MS15/2.3: Annex 1

Market Study

Asset Management Market Study

Final Report: Annex 1 – Additional feedback and detail on our responses

June 2017

The purpose of this annex

This annex is intended to provide additional detail that has not been included in the summaries provided in the main body of the final report. It therefore includes technical details which have been raised and which have been taken into consideration in our analysis. It also includes our responses to these specific comments.

This annex does not intend to duplicate any of the information found in the final report. It is also not intended to be a comprehensive summary of all the responses we received. Instead this should be viewed as supplementary information to that found in the main body of the final report.

Consumer research on retail investors: additional feedback

1. One asset manager suggested that given the diverse range of experience of retail investors, certain recommendations or observations within the report may only be relevant to, or appropriate for, certain segments of retail investors. Segmenting the retail investor category will allow firms to better apply the findings and recommendations to their client base, and ensure that FCA's recommendations benefit the targeted investors and reduce the risk of unintended or unnecessary impact on firms and their clients.

2. Some respondents suggest our findings on fee awareness may be due to the respondents' confusion between 'fund' and 'product', or about different kinds of cost through the value chain such as platform charges, which can include fund charges for pre-RDR share classes. Some also suggest looking at awareness of charges by channel of investment (i.e. platform vs. non-platform).

Consumer research – our response: additional detail

3. The summary of our response incorporating our further work is found in Chapter 4 of the main body of the report.

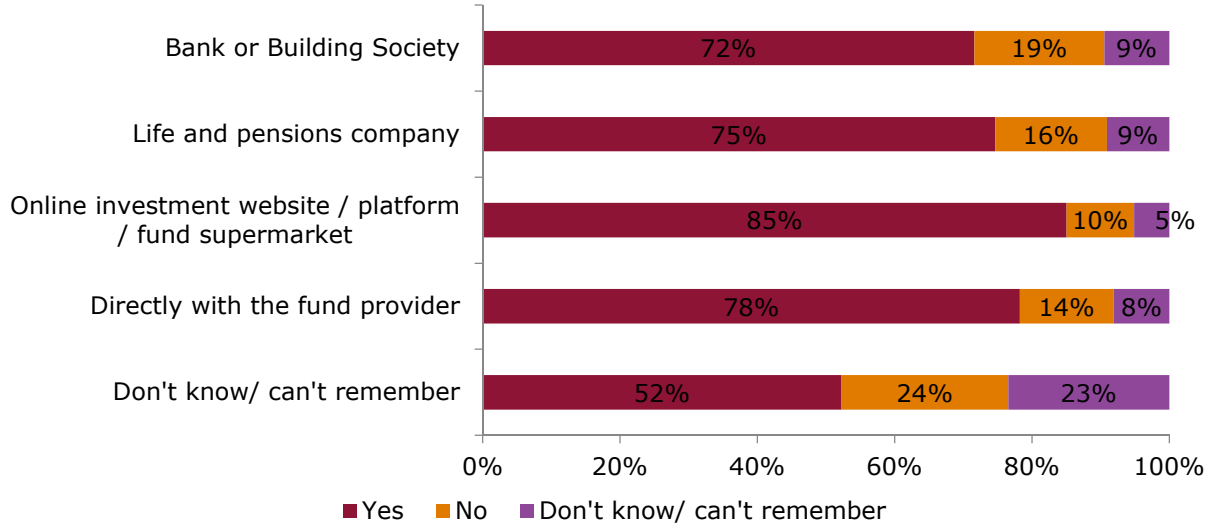
Consumer segmentation

4. We acknowledge that there is a wide range of un-advised retail investors in terms of demography and investment experience, and presented some of our quantitative survey findings by consumer segment in Annex 3 of the Interim Report.[1] We refer readers of interest in the segmentation of un-advised retail investors to this document.

5. We have looked at investors' awareness of charges given their channel of investment. Our findings are presented in Figure 1 and Figure 2 below. We found that there are some variations between respondents by their channel of investment (where investors using online platforms are more aware of fees than investors using other investment channels). This analysis is still consistent with the overall picture we presented in the interim report where 51% stated that they do not pay fund charges or that they are not sure whether they pay fund charges.

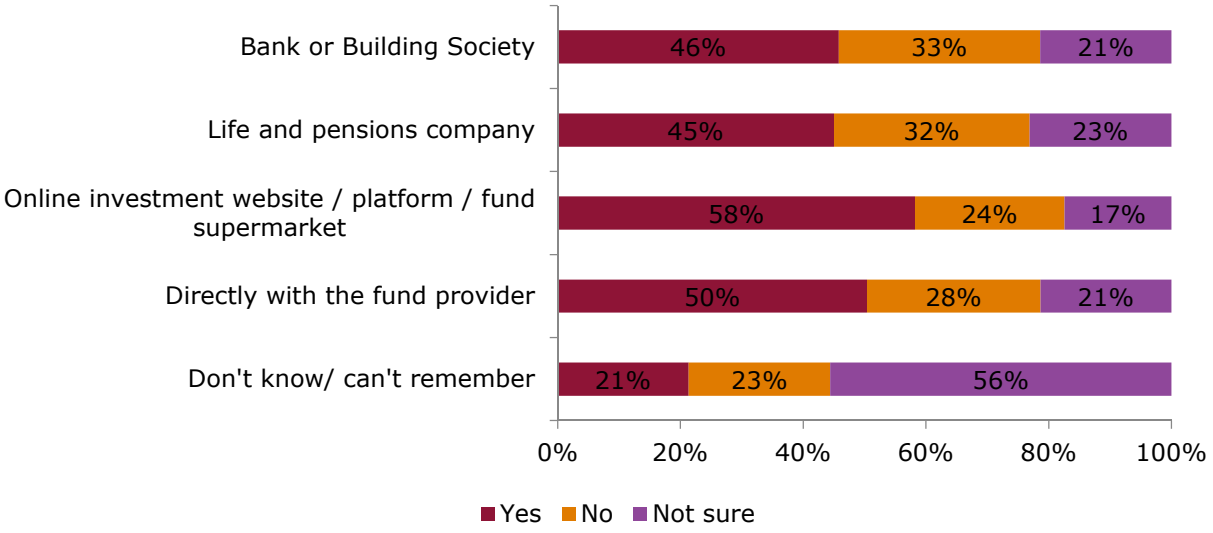
[1] *FCA Asset Management Market Study Interim Report* (2016), Annex 3, p.55-81

