-FM providers to steer their clients to their own in-house fiduciary management services. In practice, there are few large stand-alone investment consultancy and fiduciary management providers. Investment consultancy and fiduciary management services are generally provided by integrated firms who undertake investment consultancy and fiduciary management services as well as providing other types of work.
8. We examined the profitability of the three largest combined providers of investment consultancy and fiduciary management services in the UK, namely Aon, Mercer and WTW (the three largest providers). Collectively, they make up slightly above 50% of investment consultancy and fiduciary management revenues.³²⁷
9. We also examined the profitability of three smaller IC-FM providers who were in a position to provide us with net profit margin figures for investment consultancy and fiduciary management, namely, [REDACTED], [REDACTED], and [REDACTED].

³²⁴ CC3 Revised, Annex A, paragraph 9.

³²⁵ Ibid, Annex A, paragraph 16.

³²⁶ Ibid Annex A, paragraph 14.

³²⁷ 2017 revenues. Between 42% and 50% of the IC market and between [REDACTED]% and [REDACTED]% of the FM market.

10. We originally analysed the parties' financial information for the five years 2012 to 2016, however, it was only possible to examine net profit margins³²⁸ for 2016 for all the parties on a consistent basis.³²⁹

Issues in assessing profitability of investment consultancy and fiduciary management services

Return on capital employed

11. Return on capital employed (ROCE) is a standard measure of profitability that compares profits with the investment in the company and that figure can be compared to the company's weighted average cost of capital (WACC). In order to calculate ROCE, we needed to obtain an appropriate value for profits and capital employed. We considered whether it was possible to obtain appropriate data from the providers of investment consultancy and fiduciary management services to assess the profitability of investment consultancy and fiduciary management and found that there were a number of issues to consider in assessing profitability, including cost allocation and capital base.
12. We found that the issue of cost allocation, albeit time-consuming and somewhat difficult, was not a major hurdle to overcome in this profitability analysis.³³⁰ However, we considered that the most difficult issue in considering this analysis was the assessment of a capital base. First, as the investment consultancy and fiduciary management businesses are not stand-alone but part of a wider set of services offered by firms, we thought that it would have been very resource intensive for the parties to create separate balance sheets for these businesses, and that any estimates would have been subject to a high level of estimation due to the number of assumptions which would have needed to be made. Second, we thought that it would have been very resource intensive, and practically and conceptually difficult, to identify costs relating to the creation of any intangible assets. We considered that it would be disproportionate to attempt to calculate the tangible and intangible asset base relating to the investment consultancy and fiduciary management businesses. We also considered that even if we were in a position to calculate the capital base, it was unlikely to be robust enough for

³²⁸ Gross profit is revenues less direct costs; net profit is revenues less all costs (direct and indirect costs); net profit margin is net profit divided by revenues, usually expressed as a percentage. Net profit margin is equivalent to return on sales.

³²⁹ [§] told us that, prior to 2016, indirect shared costs were not allocated to FM in its management accounts, and thus its margins for IC and FM were not comparable from year to year or between each other.

³³⁰ Mercer disagreed with our finding, stating that cost allocation would be complex for individual firms, and even more complex to undertake on a reliable basis across IC and FM firms (with different structures and business models) and across time; any conclusions on the basis of these assumptions would be unreliable.

us to draw any conclusions from it. As a robust assessment of the capital base is essential to the ROCE calculation, we were not in a position to calculate ROCE.

13. In considering the parties' responses to our initial financial questionnaire, published Working Paper,³³¹ provisional decision report and the available data, we took into account the possibility that in this sector, detriment could also arise from low quality advice provided by investment consultancy and fiduciary management providers resulting in poor investment decisions by pension schemes, as well as in relation to excess profits earned by investment consultancy and fiduciary management providers.³³²
14. Due to these various difficulties it is not proportionate to undertake an assessment of economic profitability. Hence, we are not in a position to conclude whether providers representing a substantial part of the investment consultancy and fiduciary management sectors have earned profits that are persistently in excess of their cost of capital.

