Is there a Boutique Asset Management Premium?

Evidence from the European Fund Management Industry

Abstract

There exists evidence in the performance evaluation literature that mutual funds that are manufactured by large asset management groups with large "fund families" benefit from economies of scale in terms of marketing, distribution and resourcing that accrue from the larger organisation. In this paper we examine the performance of funds that are managed by "boutique" asset managers that tend to be small and which tend to offer a more focussed fund range. Using European mutual fund data, we find evidence to suggest the existence of a boutique asset management premium. This premium is particularly pronounced in the European Mid/Small Cap and the Global Emerging market fund sectors, where we find it to be both economically and statistically significant; a finding that is robust to the factor model used to calculate alphas. These results suggest in particular, that if an investor is looking to invest in a European Mid/Small Cap or in an Emerging Market equity fund, then they should give serious consideration to investing with a Boutique fund manager.

***JEL classification**:* G10, G23
***Keywords**:* Boutique Asset Manager; Mutual Fund Performance

1. Introduction

The modern-day consumer shops at a variety of retail outlets and, increasingly, online too. Each type of retail outlet will have its own characteristics and will deliver different shopping experiences. For example, many people will buy the majority of their food and household consumables at a supermarket. But for some items, often clothing, they will prefer to buy from a specialist. These specialist retailers are often referred to as "boutiques". There is no hard and fast definition of a boutique, but they are usually relatively small, focus on a particular item, or style of items, and the outlet itself is owned by a small number of people (often only one) who oversee all aspects of the outlet and may even serve behind the counter.

Today investors, like modern-day consumers, are also faced with a range of fund management organisations to which they can entrust their money. These include: large, active fund management groups that offer funds encompassing a wide range of asset classes; large, passive fund management groups who similarly offer a wide range of fund types; fund managers that focus on smart beta approaches to investing; fund managers that specialise in fund of fund offerings; and also asset managers that offer a small range of funds, focussed on one identifiable style, where the funds are managed by managers who are also the sole, or majority owners of the fund management business. This latter type of fund management organisation is sometimes referred to as "boutique asset manager". And, in the same way that a boutique food retailer, seeks to differentiate its offering from that of the multi-billion-dollar supermarket chains, boutique asset managers seek to offer their investors an investment experience that is different from that offered by multi-billion-dollar fund management organisations.

Boutique asset managers are the focus of this study. To our knowledge only one, industry study of these investment firms has been undertaken in the past. Using monthly return data to

calculate performance alphas for US boutique asset managers AMG (2015) found evidence to suggest that there was a "boutique asset manager premium". That is, that risk-adjusted returns tended to be higher for boutique asset managers compared with the risk-adjusted returns generated by non-boutique managers. The AMG results could be due to the more focussed ownership structure of the boutique funds, where the fortunes of the owners of the boutiques may be more closely aligned to those of their third-party investors. In a recent paper, Ferreira et al (2019) focused on the performance difference between funds managed by the asset management arms of commercial banks and by those managed by other corporate entities. They foun that bank-affiliated funds underperform funds that are not affiliated to banks by 92 basis points per year. Economically speaking, in a low return world, this is a very meaningful difference. They attributed this performance difference to the conflicts of interest that arise from being a bank-affiliated fund, where these funds tend to overweight investments in their parent bank's clients. While it is difficult to see why conflicts of interest would be the source of any boutique asset management premium, it is possible that the different ownership structure and focus of a boutique asset manager may lead to a performance difference compared to non-boutique managers.

To address this question we calculated risk-adjusted alphas for two sub-sets of funds. First, those long-only, Euro-denominated equity funds whose parent asset manager was identified in the *Investment & Pensions Europe* magazine (IPE) Annual Survey of European Asset Managers as being one of the 120 largest asset managers in Europe. For simplicity we refer to these funds as "Mega funds". Second, we analysed the performance of long-only, Euro denominated equity funds that are managed by boutique asset managers. We refer to these as "Boutique funds". The list of boutique managers was provided independently to us by two of the UK's leading Investment Consultants, by the membership of the Group of Boutique Asset

Managers (GBAM) and by a further, major financial institution. To anticipate our results, using Morningstar monthly gross and net return data for both Mega and Boutique funds, we find that the Boutique funds outperform the Mega funds by 0.52%pa and 0.23%pa on a gross and net basis respectively when we use a version of the Fama and French (2015) five-factor model and by 0.82%pa and 0.56%pa on a gross and net-of-fee basis respectively when we use an index model. We also find evidence to suggest that this outperformance is particularly pronounced in the European Mid/Small Cap and in the Emerging market fund sectors. The rest of this paper is organised as follows. In section 2 we place our research in the relevant academic literature; in Section 3 we introduce the data and, in particular, describe the construction of the construction of the Boutique fund database; in Section 4 we present our chosen methodology and results; finally, in Section 5 we conclude the paper.

2. Related Literature

The aim of this paper is to seek to establish whether there exists a boutique asset management premium. It therefore represents a contribution to the vast academic literature on mutual fund performance (see Cuthbertson et al (2010) for a survey of this literature). On the whole the academic evidence for the existence of active manager risk-adjusted alpha is scant. Using a sample of US funds spanning the period from 1965 to 1984, Elton et al (1993) found no evidence of positive, pre-expense alphas. Using a later sample period from 1971 to 1991, Malkiel (1995) also found no evidence of net-of-fee alpha in the US mutual fund industry. In a more recent, comprehensive study of US mutual fund performance using monthly mutual fund return data from 1984 to 2006, on around 5,000 US mutual funds, Fama and French (2010) came to the following, pithy conclusion: "*In terms of net returns to investors, performance is poor*." (page 1921). Many other studies of mutual fund performance in other markets have provided similar evidence, that is that only a small proportion of any sample of mutual fund

returns that are examined produce statistically and economically significant, risk-adjusted alphas. Indeed, Fama and French's 2010 study found that only a small proportion of their sample produce statistically significant net of fee alphas – hence their conclusion. Cuthbertson *et al* (2010) in their comprehensive survey of all aspects of fund manager performance discussed a range of papers that use data from other markets and different sample periods that generally point to the rarity of net-of-fee, risk-adjusted alpha. In a more recent paper, using data from 27 countries, Ferreira *et al* (2013) found that the global, average net-of-fee alpha is -0.20%, per quarter. Such evidence helps to explain the phenomenal rise in the popularity of indexed ("passive") investment styles.