Figure 1: Did you look at any of the charges when you made your investment? (Split by investment channel)



Sample base: All survey respondents (2500). Sample size by channel of investment: Bank or Building Society (687), Life and pensions company (694), Online investment channels (809), Directly with fund provider (241), Don't know/can't remember (69).

Figure 2: Do you pay fund charges on your most recent product? (Split by investment channel)



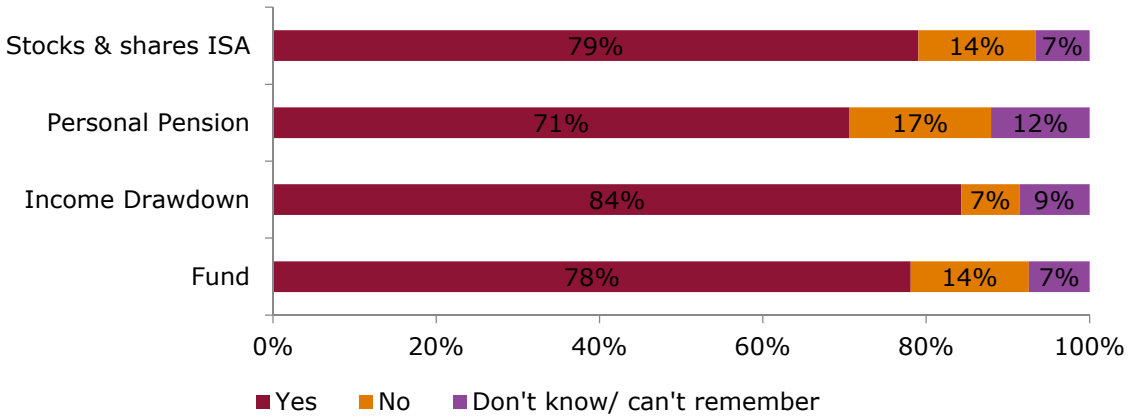
Sample base: All survey respondents (2500). Sample size by channel of investment: Bank or Building Society (687), Life and pensions company (694), Online investment channels (809), Directly with fund provider (241), Don't know/can't remember (69).

Product type

6. We have further investigated whether there is variation in fee awareness by the type of product invested (see Figure 3 and Figure 4 below). We found some variation in fee awareness: specifically on the question of whether the respondent pays fund charges, we found investors in direct fund products (rather than through tax-efficient wrappers) are more likely to state that they pay fund charges (61%). However, this

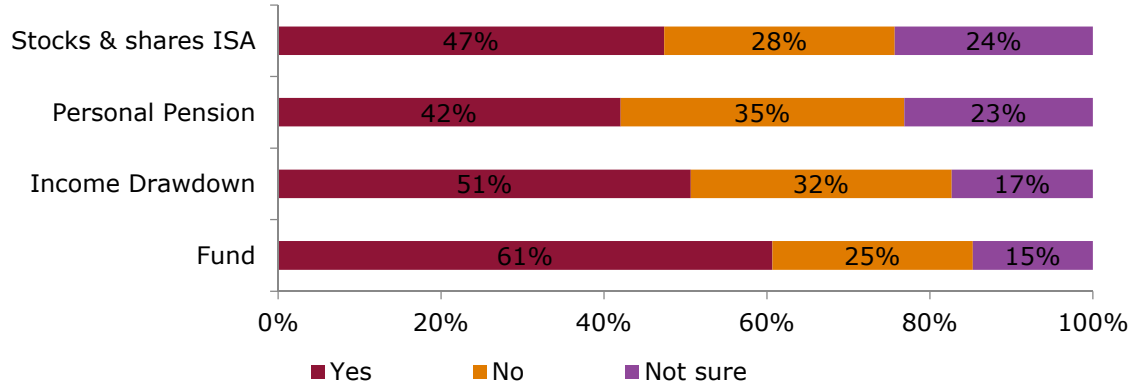
finding shows that even for this group of investors who do not pay product fees, around 40% either do not think they pay fund charges, or are not sure whether they pay fund charges.

Figure 3: Did you look at any of the charges when you made your investment? (Split by investment product)



Sample base: All survey respondents (2500). Sample size by investment product: Stocks & Shares ISA (1207), Personal Pension (610), Income Drawdown Plan (80), Funds, e.g. Unit Trusts, OEICS, Investment Trusts, ETFs (617).