Alternatives to ROCE

15. Our guidelines state that in situations where capital employed cannot be reliably valued, the CMA may consider alternative measures, such as the return on sales (ROS) or other relevant financial ratios. For instance, comparisons with businesses operating in different but similar markets may on occasion be helpful.³³³
16. Although we were not in a position to assess economic profitability, we carried out an alternative financial analysis which examined net profit margins for each of the parties' investment consultancy and fiduciary management businesses, and also looked at the financial analysis the FCA carried out on asset managers.
17. We asked the parties what the best measure of profitability would be, if they considered that ROCE would not be appropriate: none of the parties suggested an alternative measure of profitability to ROCE. None of the parties recommended a suitable benchmark against which to compare profit margins

³³¹ [Financial Performance and Profitability Working Paper](#).

³³² Mercer told us in response to our Working Paper, that it was concerned by this suggestion (that detriment in this sector could arise from low quality advice by IC or FM providers resulting in poor investment decisions by pension schemes) given that we had not identified any evidence that advice was of a low standard. It told us that there was positive evidence of good quality IC and FM services and that the limited evidence suggested that profitability was comparable with relevant sectors, and that this should lead the CMA to conclude that there was no detriment to clients in this sector.

³³³ [CC3 Revised](#), Annex A, paragraph 15.

and a number of parties told us that any benchmarking exercise would not be proportionate, and would be challenging and resource intensive.

Margins analysis: net profit margins

18. Table A7.1. and Table A7.2. below set out summary financial information (revenues, total costs, net profit and net profit margin) for the three largest providers of investment consultancy and fiduciary management services combined and for the three smaller providers of investment consultancy and fiduciary management services combined for 2016.
19. Overall, the aggregate net profit margin for investment consultancy and fiduciary management combined for the six providers in 2016 was [20% - 30%].³³⁴
20. For investment consultancy, the aggregate net profit margin for the six providers was [20% - 30%] and [20% - 30%] for fiduciary management.

³³⁴ These figures are a weighted average margin, that is, total profits divided by total revenues for the six providers.

Table A7.1: summary financial information, three largest providers of investment consultancy and fiduciary management services combined, 2016

														£m
Revenues														
Total costs														
Net profit														
Net profit margin														

Source: CMA from party responses to initial financial information request

Table A7.2: summary financial information, three smaller providers of investment consultancy and fiduciary management services combined, 2016

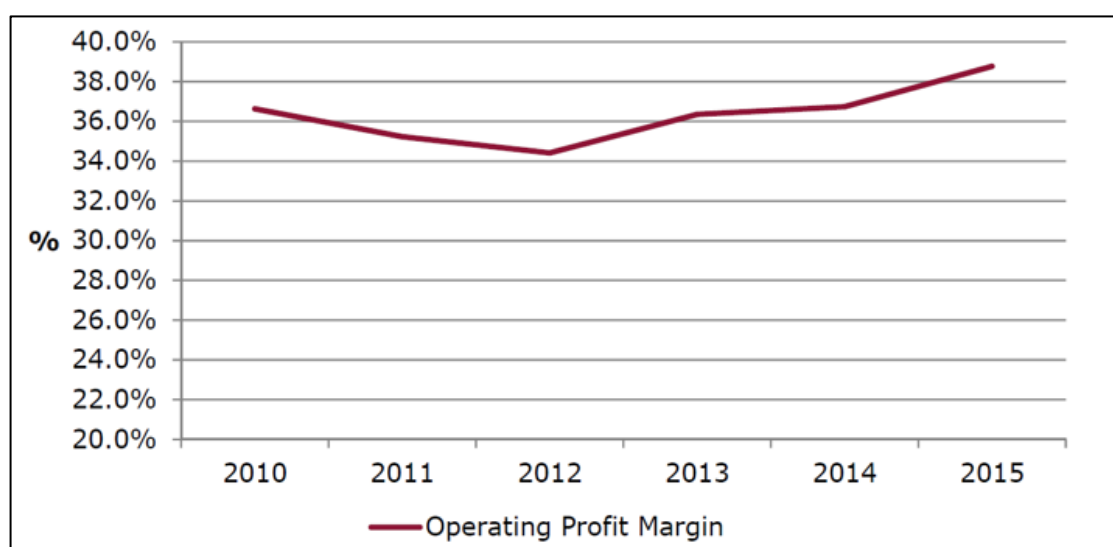
														£m
Revenues														
Total costs														
Net profit														
Net margin %														