One issue with regard to the calculation of active manager skill is the method of risk-adjustment. Alpha calculation is conditional upon the factor model used. Early performance evaluation studies used the single factor CAPM model to calculate alphas. Most recent studies have used the multi-factor models of Fama and French (1992, 1993, 2015) or that of Cahart (1997). However, generally speaking results achieved are often robust with regard to the choice of factor model, though regression alphas and R-Squareds tend to be lower and higher respectively when a multi-factor model is used compared to the results achieved using the single factor model. A valid criticism of these multi-factor models is that they measure fund manager skill using factors that are essentially arbitrage portfolios, for example, the return on a portfolio of small stocks less the return on a portfolio of large stocks. These arbitrage, or hedge portfolios are not investible options for a long only manager. To create this portfolio the manager would need to create a portfolio of "short" positions. In addition, the factors do not incorporate the costs of creating such a portfolio; shorting costs can be very high. These "hedge portfolios" then, are not investible when one considers capacity constraints and transaction costs, particularly those related to shorting even the largest, most liquid stocks (see

for example Huij and Verbeek (2009)). Perhaps of more concern, some studies have shown that alphas obtained from standard multi-factor models can misstate managerial ability (see for example Cremers et al (2012), Argon and Ferson (2006), or Angelidis et al (2013)).

An alternative approach has, perhaps, its roots in Sharpe's returns-based style analysis (Sharpe, 1992). Sharpe proposed a series of market indices that represent sources of risk which are investible, these days via investment in passive mutual funds and ETFs. Christopherson et al (2009) provided an excellent description of the desirable characteristics of an investible financial market benchmark. It should embody the set of investment opportunities available to the manager. It should be float-adjusted, that is, it should be based on the market capitalisation of tradable investments. Perhaps more importantly, the benchmarks should have a clear, simple and transparent construction methodology that can be easily replicated by a fund manager. It naturally follows that a manager should be measured against their own, stated benchmark, or, at a minimum, measured against investible benchmarks. Essentially the benchmarks (if well chosen) should capture all of the constraints within which the manager operates (see Clarke et al (2002)). Kothari and Warner (2001) and Angelidis et al (2013) argued that standard mutual fund performance measures are unable to identify significant abnormal performance if the fund's style characteristics differ from those of the benchmark. Chan et al (2009) showed that for conventional size and value style U.S. funds over the period 1989-2001, there is disagreement about the *sign* of excess returns in approximately one quarter of cases, while absolute annual abnormal returns can also differ by large magnitudes depending on the choice of benchmark. Consistent with the predictions of Kothari and Warner (2001), Angelidis et al (2013) and Cremers et al (2012), Clare et al (2015) showed that average performance of different style groups (Large Cap, Small Cap, etc) using style-consistent benchmarks is

economically different from those obtained using the standard multi-factor models, by as much as 0.34% per month in the case of Small Cap Growth funds.

Given the diversity of the mega and boutique fund sets used in this study (see below), the very wide range of fund benchmarks where they are stated, and the debate about the usefulness, or otherwise of factor models based upon arbitrage portfolios, we will use both a standard factor model, and a model based upon investible indices to establish whether there exists a boutique asset management premium in the European fund management industry.

To our knowledge this is the first thorough empirical analysis of a potential boutique asset premium. However, the research question is closely related to the studies that have sought to identify whether "family status" has any impact on fund performance. A mutual fund family has been defined in the academic literature as being a group of funds that are managed by the same fund management company where this status can convey certain benefits on the individual funds (for example, see Nanda et al, 2004). Funds that are members of a large family (that is, offered by a large asset management company or group) may benefit from the promotion, advertising and distribution that a large fund management company can provide for all of its funds. Nanda et al (2004) argued that fund family members may benefit from the re-allocation of human capital and other resources that may be required due to changing financial market conditions that a larger parent organisation might be able to provide, relative to a small one.

It is also possible that fund family-specific characteristics might affect the way in which investors view and evaluate funds. Massa (2003) suggested that the ability to move in and out of funds within a family at low cost, might be one such characteristic. The larger the number

of funds in a family, the greater the value of this option and the more attractive the funds of larger fund houses will be, relative to those offered by smaller fund houses. Guedj and Papastaikoudi (2005) examined the performance of funds within US mutual fund families. They hypothesised that families might promote their funds selectively and that this may cause unequal performance within these families. They found evidence of short-term persistence among family funds and cite this as evidence that fund management companies actively intervene in their funds' performance. Crucially for our study here, they also found that persistence in fund performance is positively related to the number of funds in a family; Boutique asset managers will typically have far fewer funds than a large asset manager. Gaspar et al (2006) examined the issue of favouritism within the top 50 US mutual fund families. They defined "favouritism" as the adoption of a strategy that involves the transference of performance (for example, assigning cheap IPO offerings or similar strategies) across member funds to favour high performance/high-fee funds. They found that families enhance the performance of high value funds by between 0.7 per cent and 3.3 per cent per year, depending on the fund style classification. Again, funds that are part of a small family, will be less likely to be able to benefit from such strategic activity.