Figure 4: Do you pay fund charges on your most recent product? (Split by investment product)



Sample base: All survey respondents (2500). Sample size by investment product: Stocks & Shares ISA (1207), Personal Pension (610), Income Drawdown Plan (80), Funds, e.g. Unit Trusts, OEICS, Investment Trusts, ETFs (617).

Definitions of institutional investors: additional feedback

7. Respondents noted that we had not used the regulatory definition of 'retail investor' and that the investors referred to as 'institutional' throughout the report do not map well onto existing 'professional' or 'eligible' categories. Suggestions were made to encourage us to be clearer about our usage of these terms, or to use the regulatory and accepted terms.

8. Similar concerns were raised with our use of the term 'segregated mandate' and 'pooling' where we have been encouraged to consider how these fit into more widely accepted concepts in other regulation.

Definitions of institutional investors – our response: additional detail

9. We used these particular definitions for this piece of work to discuss issues we identified in our analysis in an appropriate way. We were not attempting to express in either a regulatory or a formal sense how each client had been treated by the asset manager (or other counterparty) in each situation.

10. Any policy making will reflect the regulatory client definitions and the scope of any intervention will be made clear as part of any consultation on our proposals.

Performance: additional feedback

11. Many respondents argued that the evidence in our report did not support our finding that 'active funds underperformed their benchmarks after charges'. Some respondents also argued that the interim report was misleading as it failed to point out that passive funds similarly underperform against benchmarks. Several trade bodies and asset managers felt that our findings actually showed that, on average, active managers can and do outperform applicable benchmarks.

12. A number of asset managers and other respondents provided evidence to support the view that their own active funds have, on average, outperformed against their respective benchmarks, even if the industry as a whole has not.

13. Several respondents referenced academic literature that was relevant to our findings.

14. A trade body argued that we should assess post-RDR unbundled share classes, and that this would show that active equity outperforms on both a simple and weighted average basis.

15. Some respondents suggested that our analysis of performance should be more granular to identify strategies, styles or segments that outperformed the market.

16. We also received feedback from industry on our assessment of the performance of platform best buy lists and analyst ratings. In particular, we received a comment that the interim report's analysis of analyst ratings was based on a shorter data set (which was available on Morningstar Direct), but that a longer ratings history existed.

Performance – our response: additional detail

In response to comments received on the interim report we have examined other studies that assessed the performance of UK funds and carried out further empirical work ourselves. The results of this further work are set out below.

17. Our overall view is that both active and passive funds have not historically outperformed benchmarks net of fees. This finding applies to retail and institutional investors (See appendix, annex 5).

18. However, we find substantial variation in average performance both across asset classes and within asset classes. This means that an average performance finding at an asset class level does not necessarily apply to all investment categories or strategies within that asset class, and does not necessarily apply to every fund or fund family operating in that asset class.

19. We also conclude that the analyst ratings and platform best buy lists which we analysed have historically been able to help investors select relatively better performing funds but that the rated/recommended funds still do not on average outperform their Morningstar category benchmarks after fees.

Academic literature

20. In section 6 of our interim report we discussed the average performance of active and passive funds in the UK by measuring average returns in excess of Morningstar category benchmarks. Following feedback received on the interim report we have carried out some further work to determine whether our results are consistent with existing research.

21. We found several academic studies that examined the performance of UK funds:

- Blake, Caulfield, Ioannidis and Tonks (2017) analysed a data set of equity funds in the United Kingdom over the period 1998–2008.[2] The authors found that the average equity mutual fund manager in the UK does not outperform the market from either their stock selection ability or their market timing ability, once allowance is made for fund manager fees, and for the set of common risk factors known to influence returns. The authors also used a statistical technique known as bootstrapping to identify whether fund managers' returns could be explained by luck, as opposed to skill. They found that the vast majority of fund managers in their data set did not produce returns that could not be explained by luck. A small group of 'star' managers appeared to have enough skill to generate superior gross performance. However, these star managers extracted this excess performance through fees, leaving no excess returns to investors.
- Blake, Caulfield, Ioannidis and Tonks (2014) examined a data set of equity mutual funds in the United Kingdom over the period 1998–2008 and found that the average UK equity fund manager does not add value relative to the benchmark once fund management charges are taken into account.[3] The authors also found that fund size has a negative effect on the average fund manager's benchmark-adjusted performance. The authors considered the most likely explanation for this relationship is the negative market impact effect from large funds attempting to trade in size. They suggested there was an argument that funds should split themselves up when they get to a certain size in order to improve the return to investors.
- Cuthbertson, Nitzche, and O'Sullivan (2008) also used a bootstrap methodology to determine how many funds from a large group one would expect to observe having large alphas by luck and how many are actually observed in practice.4 They found evidence of significant stock picking ability amongst only a small number of top performing fund managers of UK equity unit trusts and OEICs between 1975 and 2002. The authors also found evidence of performance persistence amongst 'loser' but not amongst 'winner' funds.