Source: CMA from party responses to initial financial information request

Profit margins of asset managers

21. We considered reported data on the profit margins of asset managers as we thought they were reasonably comparable: a similar industry, parts of the same value chain, similar staff with a similar skill set and similar customers, high human capital and low tangible capital base.
22. As part of the FCA's asset management market study,³³⁵ the FCA analysed profitability of asset managers. It looked at 16 asset management firms from 2010 to 2014 and 14 firms for 2015. It found what it termed high levels of profitability, with average profit margins of 36% for the firms it sampled.

Figure A7.1: Operating profit margin

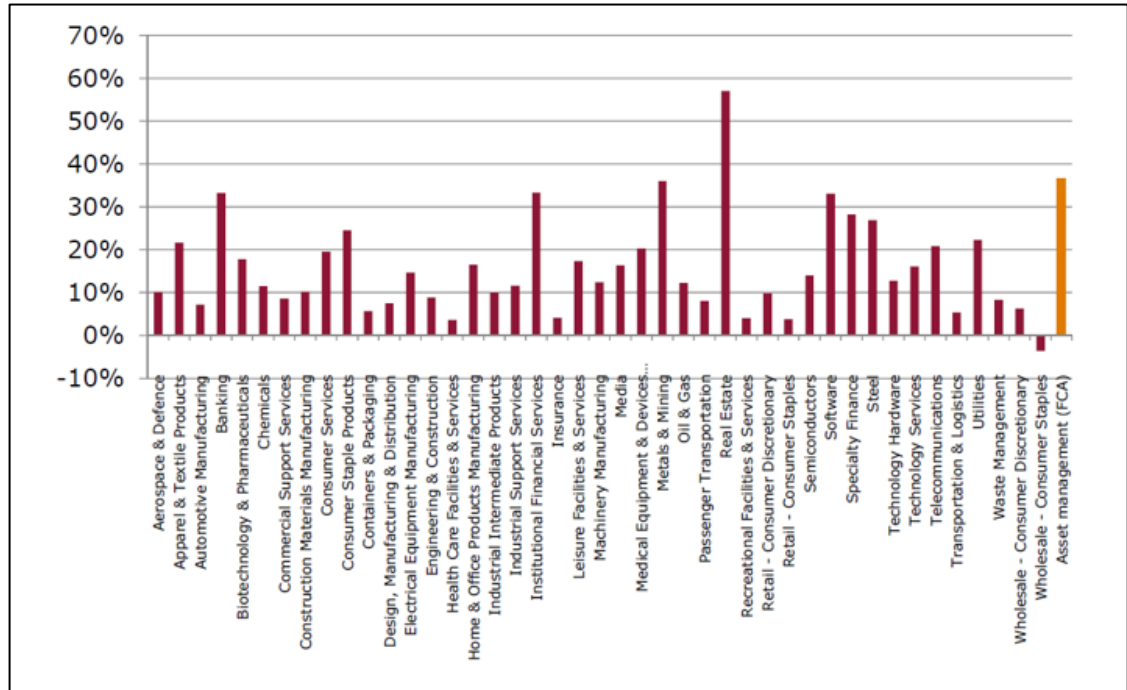


Source: [FCA market study interim report, annex 8](#)

23. It also compared operating margins for asset managers with operating margins of firms in the FTSE All Share (including asset manager firms) and showed that the average operating margin of these was around 16% with only one industry group achieving margins above the average margin found for asset managers. A comparison of industry groups in the FTSE All Share with similar business structures (high human capital, relatively low physical or financial capital) found margins in the four to 33% range. By comparison half of the asset management firms in the FCA's sample had an average operating margin above 30%. Three quarters of the asset management firms in the FCA's sample had an average operating margin above 20%.