Using US mutual fund data Kempf and Ruenzi (2008)[1] show that fund managers within families compete against other managers in the same family for scarce resources – salaries, bonuses or the best advertising budget and so on. The authors show that fund managers adjust their risk in the second half of the year based on their performance in the first half of the year in an attempt to catch up with their peers. Using both US and European mutual fund data Clare

[1] Kempf and Ruenzi (2004) also study the impact of family membership on fund flows. They found that the position in terms of performance of a fund within a family will influence its growth because families advertise their star performers. They found that the top 20 per cent of funds in a family grow on average by an additional 6.78 per cent per year as compared with the other funds in the family.

et al (2014) also show that a fund's mid-year ranking within its family and within its sector affects its risk-taking over the remainder of the year but interestingly that this effect differs between US and European family funds. Among US funds, intra-family and intra-sector competition dominates where mid-year losers increase risk by more than mid-year winners in an attempt to catch up. The opposite is found to be the case for European family funds.

Although the evidence for the impact of fund family status on fund performance is a little mixed, there do seem to be some advantages of being part of a large fund family, advantages which, by definition, will not be available to funds offered by boutique fund managers.

3. Data

We collected end month, total return data on two sets of funds from Morningstar. The first set of funds are offered for investment by Europe's largest asset managers. We refer to these funds as the "Mega funds". We identified these asset managers using the *Investment & Pensions Europe* magazine (IPE) Annual Survey of European Asset Managers. Every year IPE publish a ranking of the world's largest asset managers, which includes a list of the top 120 European asset managers by: "*Total AUM for external Europe-domiciled institutional clients*[2]". In 2019 the IPE reported that this group managed €10.2trn of assets. The US's Blackrock were ranked number 1 in 2019 with total reported assets of €902bn; while the UK's Legal and General Investment Management were ranked second with total reported assets of €808bn. We used this list to search for all long-only, Euro-denominated equity funds on the Morningstar database, that is, Global Broad Category Group, Equities that were open for investment by asset managers on this list over the sample period from 2007 to 2019. We then downloaded the gross and net-of-fee total returns on the oldest share class of each of these funds (as is

[2] The full list and total assets of each asset manager in this list can be found at: https://www.ipe.com/top-120-european-institutional-managers-2019/10031649.article.

conventional) to avoid duplication of share classes, on a monthly basis from January 2000 to July 2019. To be included in the sample, both the gross and net-of-fee returns on each fund needed to have a minimum of 36 consecutive return observations. This process yielded return data on 783 unique, long only equity "Mega" funds. Column 2 in Table 3 shows the breakdown of this set of funds according to the Morningstar categorisation. The table shows, for example, that 34% of these funds are *European Large Cap* funds.

We compare the performance of these Mega funds with a set of long-only, equity, Euro-denominated funds that have been made available for investment by "Boutique" asset managers. Clearly, there is no official definition of a boutique fund. In their industry study of the same phenomenon, AMG (2015) identified boutique fund managers using the MercerInsight global database where the definition of a boutique manager "*was based entirely on AMG's proprietary analysis* (AMG (2015), page 3)." To do this AMG used background information on:

(i) ownership structure,

(ii) scope of business, and

(iii) level of assets under management.

More specifically an asset manager was identified as being a boutique if: the Principals held at least 10% of the equity in the firm; if investment management was the firm's sole business focus; if the firm's AUM was less than $100bn; and if the firm was not offering, exclusively, smart beta or fund of fund strategies. Their classification methodology identified 816 unique "boutique" investment management firms around the world.

To create our database of European-based boutique asset managers, we approached two investment consultancies that specialise in providing investment advice to institutional

investors such as pension funds and insurance companies and another major financial institution. In each case, part of their service is the identification of third-party fund managers to manage their clients' investments. These companies were all asked to identify European-based asset managers that they categorised as "boutique", where the guidance was for these firms to have the broad characteristics relating to ownership, strategy and focus that AMG had identified as being the crucial features of a Boutique asset manager. As well as asking these three organisations for their list of European-based asset management boutiques, we also posed the same question to the *Group of Boutique Asset Managers* (GBAM)[3] which comprises 12, self-styled boutique asset managers based around the world. The question posed to them was the same as was posed to the other market contacts, but where they were being asked to identify asset managers that were similar to themselves. Perhaps a boutique asset manager is best placed to identify another boutique manager?

The list of asset managers provided by these contacts was then combined and, as might be expected, there was a fair degree of overlap with many investment firms appearing on each list[4]. The lists were reduced to one, unique set of boutique fund management firms. This amalgamated list is presented in Appendix 1. We then followed the same data collation process that was used to build the Mega fund database. We downloaded the gross and net-of-fee total returns on the oldest share class of each of the long only, Euro denominated equity funds managed by a boutique asset manager, on a monthly basis from January 2007 to July 2019. This process yielded return data on 299 unique, long only equity "Boutique" funds.

[3] https://www.gbammanagers.com/

[4] We are aware that there may be an element of survivorship bias in this sample, since the contributors to the list were only able to give names of current boutiques. In the absence of another, independent source of such information this possible bias is unavoidable. However, the results will still be comparable to those of AMG.

Tables 3 and 4 present the Morningstar categorisation of the Mega and Boutique funds respectively. The largest Mega fund category is Europe Large Cap which makes up 34% of the total. Europe Large Cap funds make up 39% of the Boutique sample of funds. Around 15% of the Boutique sample do not fall easily in to the Morningstar categorisation, compared with 6% of the Mega funds.

4. Methodology and Results

4.1 Methodology

The aim of this paper is to compare the risk-adjusted performance of funds that are manufactured by Europe's largest fund management groups, with those manufactured by boutique asset manager firms. To do this we need a process for risk-adjusting fund returns so that performance alphas (Jensen alphas) can be calculated, that is, the component of return that is usually interpreted as being due to manager skill. We use two approaches to calculate alphas. The first involves the use of an index model, where the factors represent the unconditional premium that could be achieved from investing in a broad market category, that is, the return on this index minus the return on the risk-free rate of interest. The second involves the imposition of a standard, factor model where the factors are essentially returns generated by an arbitrage portfolio.