22. Older research into units trusts and OEICs in the UK has found that on average a fund manager does not outperform the market benchmark, and that any outperformance is more likely to be due to luck rather than skill. See for example Blake and Timmermann (1998), Lunde, Timmermann, and Blake (1999).[5]

23. These other studies typically show that the average equity fund manager in the UK does not outperform the market once fund management charges are taken into

[2] Blake, D., Caulfield, T., Ioannidis, C. & Tonks I., 2017. New evidence on mutual fund performance: a comparison of alternative bootstrap methods. Journal of Financial and Quantitative Analysis.

[3] Blake, D., Caulfield, T., Ioannidis, C. and Tonks, I. P., 2014. Improved inference in the evaluation of mutual fund performance using panel bootstrap methods. Journal of Econometrics.

[4] Cuthbertson, K. and Nitzsche, D. and O'Sullivan, N., False Discoveries: Mutual Fund Performance: Skill or Luck? (2008). Journal of Empirical Finance

[5] Timmermann, A., & Blake, D. , Mutual Fund Performance: Evidence from the UK (1998). Review of Finance.

Lunde, A., Timmermann, A., & Blake, D. (1999). The Hazards of Mutual Fund Underperformance: a Cox Regression Analysis. Journal of Empirical Finance, 6(2), 121-152.

account, and once the set of common risk factors known to influence returns is taken into account. This is consistent with our results on average performance against benchmark, and with our own estimation of alpha based upon a four factor model (see below).

Sensitivity Analysis

24. Based on the feedback provided on the interim report we reassessed performance using the alternative samples and methodologies listed below:
    - Estimated a risk-adjusted measure of performance using alpha, calculated by a four factor model for a subsample of UK equity funds.[6]
    - Examined performance against benchmark for different sub-samples, split by asset class.
    - Calculated net returns with distribution costs removed for a sample of funds available on an investment platform.

25. These sensitivities have been carried out using both an asset weighted average return and a simple average return.[7] Specifically, for each month we calculate the asset-weighted average (or simple average) excess return across share classes, and we then calculate a time-series average excess return. As with the interim report's approach, we examine open-ended funds with GBP-denominated share classes available for sale in the UK, as listed on Morningstar Direct.

26. It is important to note that the purpose of this market study is not to identify and encourage one investment strategy over another and these results should not be seen as such.

Risk-adjusted performance using alpha

27. We are only able to calculate the four factor alpha measure for funds using factor data obtained for UK equities. The table below shows that on both a simple average and asset weighted basis, alpha was not significantly different from zero for bundled share classes. In addition, whilst the alpha generated by clean share classes is higher than that for bundled share classes, this is not significantly different from zero at a 95% confidence interval. Furthermore we do not consider that assessing performance over such a short time period is sufficiently robust. Therefore, for this sample we do not find evidence of excess returns as captured by alpha.

[6] The detail of this alpha calculation is discussed in Annex 4. Although in this section we require 24 months of continuous monthly observations when estimating alpha.

[7] Observations which are missing data in returns or benchmark returns are dropped. For the weighted average observations missing net asset figures are also dropped.

Table 1: Annualised average active UK equity fund performance as measured by four factor alpha (%)

	Alpha	
UK equity	**Simple Average**	**Weighted average**
2003-2012 (Bundled)	**-0.28** (0.706)	**-0.42** (0.660)
2013-2015 (Clean)	**1.98*** (0.073)	**1.68*** **(0.100)**

T-statistics based on standard errors, robust to conditional heteroskedasticity and serial correlation of up to four lags as in Newey and West (1987), P–Values are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Morningstar Direct. Open-ended funds available for sale in the UK with GBP-denominated share classes.

Performance against benchmark by asset class

28. When looking at different sub-sector results for bundled share classes (i.e. including distribution costs faced by investors), we find that performance against Morningstar category benchmark varies substantially both across asset class and within asset class. We find that across all broad category groups' results are negative. However, around half of results are not statistically significantly different from zero. This demonstrates that an average finding does not necessarily apply to each sub-category of investments, or indeed to every firm in the industry. However, we also acknowledge that for some funds there may not be an investable benchmark which fully captures the risks being taken.

Table 2: Annualized net returns over category benchmark (percentage points) including distribution costs – Broad category sub samples, 2003-2015

	Active		Passive	
Broad category group	**Simple Average**	**Weighted Average**	**Simple Average**	**Weighted Average**
Allocation	**- 1.69*** (0.095)	**- 2.38**** (0.03)	**- 2.21*** (0.084))	**- 2.17*** (0.091))
Alternative	**- 2.97** (0.146)	**-2.97** (0.146)	-	-
Convertibles	**- 1.21** (0.381)	**- 1.39** (0.332)	-	-
Equities	**- 0.17** (0.725)	**- 0.36** (0.512)	**- 0.97***** (0.001)	**- 0.71**** (0.022)
Fixed Income	**- 1.66***** (0.000)	**- 1.50***** (0.000)	**- 1.28***** (0.000)	**- 0.87 ***** (0.000)
Money Market	**-0.79***** (0.000)	- **0.68***** (0.000)	-	-

T-statistics based on standard errors, robust to conditional heteroskedasticity and serial correlation of up to four lags as in Newey and West (1987), P–Values are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Morningstar Direct. Open-ended funds available for sale in the UK with GBP-denominated share classes.

29. As Table 3 shows, even within equity groupings the average returns against benchmarks have varied greatly over the period examined. Again, we see that none of the sub-groupings outperform the benchmark with the majority being not statistically different from zero.