³³⁵ [FCA Asset Management Market Study, final report](#) June 2017.

Figure A7.2: 10-year operating margins by industry % (H2 2006 – H1 2016)



Source: FCA market study interim report, annex 8, from Bloomberg and FCA data

24. By comparison, the aggregate net profit margins for investment consultancy and fiduciary management combined for the six-investment consultancy and fiduciary management providers in 2016 were lower than the margins the FCA found for asset managers, but higher than the average operating margins in the FTSE All Share sample created by the FCA. However, we did not think that a comparison with the FTSE All Share index is meaningful because the index was an average of margins across a wide range of industries, subject to different degrees of risk.

Glossary

AEC	Adverse effect on competition.
AM-FM Firms	Fiduciary management firms which also offer asset management products but do not offer investment consultancy services.
Asset management	The management of investments, including selecting and trading individual securities, on behalf of individual retail investors and institutional investors such as pension schemes.
Asset manager(s)	Firms supplying Asset management services.
AUA	Assets under advice.
AUM	Assets under management.
CC3 Revised	<i>Guidelines for market investigations: Their role, procedures, assessment and remedies, CC3 Revised</i> , April 2013, adopted by the CMA.
CMA	Competition and Markets Authority.
CMA survey	The CMA commissioned <i>survey</i> of pension scheme trustees (carried out by IFF Research). IFF Research's Report was published on 29 March 2018. ³³⁶
COBS	The FCA's ' <i>Conduct of Business sourcebook</i> '. ³³⁷
DB	Defined Benefit pension scheme.
DC	Defined Contribution pension scheme.
DC Code	TPR's ' <i>Code of Practice 13</i> '. ³³⁸
DPB	Designated Professional Body, such as the Institute and Faculty of Actuaries.
EA02	<i>Enterprise Act 2002</i> . ³³⁹

³³⁶ CMA Survey. <https://www.gov.uk/cma-cases/investment-consultants-market-investigation#survey-of-pension-scheme-trustees-publication-of-iff-researchs-report>.

³³⁷ Conduct of Business sourcebook. <https://www.handbook.fca.org.uk/handbook/COBS.pdf>.

³³⁸ TPR Code of Practice 13, <http://thepensionsregulator.gov.uk/codes/code-governance-administration-occupational-dc-trust-based-schemes.aspx>

³³⁹ Enterprise Act 2002. <http://www.legislation.gov.uk/ukpga/2002/40/contents>.

EBC	Employee Benefit Consultant. EBCs provide advice in relation to the design and implementation of pension schemes and other employee benefits.
EU	European Union.
Externally Acquired	Fiduciary management mandates that were not awarded to the incumbent Investment consultant .
FCA	Financial Conduct Authority.
Fiduciary management market	The relevant market for the supply of fiduciary management services to pension schemes in the United Kingdom.
Fiduciary management services	Fiduciary management services means the provision of a service to institutional investors where the provider makes and executes decisions for the investor based on the investor's investment strategy in the United Kingdom. This service may include responsibility for all or some of the investor's assets. This service may include, but is not limited to, responsibility for asset allocation and fund/manager selection.
Fiduciary manager	A firm or individual providing fiduciary management services .
GQI	GA's Greenwich Quality Index
HHI	Herfindahl-Hirschman Index; a measure of market concentration
Hybrid	Pension schemes that have a DB and a DC element.
IC-FM firms	Firms that offer both investment consultancy and fiduciary management services to clients.
IMA	Investment Management Agreement.
Institutional investors	Institutional investors means legal entities invested in funds or mandates, including pension schemes, charities, insurance companies, and endowment funds.
Internally Acquired	Fiduciary management mandates that were awarded to the incumbent Investment consultant .
Investment consultancy market	The relevant market for the supply of investment consultancy services to pension schemes in the United Kingdom.