The first model that we estimate is a pragmatic, index model. By looking at the main Morningstar categories we identified a relatively parsimonious set of replicable market indices as a way of modelling fund returns and, therefore, as a way of providing an alternative measure of risk-adjusted alpha. We used the following total return indices that were all sourced from the MSCI index range:

F1. Global Equity Large Cap
F2. Global Equity Mid/Small
F3. Europe Equity Large Cap
F4. Europe Equity Mid/Small
F5. US Equity Large Cap
F6. US Equity Mid/Small
F7. UK Equity Large Cap
F8. UK Equity Mid/Small
F9. Global Emerging Markets

We collected the end month total return on these indices from January 2007 to July 2019, converted the indices into Euros, calculated the monthly returns for each index, and from these returns subtracted a proxy for the risk-free rate of interest, to create the unconditional premium. We then estimated the following model for all of the Mega and Boutique funds in the sample:

$$R_{pt} - R_{ft} = \alpha_p + \sum_{i=1}^{k} \beta_{kp} F_{kt} + \varepsilon_{pt} \quad (1)$$

where F_k is a vector of returns in excess of the risk-free rate for each of the 9 market indices listed above.

As an alternative to the index-based model we also use a standard factor model to capture the systemic risks embodied in these funds. To this end, we chose a set of factors available on Kenneth French's website[5] based upon Fama and French (2015). In their paper Fama and French propose a five-factor model consisting of:

Mkt-Rf	The excess return on a broad equity portfolio.
SMB	The return difference between a small stock and large stock portfolio.
HML	The return difference between a portfolio consisting of high book-to-market-value stocks and a portfolio consisting of low book-to-market-value stocks
RMW	The return difference between a portfolio consisting of stocks of companies with robust profitability and a portfolio of stocks of companies with weak profitability.

[5] https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

CMA — The return difference between a portfolio consisting of the stocks of companies with a conservative approach to investment and portfolio consisting of stocks with an aggressive approach to investment.

We use the set of developed economy, five factors available on Professor French's website, which we convert into Euros to be consistent with the Euro-denominated mutual fund returns. We then estimate the following model using OLS for each Mega and Boutique fund in our sample:

$$R_{pt} - R_{ft} = \alpha_p + \beta_{1p}\left(Mkt - R_f\right)_t + \beta_{2p}(SMB)_t + \beta_{3p}(HML)_t + \beta_{4p}(RMW)_t + \beta_{5p}(CMA)_t + \varepsilon_{pt} \quad (2)$$

where R_{pt} is the monthly total return, either gross or net of fees, on the pth fund, over month t; R_{ft} is a proxy for the risk-free rate of interest; β_{1p} to β_{5p} are OLS coefficients; ε_{pt} is a white noise error term; and, crucially, α_p is an OLS constant term which represents manager skill.

Estimates of expressions (1) and (2) yield the estimates of manager skill, α_p, for the two sets of funds.

4.2 Results

4.2.1 Style Model Results

Tables 3 and 4 present the results of estimates of expression (1) using the gross-of-fee, end-month returns on the two samples of funds: Mega and Boutique funds. Figure 1 shows the distribution of gross-of-fee alphas, while Figure 2 shows the equivalent distributions for net-of-fee returns. In both cases we can see that the distribution of Boutique fund manager alphas are shifted to the right of the Mega fund alpha distributions – an indication that a Boutique premium may exist. Table 3 shows that the average R^2 of the regressions for the Mega funds

is 93%, which indicates that the model generally provides a good description of the generated returns. The equivalent figure shown in Table 4 for the Boutique fund returns is equivalently high, at 91%. The average alpha generated by the mega funds is 0.02% per month, or 0.21% per annum. The standard deviation of these alpha estimates, at 0.24%, indicate that their dispersion is quite high and, as column 6 confirms, that a high proportion are negative (46.4%). Finally, the last two columns indicate that only a small proportion of the alpha estimates are statistically significant at the 95% level of confidence: 9.6% of the sample are found to positive and statistically significant, while 6.1% are found to be negative and statistically significant. These findings are broadly in line with those of many other exercises of this kind, that is: an economically small, average alpha, with a relatively low proportion of funds producing an alpha that is positive and significantly different from zero at conventional confidence intervals.

Table 4 presents the results of the same analysis, but applied to the Boutique fund sample. The average monthly alpha generated by this set of funds is substantially higher than that reported in Table 3, at just under 0.9% per month, or 1.03% per annum. The Boutique funds, on average, therefore outperform those funds managed by large asset managers by just over 0.8% per annum. We find this difference in mean alphas to be significant at the 99% confidence level. Once again, the dispersion of alphas is wide, as the alpha standard deviation of 0.28% indicates. However, the proportion of funds producing a positive alpha is higher at 61.9% compared with the 46.4% for the Mega funds; the proportion of funds with positive and significant alphas is still relatively low, 13.7%. Overall, in gross-of-fee terms, the results presented in Tables 3 and 4 indicate that there exists a boutique manager premium of just over 0.8%pa.

Tables 5 and 6 present results analogous to those presented in Tables 3 and 4, but where net-of-fee returns were used in expression (1). Once again, in both tables the average R^2s are high

indicating that the style factors are, on average, a good representation of risk-return characteristics of the sets of funds. In both cases we can see that the average alpha has fallen from 0.02% to -0.11% per month for the Mega funds, and from 0.09% to -0.07% for the Boutique funds. The first point to make about this fall in the mean value of alpha is that it does not necessarily mean that mangers are systematically subtracting value on average (though in both samples that is almost certainly true of some funds). It must be remembered that the style indices do not include fees, so in this sense we are not comparing like for like. However, these results, do still indicate two important results. First, Boutiques funds are, on average, more expensive than those offered by Mega funds. This makes sense, since these funds no doubt benefit from the economies of scale that should arise from being produced by a large asset manager. But second, even give this consideration, there is still a boutique asset management premium of 0.56% per annum, on average. We find this difference to be significant at the 95% level of confidence.

Although it may be difficult to identify the precise source of the apparent premium, we can view the average betas from the Index model to determine differences in exposure to the style factors. Figure 5 shows the difference between the average beta exposure of the Boutique funds to each source of risk proxy and the average beta exposure of the Mega funds. The chart, generated using net-of-fee return data, shows that the Mega funds have a greater exposure to Global Large and Mid/Small Cap stocks (GLC and GMS), and to European Large Cap stocks, than the Boutique funds, and that the Boutique funds have a greater exposure to European Mid/Small Cap stocks.