Table 3: Annualized net returns over category benchmark (percentage points) including distribution costs – Equity sub samples, 2003-2015

	Active		Passive	
Equity Geographic grouping	**Simple Average**	**Weighted Average**	**Simple Average**	**Weighted Average**
UK	**0.46** (0.451)	**- 0.20** (0.814)	**- 1.23***** (0.000)	**- 0.83**** (0.013)
Global	**- 0.50** (0.610)	**- 0.59** (0.638)	**- 0.91*** (0.083)	**- 0.65** (0.474)
Europe	**0.76** (0.249)	**0.64** (0.458)	**- 0.41** (0.270)	**- 0.01** (0.980)
US	**-1.60**** (0.021)	**-1.74**** (0.036)	**-1.16**** (0.024)	**-0.79** (0.254)
Asia	**0.44** (0.283)	**0.32** (0.642)	**- 0.75*** (0.095)	**- 0.49** (0.455)
Emerging Market	**-0.03** (0.954)	**1.26** (0.152)	**- 0.47** (0.246)	**0.20** (0.536)

T-statistics based on standard errors, robust to conditional heteroskedasticity and serial correlation of up to four lags as in Newey and West (1987), P–Values are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Morningstar Direct. Open-ended funds available for sale in the UK with GBP-denominated share classes.

30. Based on the results from this sensitivity analysis we conclude that on average both active and passive funds did not outperform benchmarks. However, we also find that across categories and within categories the results vary greatly, suggesting that average performance results may not always provide a useful indication of the performance of sub-categories of investments, or particular funds or fund families.

Performance against benchmark by asset class with distribution costs removed

31. As a further sensitivity we have calculated net returns in excess of benchmarks for a range of asset classes, with distribution costs removed. We have assessed funds available on an investment platform, because for this platform we have data at a share class level on historical commissions. This data allows us to remove distribution costs from bundled share classes using accurate commission data. This allows us to calculate average net returns for a pooled sample of bundled and clean share classes on an equivalent basis for the 2006-2015 period[8]. Our sample relates to all open-ended funds with GBP-denominated share classes available for sale in the UK on this investment platform.

Table 4: Annualized net returns over category benchmark (percentage points) excluding distribution costs – All asset classes, 2006-2015

	Active		Passive	
All Asset classes	**Simple Average**	**Weighted Average**	**Simple Average**	**Weighted Average**
Weighted average excess return	**- 0.14** (0.814)	**0.13** (0.769)	**-0.57*** (0.061)	**- 0.52**** (0.049)

T-statistics based on standard errors, robust to conditional heteroskedasticity and serial correlation of up to four lags as in Newey and West (1987), P–Values are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Morningstar Direct and an Investment Platform. Open-ended funds available for sale in the UK with GBP-denominated share classes.

[8] The platform data was only collected for the period from 2006-2015.

Table 5: Annualized net returns over category benchmark (percentage points) excluding distribution costs – broad category sub samples, 2006-2015

Broad category group	Active		Passive	
	Simple Average	**Weighted Average**	**Simple Average**	**Weighted Average**
Allocation	**-1.59** (0.218)	**-1.46** (0.289)	**- 0.85** (0.152)	**-0.88** (0.141)
Alternative	-**1.94** (0.334)	**-1.92** (0.339)	**-**	**-**
Convertibles	**0.01** (0.996)	-	**-**	**-**
Equities	**0.58** (0.326)	**0.91** (0.158)	**-0.55** (0.106)	**-0.43** (0.186)
Fixed Income	**- 1.21*** (0.053)	**-1.47***** (0.002)	**0.63**** (0.041)	**-0.84***** (0.003)
Money Market	**- 0.71** (0.000)	**-0.63***** (0.000)	-	-

T-statistics based on standard errors, robust to conditional heteroskedasticity and serial correlation of up to four lags as in Newey and West (1987), P–Values are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Morningstar Direct and an Investment Platform. Open-ended funds available for sale in the UK with GBP-denominated share classes.

Table 6: Annualized net returns over category benchmark (percentage points) including distribution costs – Equity sub samples, 2006-2015

Equity Geographic grouping	Active		Passive	
	Simple Average	**Weighted Average**	**Simple Average**	**Weighted Average**
UK	**1.40*** (0.065)	**1.28** (0.250)	**- 0.75*** (0.085)	**- 0.54** (0.120)
Global	**-0.36** (0.746)	**-0.22** (0.876)	**- 0.44** (0.506)	**0.24** (0.713)
Europe	**1.66*** (0.051)	**1.78*** (0.069)	**0.21** (0.661)	**0.35** (0.471)
US	**- 1.14** (0.180)	**-1.18** (0.166)	**-0.73** (0.226)	**- 0.61** (0.271)
Asia	**0.62** (0.207)	**1.54** (0.106)	**- 0.86** (0.120)	**-0.49** (0.457)
Emerging Market	**0.73** (0.309)	**1.68** (0.128)	**-0.79** (0.288)	**-0.50***** (0.000)

T-statistics based on standard errors, robust to conditional heteroskedasticity and serial correlation of up to four lags as in Newey and West (1987), P–Values are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Morningstar Direct and an Investment Platform. Open-ended funds available for sale in the UK with GBP-denominated share classes.

32. While, as expected, these show better net performance when compared to performance which includes distribution charges, based on the results from this sensitivity we conclude that on average both active and passive funds did not outperform benchmarks.