Investment consultancy services	Investment consultancy services means the provision of a service to institutional investors where the provider advises the investor in relation to the investors' investment strategy in the United Kingdom. This service may include, but is not limited to, advice on strategic asset allocation, fund/manager selection, advice on whether fiduciary management services are appropriate for the investor, and advice to employers in the United Kingdom.
Investment consultant	Firm or individual offering investment consultancy services .
Investment strategy	The investor's strategy for the allocation of their assets amongst asset classes. This may include an assessment of the investor's approach to risk, and may include details such as the investor's approach to the use of risk hedging instruments.
Issues Statement	The CMA's issues statement on the investigation published on 21 September 2017. ³⁴⁰
ITT	Invitation to tender.
KPMG Survey	<i>'2018 KPMG UK Fiduciary Management Survey'</i> . ³⁴¹
LDI	Liability Driven Investment. An umbrella term to cover an investment strategy whereby approaches are taken to hedge against expected risks such as low interest rates.
Master Trust	A Master Trust is a form of multi-employer occupational pension scheme established under trust and intended for employers that are not connected with each other.
MiFID II	The EU legislation comprising a package of instruments in relation to markets in financial instruments, of which the MiFID II Directive and the MiFID II Delegated Regulation are the most directly relevant in the context of the present market investigation.
MiFID II Delegated Regulation	Commission Delegated Regulation (EU) 2017/565 of 25 April 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council as regards organisational requirements and operating conditions for

³⁴⁰ 'INVESTMENT CONSULTANCY SERVICES AND FIDUCIARY MANAGEMENT SERVICES - MARKET INVESTIGATION: Statement of issues', 21 September 2017.

<https://assets.publishing.service.gov.uk/media/59c376f7ed915d408c10d131/investment-consultancy-market-investigation-issues-statement.pdf>

³⁴¹ 2018 KPMG UK Fiduciary Management Survey | KPMG | UK <https://home.kpmg.com/uk/en/home/insights/2018/11/2018-kpmg-uk-fiduciary-management-survey.html>

investment firms and defined terms for the purposes of that Directive, OJ L 87, 31.3.2017, p1.³⁴²

MiFID II Directive	Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU, OJ L 173, 12.6.2014, p349. ³⁴³
PA04	Pensions Act 2004 . ³⁴⁴
PA08	Pensions Act 2008 . ³⁴⁵
PA95	Pensions Act 1995 . ³⁴⁶
PERG	FCA's ' Perimeter Guidance Manual '. ³⁴⁷
PPF	Pension Protection Fund.
PRIN	FCA's ' Principles for Businesses sourcebook '. ³⁴⁸
RAO	Regulated activities order, set out in the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001. , SI 2001/516, ³⁴⁹ as amended.
RCB(s)	Relevant Customer Benefit(s)
ROCE	Return on Capital Employed.
SFP	Statement of funding principles
SIP	Statement of Investment Principles.
SYSC	FCA's ' Senior Management Arrangements, Systems and Controls sourcebook '. ³⁵⁰
Terms of Reference (ToR)	In this investigation, the FCA's ' Asset Management Market Study, Final Decision: Market Investigation Reference (MIR) on Investment Consultancy Services and Fiduciary Management Services '. ³⁵¹
TPE	Third-party Evaluator.

³⁴² <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R0565&from=EN>

³⁴³ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0065&from=EN>

³⁴⁴ Pensions Act 2004. <http://www.legislation.gov.uk/ukpga/2004/35/contents>.

³⁴⁵ Pensions Act 2008. <http://www.legislation.gov.uk/ukpga/2008/30/contents>.