4.2.2 Factor Model Results

Tables 7 and 8 present a summary of the results generated using expression (2) where the independent regressors are based upon the Fama and French (2015) five factor model for developed economies. That is, factors that are essentially hedge portfolios. Figures 3 and 4 present the five-factor model, alpha distributions which again show that the Boutique alpha distributions are to the right of the equivalent mega fund alpha distributions. The average R^2s of the regressions in Tables 7 and 8 at 87.6% and 84.8% for the gross-of-fee returns are lower than the 93.9% and 91.2% generated by the style index model of returns. This indicates that the models are, on average, a less appropriate description of the risk and return characteristics of these two sets of funds. The average alphas are lower in Tables 7 and 8. The average monthly alpha for the mega funds is -0.07% and -0.02% for the Boutique funds. However, this indicates, once again, that there may be a boutique asset manager premium. The difference between the two averages indicates a gross-of-fee premium of circa 0.52% per annum. Tables 7 and 8 also indicate that a higher proportion of Boutique funds produce positive alphas, 42.5% compared to the 33.1% of Mega funds that produce a positive alpha, but, as was seen in Tables 3 to 6, only a small proportion of both fund sets produce an alpha which is positive and statistically different from zero. Only 2.7% of the Mega funds produce a statistically significant, positive alpha, and only 8.0% of the Boutique funds. The results for net-of-fee returns using the Fama and French five factor model, presented in Tables 9 and 10, indicate (as expected) much lower average alphas for both sets of funds; -0.19% for the Mega fund and -0.17% for the Boutique funds. The annualised boutique asset management premium is, however, still positive at 0.23% per annum.

Figure 6 presents the average difference in Boutique beta values and those of Mega funds, generated using net-of-fee returns. The Boutique funds have: a higher average exposure to

market risk (ERM), to the small stock risk factor (SMB) and to the profitability factor (RMW); and have a slightly lower exposure to the value factor (HML) and to the investment factor (CMA).

4.2.3 Sectoral Comparisons

As well as presenting a summary of the regression results for the full sample of Mega and Boutique funds, Tables 3 to 10 also present results by sector. The two ranges of fund sectors do not match up perfectly, which indicates that large and Boutique asset managers tend to focus on different sectors of global equity markets[6]. And, as the tables show, where there is overlap, there are often too few funds to make meaningful comparisons, for example in the US Large Cap sector, where there are only 5 Boutique funds in the sample. However, there are four sectors where we could make more meaningful comparisons. We have in the sample of funds: 267 and 117 Mega and Boutique, Europe Large Cap equity funds; 69 and 43 Mega and Boutique, Europe Mid/Small Cap equity funds; 49 and 21 Mega and Boutique, Global Emerging Market equity funds; and 165 and 77 Mega and Boutique, Global Large Cap equity funds.

First, we consider the style model results, presented in Tables 3 to 6. The set of Boutique Europe Large Cap funds outperform the Mega funds by 0.33% pa on a gross-of-fee basis and by 0.08% in net-of-fee terms. This outperformance is higher for the Europe Mid/Small Cap sector at 1.45% and 0.94% respectively. Outside of European equity markets we find that the Boutique Global Emerging Markets funds outperform the equivalent Mega funds by 0.42%pa and 0.54%pa on a gross and net-of-fee bases respectively. Finally, the equivalent values for

[6] Please also note that a number of funds in each set cannot be easily categorised.

the Global Large Cap equity sector are 0.28%pa and 0.01%pa respectively, which provides tentative evidence that a boutique premium may be evident in this fund sector too.

Tables 7 to 10 present analogous sectoral results, but based upon the Fama and French five factor model. The outperformance of Boutique European Large Cap funds over their Mega fund equivalents is 0.45%pa on a gross-of-fee basis and 0.18%pa on a net-of-fee basis. The equivalent figures for the European Mid/Small cap sector are 1.86%pa and 1.04%pa. Once again, we find that the largest outperformance is in the Global Emerging Markets fund sector. Here Boutique funds outperform their Mega fund comparators by 2.14%pa and 1.74%pa on a gross-of-fee and net-of-fee basis respectively. However, given that this model describes a lower proportion of the returns from these funds we should perhaps treat this result with caution. Finally, and in contrast to the results using the preferred, style-based model, there is evidence in the Global Equity Large Cap fund sector to suggest that Mega funds produce a higher mean alpha than the boutique funds. Here the Boutique premium is negative at -0.37% and -0.29% on a gross-of-fee and net-of-fee basis respectively.

The sectoral results generally indicate that there are certain fund sectors where the boutique asset manager premium is more prevalent. In particular, if an investor is looking to invest in a European Mid/Small Cap manager or is looking to invest in Emerging Market equities, then they should perhaps give serious consideration to investing with a Boutique fund manager.

5. Conclusions

AMG's 2015 industry study indicated that there might be a premium available to investors when they invest with a boutique asset manager. Using their definition of a boutique manager and with the help of financial industry institutions, the results presented in this paper suggest

that funds managed by European boutique asset managers do tend to outperform those managed by Europe's largest fund management groups. On average AMG report a boutique premium of 141bps per year versus comparable financial market indices. Our results, show that the boutique premium, calculated as the difference in performance between Boutique and Mega active funds, ranges between 82bps and 52bps on a gross-of-fee basis depending upon the conditional model of risk employed. On a net-of-fee basis this figure falls to between 56bps and 23bps, again depending upon the risk model. We also find particular evidence of a boutique premium in two fund sectors: the European Mid/Small Cap sector and the Global Emerging Markets sector.

We believe that the results presented here are compelling enough to warrant further analysis of this part of the asset management industry. Future research in this area could involve a more detailed analysis of the ownership structure of boutique managers and/or perhaps a more detailed analysis of the make-up of a typical fund managed by a boutique manager.