Ratings and recommendations of mutual funds

33. In the interim report we presented an assessment of outcomes for retail investors using different tools to help them identify outperforming asset managers (see Annex 4 to the interim report). We assessed whether tools such as platform best buy lists and third party ratings were able to add value by identifying superior-performing funds.

34. Specifically, we compared the performance of share classes 'recommended' by these tools with the performance of 'non-recommended' share classes that were in the wider Morningstar Direct universe.

35. The analysis in the interim report generally found that these 'recommended' products outperformed 'non-recommended' products (see Annex 4 to the interim report). Our analysis looked at best buy lists from a sample of direct-to-consumer platforms, as well as two third party ratings: the Morningstar Rating and the Morningstar Analyst Rating.

36. Since the interim report, we have updated our analysis of platform best buy lists to reflect comments on the interim report, as well as feedback from one platform that there was an error in some of the raw data submitted to the FCA.

Assessment of Analyst ratings

37. We received feedback from industry on our assessment of the Morningstar Analyst Rating, a qualitative forward-looking measure of performance that reflects an analyst's expectations of a fund's performance relative to its peers. In particular, we received a comment that the interim report's analysis was based on a shorter data set (which was available on Morningstar Direct), but that a longer ratings history existed.

38. Since the interim report, we have been provided with this full history, and we have updated our analysis to use the new data. We made two further changes to our assessment. We now assess funds, rather than share classes, and we compare the performance of positively-rated funds to not rated or neutral rated funds that were available on our sample of direct-to-consumer platforms, rather than the wider Morningstar Direct universe. We took this latter approach because it allows us to compare the performance of platform best buy lists (which use the same approach) with those of third party ratings systems.

39. For the final report we have assessed performance of this rating on two bases:

    (i) Investors hold funds only for the period during which they are 'recommended', and

    (ii) Investors hold 'recommended' funds for five years starting from the first recommendation date (or until the end of our sample period).

40. The Morningstar Analyst Rating's current rating scale consists of gold-, silver-, bronze-, neutral and negative ratings, and was introduced in 2011. Before this, two different systems were used: elite, superior, standard, inferior, impaired, and an AAA, AA, A system. We have mapped these together as follows: elite and AAA historical ratings mapped directly to Gold. Superior, AA, and A historical ratings are mapped to Silver and Bronze, and together with gold, elite and AAA form the group we label 'gold, silver, or bronze'.

We have assessed the performance of gold- and gold-, silver-, or bronze-rated funds available on the direct-to-consumer investment platforms in our sample. As with the interim report, performance is measured using net returns in excess of Morningstar category benchmarks.

Table 7: performance of Morningstar's Gold- and Gold-, Silver-, and Bronze-Rated Funds

Assumed holding period	Rating assessment type	Average excess return over benchmark **(Percentage Points)**
As listed (one-month holding period)	**MS Gold-rated**	**0.70** (0.95)
	MS Gold-, Silver-, or Bronze-rated	**0.14** (0.21)
	Gold-rated - Not rated (or neutral rated)	**1.66** (2.49)**
	Gold-, Silver-, or Bronze-rated - Not rated (or neutral rated)	**1.10** (4.59)***
Five-year holding period	**MS Gold-rated**	**0.57** (0.78)
	MS Gold-, Silver-, or Bronze-rated	**0.13** (0.21)
	Difference between Gold-rated and Not rated (or neutral rated)	**1.38** (2.12)**
	Difference between Gold-, Silver-, or Bronze-rated and Not rated (or Neutral rated)	**1.06** (4.62)***

Sample of investment platforms for information on which funds were historically available for sale on their platforms. Excess returns are expressed in % per year. Statistics are computed on monthly returns and annualised by multiplying monthly returns by twelve. The sample period is January 2006 to December 2015.
t-statistics based on standard errors, robust to conditional heteroscedasticity and serial correlation of up to two lags as in Newey and West (1987), are reported in parentheses. ***, **, * denote statistical significance at 1%, 5% and 10% levels, respectively.

Source: Morningstar Direct, and Morningstar Inc. for data on net flows, returns, AUM and ratings.

41. The first part of table 7 shows results assuming funds are only held for the period they are rated (or not). The second part shows the same statistics for portfolios of funds built assuming investors hold them for five years starting each rating month (or until the end of the period).[9]

42. For example, the bottom row of the table shows that gold-, silver-, or bronze-rated funds excess returns were on average a statistically significant 1.06 percentage points per annum higher than the excess returns of not-rated (or neutral-rated) funds, assuming a five-year holding period.

43. The table shows that both gold- and gold-, silver-, or bronze-rated funds on average delivered higher excess returns than not rated (or neutral rated) funds available on the platforms in our study. These findings holds over both assumed investor holding periods, and are consistent with the overall results at the interim report stage.

[9] We adopt a simple comparison in this table in which we do not condition on rated and not-rated products being in the same investment category.

44. We also find that gold- and gold-, silver-, or bronze-rated funds on average did not outperform Morningstar category benchmarks under either of the two holding periods, which is also consistent with the results in the interim report.

45. We conclude that these ratings have historically been capable of helping investors identify better-performing funds, although we have not found evidence that they are on average able to identify funds that outperform Morningstar category benchmarks after fees.