³⁴⁶ Pensions Act 1995. <http://www.legislation.gov.uk/ukpga/1995/26/contents/enacted>.

³⁴⁷ Perimeter Guidance Manual. <https://www.handbook.fca.org.uk/handbook/PERG.pdf>.

³⁴⁸ Principles for Businesses sourcebook. <https://www.handbook.fca.org.uk/handbook/PRIN.pdf>.

³⁴⁹ Financial Services and Markets Act 2000 (Regulated Activities) Order 2001.

<http://www.legislation.gov.uk/uksi/2001/544/contents/made>.

³⁵⁰ Senior Management Arrangements, Systems and Controls sourcebook.

<https://www.handbook.fca.org.uk/handbook/SYSC.pdf>.

³⁵¹ FCA's Asset Management Market Study, Final Decision: Market Investigation Reference (MIR) on Investment Consultancy Services and Fiduciary Management Services, September 2017, <https://www.fca.org.uk/publication/market-studies/final-decision-market-investigation-reference.pdf>

Companies included in the report

AHL	Aon Hewitt Limited.
Albourne	Albourne Partners Limited.
Allenbridge	MJH Group Holdings Limited, its subsidiaries and associated businesses.
Alliance Bernstein	AllianceBernstein Limited.
Aon	Aon Hewitt Limited and Aon Hewitt Risk Management Services Limited.
Baillie Gifford	Baillie Gifford and Co
Barnett Waddingham	Barnett Waddingham LLP.
BBS	BBS Consultants & Actuaries Ltd.
bfinance	Bfinance UK Limited
Blackrock	BlackRock Investment Management (UK) Limited.
BNP Paribas	BNP Paribas Asset Management UK Limited.
Cambridge Associates	Cambridge Associates Limited.
Capita	Capita Employee Benefits Limited and Capita Employee Benefits (Consulting) Limited (part of Capita plc).
Cardano	Cardano Risk Management Limited.
Charles Stanley	Charles Stanley & Co. Limited.
Conduent	Conduent HR Services. (Conduent HR Services is a trading name in the UK for Buck Consultants Limited, Buck Consultants (Administration & Investment) Limited, and Buck Consultants (Healthcare) Limited.)
DWP	Department for Work and Pensions.
EY	Ernst & Young LLP
First Actuarial	First Actuarial LLP.
GA	Greenwich Associates

Goldman Sachs	Goldman Sachs Asset Management International.
HRMSL	Hewitt Risk Management Services Limited.
Hymans	Hymans Robertson LLP.
IA	The Investment Association.
Jagger and Associates	Jagger & Associates Limited.
JLT	Jardine Lloyd Thompson Group plc.
Kempen	Kempen Capital Management N.V.
KPMG	KPMG LLP.
LCP	Lane Clark & Peacock LLP.
Legal and General	Legal and General Investment Management Limited.
Mercer	Mercer Limited.
Momentum	Momentum Investment Solutions & Consulting, a division of Momentum Global Investment Management Limited.
PLSA	The Pensions and Lifetime Savings Association.
PPF	Pension Protection Fund.
Punter Southall	XPS Investment brand. (See Xafinity and Punter Southall Investment Consulting Limited.)
Quantum	Quantum Actuarial LLP.
Redington	Redington Limited.
River and Mercantile	River and Mercantile plc.
Russell Investments	Russell Investments Limited, Russell Investments Implementation Services Limited and Russel Investments Systems Limited.
Schroders	Schroder Investment Management Limited and Schroder Investment Management North America Limited.
SEI Investments	SEI Investments (Europe) Limited.
Spence and Partners	Spence and Partners Limited.

**Stamford
Associates**

Stamford Associates Limited.

TPR

The Pensions Regulator.

XPS or Xafinity

XPS, Xafinity Consulting and Punter Southall Investment Consulting Limited.)

WTW

Willis Towers Watson Limited.