References

AMG. 2015. The Boutique Premium. Do Boutique Investment Managers Create Value? https://www.amg.com/content/dam/amg/boutique-advantage/The_Boutique_Premium.pdf.

Angelidis, T., D. Giamouridis and N. Tessaromatis. 2013. Revisiting mutual fund performance evaluation. Journal of Banking and Finance 37(5), 1759–1776.

Aragon, G.O., W.E. Ferson. 2006. Portfolio performance evaluation. Foundations and Trends in Finance 2 (2), 83-190.

Carhart, M. 1997. On persistence in mutual fund performance. Journal of Finance 52(1): 57-82.

Chan, L.K., S.G. Dimmock, G., J. Lakonishok. 2009. Benchmarking money manager performance: Issues and evidence. Review of Financial Studies 22(11), 4553-4599.

Christopherson, J.A., D.R. Carino, and W.E. Ferson. 2009. Portfolio Performance Measurement and Benchmarking. Mc Graw Hill.

Clare, A., N. Ferguson and M. Sherman. 2014. Family Status and Mutual Fund Performance, Journal of Asset Management, 15, 163–175.

Clare, A., S. Agyei-Ampomah, A. Mason and S.H. Thomas. 2015. On luck versus skill when performance benchmarks are style-consistent. Journal of Banking and Finance, Volume 59, 1-550.

Clarke, R., H. De Silva and S. Thorley. 2002. Portfolio constraints and the fundamental law of active management. Financial Analysts Journal 58(5), 48-66.

Cremers, M., A. Petajisto and E. Zitzewtz. 2012. Should benchmark indices have alpha? Revisiting performance evaluation. Critical Finance Review 2, 1-48.

Cuthbertson, K., D. Nitzsche and N. O'Sullivan. 2010. Mutual Fund Performance: Measurement and Evidence. Financial Markets, Institutions and Instruments xx: 95-187.

Elton, E.J., M.J. Gruber, S. Das and M. Hlavka. 1993. "Efficiency with Costly Information: A Reinterpretation of Evidence from Managed Portfolios." Review of Financial Studies 6:1-21.

Fama, E. F. and K.R. French. 1992. The cross-section of expected stock returns. Journal of Finance 47(2), 427-465.

Fama, E.F. and K.R. French. 1993. Common Risk Factors in the Returns on Stocks and Bonds. Journal of Financial Economics 33(1): 3–56.

Fama, E.F. and K.R. French. 2010. Luck versus skill in the cross-section of alpha estimates. Journal of Finance (65)5, 1915–1947.

Fama, E.F. and K.R. French. 2015. A Five-Factor Asset Pricing Model. Journal of Financial Economics, vol. 116, no. 1 (April): 1–22.

Ferreira, M., A. Keswani, S. Ramos and A.F. Miguel. 2013. The Determinants of Mutual Fund Performance: A Cross-Country Study. Review of Finance 17(2), pp. 483- 525.

Gaspar, J., M. Massa and P. Matos. 2006. Favouritism in mutual fund families? Evidence on strategic cross-fund subsidization. Journal of Finance 61(1): 73–104.

Guedj, I. and J. Papastaikoudi. 2005. Can mutual fund families affect the performance of their funds? http://ssrn.com/abstract=467282.

Huij, J., and M. Verbeek, 2009. On the use of multifactor models to evaluate mutual fund Performance. Financial Management 38:1, 75-102.

Kempf, A. and S. Ruenzi. 2004. Family matters: The performance flow relationship in the mutual fund industry. http://ssrn.com/abstract=549121.

Kempf, A. and S. Ruenzi. 2008. Tournaments in mutual fund families. The Review of Financial Studies 21(2): 1013–1036.

Kothari, S. P., J.B. Warner. 2001. Evaluating mutual fund performance. Journal of Finance 56(5), 1985-2010.

Malkiel, G. 1995. Returns from Investing in Equity Mutual Funds 1971 to 1991. Journal of Finance 50: 549-572.

Massa, M. 2003. How do family strategies affect fund performance? When performance-maximisation is not the only game in town. Journal of Financial Economics 67(2): 249–304.

Nanda, V., Z. Wang and L. Zheng. 2004. Family values the star phenomenon: Strategies and mutual fund families. Review of Financial Studies 17(3): 667–698.

Sharpe, William F. 1992. Asset Allocation: Management Style and Performance Measurement. The Journal of Portfolio Management, Winter, 7-19.

Table 1: Description of style indices

This Table presents the set of indices in this study used to estimate expression (1) in the text. All of the indices are MSCI total return indices and were collected from Thomson Financial's Datastream.

Notation	Description
GLC	Global Equity Large Cap
GMS	Global Equity Mid/Small
ELC	Europe Equity Large Cap
EMS	Europe Equity Mid/Small
USLC	US Equity Large Cap
USMS	US Equity Mid/Small
UKLC	UK Equity Large Cap
UKMS	UK Equity Mid/Small
GEM	Global Emerging Market

Table 2: Descriptive statistics for the Style indices

In this Table we present descriptive statistics on the Euro-denominated style indices listed in Table 2. All of the factors are expressed in excess of a risk-free comparator, and therefore represent unconditional historic risk premia.