Assessment of Platform 'best buy' lists

46. In the interim report we presented an assessment of outcomes for retail investors using different tools to help them identify outperforming asset managers (see Annex 4 to the interim report). We compared the performance of share classes in a sample of direct-to-consumer platforms' best buy lists with the performance of non-best buy list share classes that were in the wider Morningstar Direct universe.

47. The analysis in the interim report found that share classes in platform best buy lists on average significantly outperformed share classes not in best buy lists. This finding held across three assumed investor holding periods:

    1. Investors are assumed to hold share classes in best buy lists for as long as the share class is 'recommended', and update their portfolio to reflect changes in the best buy list;

    2. Investors are assumed to buy and hold a 'recommended' share class for three years, irrespective of whether the share class ceases to be recommended during this holding period; and

    3. Investors are assumed to buy and hold a 'recommended' share class for five years, irrespective of whether the share class ceases to be recommended during this holding period.

48. Since the interim report, we have updated this analysis in three ways. First, we received feedback from one platform that there was an error in some of the raw data submitted to the FCA, and so we have refreshed the results to reflect the new data. Second, we have altered our analysis to assess funds, rather than share classes. We have taken this step to reflect feedback that platforms analyse and then consider products at the fund level, rather than share class level.[10] Third, we have compared performance of best buy list funds to funds which are also available on the same platform, rather than the wider universe.

49. For the final report we have assessed performance on two bases: (i) investors hold funds only for the period during which they are 'recommended', and (ii) investors hold 'recommended' funds for five years starting from the first recommendation date (or until the end of our sample period).

    We find that on average 'recommended' funds outperform 'non-recommended' funds, under both of the assumed investor holding periods. This finding is consistent with the results presented in the interim report. As with the interim report findings, we continue to find that while 'recommended' funds significantly outperformed 'non-recommended' funds, 'recommended' funds did not outperform Morningstar category benchmarks.

[10] Because of RDR, funds tend to have clean and bundled share classes. If a fund has multiple share classes within each of these two categories we group them into a single clean or bundled group by averaging performance, fees, and other charges. We analyse only bundled share classes during the bundled pre-RDR period, and only clean share classes post-RDR.

Profitability: additional feedback

50. Some asset managers and a trade body argued that our sample period corresponds to a period of growing markets and fails to take into account the period of the financial crisis when margins were "compressed". They argue that this leads to profit margins that are unrepresentative of financial performance across the business cycle.

51. A number of respondents argued that this sample is too small and tends to be skewed towards larger more established firms.
    - Several respondents note that by favouring larger firms over small ones, we are potentially biasing our evaluation of profitability upwards.
    - A trade body provided profitability over three years for a larger sample of firms, including smaller firms, and argues that if a selection of firms that span a range of sizes is chosen, a greater range of margins is observed between 2013 and 2015. Over two thirds of its sample has margins above 20% but a much wider range is observed from a loss making position to a margin above 80%.

52. Some stakeholders criticised our use of margins to analyse the profitability of the asset management industry because margins of other industries offer no insight into the profitability of the asset management market. Respondents suggested that other industries have different business models, market concentrations and levels of risk which make them inappropriate comparators.

53. Asset managers also argue that the uplift to the capital base should be larger than the estimate used in our analysis. However, respondents have not provided detailed evidence on this and comments tend to be based on firms' prior experience.

54. A number of respondents have noted that the cost of capital that they use internally is higher than the estimate used in our analysis.

Profitability – our response: additional detail

The sample length

55. All asset managers in our sample were asked to provide 10 years' worth of financial data but the majority told us that their systems did not support financial reporting going back this length of time. This would suggest that industry does not tend to think about its profitability over lengthy cycles nor do asset managers operate in such a way that periods of profitability must be used to mitigate stretches of financial loss or compressed profitability.

56. As we were unable to secure data for the longer time period we requested, we relied on publicly available data to test the possible sensitivity of our results to a longer time period. Since annual reports are published at the company level we used data from a sample of firms selected on the basis that the whole business was involved in

investment management in order to avoid performance in other markets distorting the data.

57. We looked at profit and profit margins from these firms going back 10 years. What we found was that whilst some firms' experienced poor performance in 2008-09 this looked like a one off impact caused by an unprecedented downturn in market performance rather than the end of a long period of decline. For those experiencing this downturn, margins beforehand looked similar to those taken from our sample period. Some firms we examined experienced no such drop in profitability leading us to the conclusion that sufficient diversification insulates some asset managers from prevailing macroeconomic effects. Some responses note however that such diversification is more readily available to larger firms. Our conclusion was that performance levels, though improving over time in line with asset growth, were not materially different for a longer time period and that the results of the more detailed analysis carried out on the shorter time period reflected a representative estimate of profitability for the sample of firms.

The sample size

58. In our analysis, we find a slight positive correlation between scale and operating margin. We also find that asset managers typically have incentives, amongst them profitability, to grow funds' assets under management. However, the sample submitted by the trade body does not appear to demonstrate any systematic link between scale and profitability and so our sample, whilst small, does not seem to us to demonstrate any obvious bias. Indeed the sampling (though it includes several large firms to maximise the amount of market coverage) also includes several smaller firms to ensure that the sample was more representative.

59. The one subsection of the market that our sample does not cover however is very small asset managers. These firms were considered too small for our data request to be proportionate and it would have been difficult to select a small but representative sample of the long tail of small firms in the industry. Given, as discussed above, that these firms may have been unable to sufficiently diversify their product offering it is possible that they were hit harder by the financial downturn in 208/09 and slower to recover than other firms, leading to a perception by some members of the industry that profitability is overstated. However, weighted by AUM or revenue this is a very small component of the industry.