	GLC	GMS	ELC	EMS	USLC	USMS	UKLC	UKMS	GEM
Ave annualised	6.85%	7.44%	3.60%	4.34%	9.61%	9.76%	2.85%	5.63%	6.08%
Stdev annualised	13.12%	15.60%	16.91%	17.58%	13.58%	15.73%	14.24%	17.55%	17.83%
Skew	-0.53	-0.47	-0.44	-0.59	-0.48	-0.29	-0.36	-0.24	-0.45
Max month	12.34%	16.40%	16.13%	17.21%	9.78%	15.00%	12.36%	22.98%	18.50%
Min month	-11.36%	-15.77%	-15.93%	-19.85%	-10.08%	-13.87%	-11.46%	-19.85%	-20.56%

Table 3: Mega funds, Gross returns, Index Model

This Table presents descriptive statistics based upon the gross-of-fee monthly returns of the sample of 783 funds owned and managed by some of Europe's largest asset managers. The sectors in column 1 correspond broadly to the Morningstar Equity category. The number of funds in each category is indicated in column 2. The data in columns 3 to 8 are all generated, directly or indirectly, by the style regression described in the text (see expression (1)). Column 3 presents the average R^2 of each regression; column 4 presents the average, monthly alpha from expression (1); column 5 presents the standard deviation of estimated alphas; column 6 presents the proportion of positive alphas; while columns 7 and 8 present the proportion of statistically significant positive and negative alphas respectively.

	#	R^2	alpha	stdev. alpha	alpha +	alpha t p	alpha t n
All	783	93%	0.02%	0.24%	53.6%	9.6%	6.1%
Europe Large Cap	267	96.2%	0.01%	0.17%	55.4%	8.2%	6.0%
Europe Mid/Small	69	93.0%	0.16%	0.23%	78.3%	29.0%	2.9%
Global Emerging Markets	49	93.2%	0.00%	0.21%	49.0%	8.2%	4.1%
Global Large Cap	165	94.8%	-0.02%	0.17%	39.4%	7.3%	8.5%
Global Mid/Small	10	91.8%	-0.05%	0.16%	20.0%	0.0%	10.0%
Asia	33	92.4%	0.02%	0.19%	60.6%	3.0%	3.0%
Country	27	83.1%	-0.04%	0.30%	51.9%	0.0%	3.7%
Europe Emerging Market	9	79.8%	0.03%	0.19%	33.3%	0.0%	0.0%
Property	25	80.2%	0.19%	0.25%	68.0%	16.0%	0.0%
Sector	49	83.1%	0.03%	0.45%	71.4%	10.2%	8.2%
US Large Cap	32	94.4%	-0.01%	0.15%	50.0%	3.1%	9.4%

Table 4: Boutique funds, Gross returns, Index Model

This Table presents descriptive statistics based upon the gross-of-fee monthly returns of the sample of 299 funds owned and managed by Boutique asset managers. The sectors in column 1 correspond broadly to the Morningstar Equity category. The number of funds in each category is indicated in column 2. The data in columns 3 to 8 are all generated, directly or indirectly, by the style regression described in the text (see expression (1)). Column 3 presents the average R^2 of each regression; column 4 presents the average, monthly alpha from expression (1); column 5 presents the standard deviation of estimated alphas; column 6 presents the proportion of positive alphas; while columns 7 and 8 present the proportion of statistically significant positive and negative alphas respectively. The final column shows the annualised Boutique premium (comparison of results with those in Table 3) where there are enough observations to make a meaningful comparison.

	#	R^2	alpha	stdev alpha	alpha +	alpha t p	alpha t n	Premium
All	299	91.20%	0.09%	0.28%	61.87%	13.71%	5.35%	0.82%
Europe Equity Large Cap	117	94.11%	0.04%	0.19%	59.83%	7.69%	5.13%	0.33%
Europe Equity Mid/Small Cap	43	89.25%	0.28%	0.35%	79.07%	32.56%	2.33%	1.45%
Global Emerging Markets Equity	21	87.95%	0.03%	0.24%	66.67%	4.76%	4.76%	0.42%
Global Equity Large Cap	77	92.14%	0.01%	0.26%	46.75%	14.29%	9.09%	0.28%
Asia	7	77.90%	0.28%	0.26%	100.00%	14.29%	0.00%	
Country	4	81.52%	0.01%	0.27%	50.00%	0.00%	0.00%	
Property	2	72.66%	0.42%	0.05%	100.00%	0.00%	0.00%	
Sector	9	85.25%	0.28%	0.23%	88.89%	22.22%	0.00%	
US Equity Large Cap Blend	5	89.41%	-0.11%	0.14%	20.00%	0.00%	0.00%	

Table 5: Mega funds, Net returns, Index Model

This Table presents descriptive statistics based upon the net-of-fee monthly returns of the sample of 783 funds owned and managed by some of Europe's largest asset managers. The sectors in column 1 correspond broadly to the Morningstar Equity category. The number of funds in each category is indicated in column 2. The data in columns 3 to 8 are all generated, directly or indirectly, by the style regression described in the text (see expression (1)). Column 3 presents the average R^2 of each regression; column 4 presents the average, monthly alpha from expression (1); column 5 presents the standard deviation of estimated alphas; column 6 presents the proportion of positive alphas; while columns 7 and 8 present the proportion of statistically significant positive and negative alphas respectively.

	#	R^2	alpha	stdev alpha	alpha +	alpha t p	alpha t n
All	783	92.9%	-0.11%	0.24%	27.8%	2.2%	25%
Europe Large Cap	267	96.2%	-0.10%	0.17%	23.2%	1.9%	27.0%
Europe Mid/Small	69	93.1%	0.03%	0.23%	63.8%	10.1%	8.7%
Global Emerging Markets	49	93.3%	-0.15%	0.23%	20.4%	2.0%	22.4%
Global Large Cap	165	94.7%	-0.15%	0.18%	18.2%	1.2%	38.2%
Asia	33	92.4%	-0.11%	0.22%	30.3%	0.0%	27.3%
Country	27	82.4%	-0.15%	0.27%	33.3%	0.0%	11.1%
Europe Emerging Market	9	82.9%	-0.17%	0.21%	22.2%	0.0%	0.0%
Global Mid/Small	10	91.7%	-0.20%	0.21%	10.0%	0.0%	30.0%
Property	25	81.5%	-0.05%	0.29%	40.0%	4.0%	8.0%
Sector	49	83.1%	-0.13%	0.49%	44.9%	2.0%	14.3%
US Large	32	94.5%	-0.14%	0.15%	12.5%	0.0%	37.5%

Table 6: Boutique funds, Net returns, Index Model

This Table presents descriptive statistics based upon the net-of-fee monthly returns of the sample of 299 funds owned and managed by Boutique asset managers. The sectors in column 1 correspond broadly to the Morningstar Equity category. The number of funds in each category is indicated in column 2. The data in columns 3 to 8 are all generated, directly or indirectly, by the style regression described in the text (see expression (1)). Column 3 presents the average R^2 of each regression; column 4 presents the average, monthly alpha from expression (1); column 5 presents the standard deviation of estimated alphas; column 6 presents the proportion of positive alphas; while columns 7 and 8 present the proportion of statistically significant positive and negative alphas respectively. The final column shows the annualised Boutique premium (comparison of results with those in Table 6) where there are enough observations to make a meaningful comparison.