60. It should be noted at this point that whilst money weighted averaging is commonly used to represent financial metrics in annex 8 it is not the only metric used in either our analysis (where we are able to look at individual firms' metrics) or the interim report (where we use un-weighted ranges and range counts to give a sense of the distribution of our results). In both of these cases, we conclude that profitability of asset management is typically high.

Analysis of margins

61. The primary aim of this part of the analysis was to give the profit margin found in our sample a sense of scale. Margins are a dimensionless ratio meaning they can be compared across industries despite differences in market structure. By taking an average of operating margins across a long timescale, firms of different sizes and many different industries, it is possible to mitigate for the various discrepancies between different markets and to produce a benchmark that allows us to gauge

whether the profitability margins in our sample are high or low relative to market returns rather than relying simply on judgement.

62. Margin analysis is a commonly used tool in corporate finance and equity research to compare the performance of disparate firms. Respondents did not offer an alternative methodology that we should be considering. It should also be noted that our analysis of profitability deliberately focussed on several different measures of profitability rather than solely on margin. Each of these indicators pointed toward an industry with relatively high levels of profitability earned over a sustained period of time.

Adjusted Return on Capital Employed (ROCE)

63. Our adjusted ROCE analysis makes two adjustments to return on capital employed. Firstly we add back a proportion of front line staff cost to profitability, to estimate the economic return made by the investment manager. This causes adjusted ROCE to rise. Second we apply a multiplier to capital employed, to take account of human capital. This causes adjusted ROCE to fall.

64. Respondents to the interim report typically acknowledge that our profitability assessment must include an adjusted return on capital employed analysis in order to estimate economic returns in the asset management industry. However, some respondents, primarily asset managers, think that only capital should be adjusted. These respondents view our adjustments to return as distortions of profitability.

65. Respondents argue that their ability to generate returns is inherently bound up with their frontline staff and the human capital they represent. They also make clear that they would be unable to retain staff if they did not pay market rates.

66. However the reason we have made adjustments to operating profit is precisely because asset management firms are so reliant on individual fund managers (or teams of fund managers). In the asset management market we have found that past performance is used to select asset managers. An asset manager with a proven track record can help a firm generate additional revenue. The credence nature of the good can also lead to asset managers themselves developing a reputation for performance. In other financial markets high capital requirements prevent employees from presenting a credible competitive threat to their employer. In the asset management market however reputation is a more fundamental barrier to entry. The structure and behaviours in the market give front line staff a degree of market power that allows then to extract a greater share of the economic profits earned by their firm. We see similar patterns of economic renumeration in accountancy and law firms that operate in structurally similar markets which are typically partnerships, where profit is typically calculated before key front line staff extract their remuneration. It is for this reason that we have sought to estimate a proportion of staff costs to add back to operating profit as a way of estimating the economic profit that had been split between frontline staff and the firms owners. Rather than contradict this, firms' submissions have tended to strengthen our view of the market's structure and hence we continue to think that profitability should be adjusted to better reflect economic returns.

67. Asset managers also argue the uplift to the capital base should be larger than the estimate used in our analysis. However respondents have not provided detailed evidence on this and the arguments tend to be based on a single firm's prior experience rather than of the market as a whole. Also, as discussed in annex 8 of the

interim report, we were concerned that our method for measuring the capital uplift produces an overestimate. The concern is that the uplift includes not only the value of human capital but also the value of the merged entity's increased ability to raise prices above the competitive level as a result of the merger. Our adjustment should just include uplift for the value of human capital and exclude this capitalised market power, however we were not able to separately identify these values as part of our analysis.

68. In testing the sensitivity of our results we found that for an adjusted ROCE where capital uplift is applied but no adjustment is made to operating profitability, the data suggested that average returns in the industry were still in excess of the cost of capital. Though in this case, the number of firms and the number of periods in which their return exceeds the cost of capital is significantly reduced.

69. Given industry's responses to the study regarding their relationship with front line staff, plus the likelihood that capitalised market power has led to human capital being an overestimate of economic capital we think our adjusted ROCE figures provided constitute our best estimate of economic returns given available data. When combined with our operating margin and other profitability analysis we think this indicates that profitability is high in the asset management market.

Estimation of the cost of capital

70. While the rates used by firms may be appropriate for their own internal analysis, the estimate outlined in the interim report is intended to be reflective of the return required by those invested in the asset management market.

71. Our estimate of beta in the asset management industry is similar to other publicly available estimates and it seems unlikely that this is the driver behind differences in the estimated cost of capital. It is possible that differences in our estimate may therefore stem from different estimates of the equity risk premium (ERP). Our cost of capital draws on the UK section of the Credit Suisse global investment returns year book (2016). This uses a very long data set to better estimate ERP and it is possible that firms find a higher estimate more appropriate for internal purposes.

72. Our estimate of cost of capital considered a range of parameters and selected a point estimate from the higher end of this range. As part of our sensitivity analysis we also conducted our ROCE analysis using a much higher cost of capital (9.5%) based on a higher estimate of ERP). This did not affect average results, though only 11 of 13 firms had adjusted ROCE above WACC in this scenario.

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