	#	R^2	alpha	stdev alpha	alpha +	alpha t p	alpha t n	Premium
All	299	91.04%	-0.07%	0.27%	37.1%	5.4%	19.1%	0.56 %
Europe Large Cap	117	93.85%	-0.10%	0.19%	27.4%	3.4%	17.1%	0.08 %
Europe Mid/Small Cap	43	89.35%	0.10%	0.33%	67.4%	20.9%	7.0%	0.94 %
Global Emerging Markets	21	88.02%	-0.11%	0.24%	33.3%	0.0%	19.0%	0.54%
Global Large Cap	77	92.05%	-0.15%	0.29%	31.2%	2.6%	32.5%	0.01%
Asia	7	77.92%	0.10%	0.27%	57.1%	14.3%	0.0%	
Country	4	81.53%	-0.22%	0.39%	25.0%	0.0%	0.0%	
Property	2	75.64%	0.22%	0.25%	100.0%	0.0%	0.0%	
Sector	9	85.18%	0.08%	0.23%	55.6%	0.0%	0.0%	
US Large Cap	5	89.50%	-0.29%	0.19%	0.0%	0.0%	60.0%	

Table 7: Mega funds, Gross returns, Factor Model

This Table presents descriptive statistics based upon the gross-of-fee monthly returns of the sample of 782 funds owned and managed by some of Europe's largest asset managers. The sectors in column 1 correspond broadly to the Morningstar Equity category. The number of funds in each category is indicated in column 2. The data in columns 3 to 8 are all generated, directly or indirectly, by the style regression described in the text (see expression (2)). Column 3 presents the average R^2 of each regression; column 4 presents the average, monthly alpha from expression (2); column 5 presents the standard deviation of estimated alphas; column 6 presents the proportion of positive alphas; while columns 7 and 8 present the proportion of statistically significant positive and negative alphas respectively.

	#	R^2	alpha	stdev alpha	alpha +	alpha t p	alpha t n
All	782	88%	-0.07%	0.24%	33.1%	2.7%	9.0%
Europe Large Cap	267	90.0%	-0.15%	0.16%	13.5%	0.4%	11.2%
Europe Mid/Small	69	83.8%	0.13%	0.26%	73.9%	11.6%	1.4%
Global Emerging Markets	49	81.3%	-0.07%	0.26%	38.8%	0.0%	0.0%
Global Large Cap	165	94.7%	-0.07%	0.15%	26.7%	3.0%	17.6%
Asia	33	83.4%	-0.11%	0.22%	27.3%	0.0%	6.1%
Country	27	74.0%	-0.06%	0.28%	44.4%	0.0%	3.7%
Europe Emerging Market	9	74.1%	-0.04%	0.18%	33.3%	0.0%	0.0%
Global Mid/Small	10	89.7%	-0.09%	0.21%	30.0%	0.0%	10.0%
Property	25	72.7%	0.05%	0.19%	56.0%	4.0%	0.0%
Sector	48	80.2%	-0.05%	0.41%	45.8%	4.2%	2.1%
US Large Cap	32	93.9%	0.03%	0.14%	62.5%	3.1%	0.0%

Table 8: Boutique funds, Gross returns, Factor Model

This Table presents descriptive statistics based upon the gross-of-fee monthly returns of the sample of 299 funds owned and managed by Boutique asset managers. The sectors in column 1 correspond broadly to the Morningstar Equity category. The number of funds in each category is indicated in column 2. The data in columns 3 to 8 are all generated, directly or indirectly, by the style regression described in the text (see expression (2)). Column 3 presents the average R^2 of each regression; column 4 presents the average, monthly alpha from expression (2); column 5 presents the standard deviation of estimated alphas; column 6 presents the proportion of positive alphas; while columns 7 and 8 present the proportion of statistically significant positive and negative alphas respectively. The final column shows the annualised Boutique premium (comparison of results with those in Table 7) where there are enough observations to make a meaningful comparison.

	#	R^2	alpha	stdev alpha	alpha +	alpha t p	alpha t n	Premium
All	299	84.80%	-0.02%	0.30%	42.47%	8.03%	7.36%	0.52%
Europe Large Cap	117	86.98%	-0.11%	0.20%	27.4%	0.9%	4.3%	0.45%
Europe Mid/Small Cap	43	79.55%	0.28%	0.40%	81.4%	32.6%	0.0%	1.86%
Global Emerging Markets	21	77.64%	0.10%	0.39%	62.5%	16.1%	5.4%	2.14%
Global Large Cap	77	90.16%	-0.10%	0.26%	33.8%	5.2%	16.9%	-0.37%
Asia	7	69.75%	0.15%	0.33%	57.1%	14.3%	0.0%	
Country	4	73.64%	0.05%	0.22%	50.0%	0.0%	0.0%	
Property	2	66.93%	0.15%	0.03%	100.0%	0.0%	0.0%	
Sector	9	81.21%	0.14%	0.29%	88.9%	11.1%	11.1%	
US Large Cap	5	91.13%	-0.03%	0.18%	60.0%	0.0%	0.0%	

Table 9: Mega funds, Net returns, Factor Model

This Table presents descriptive statistics based upon the net-of-fee monthly returns of the sample of 782 funds owned and managed by some of Europe's largest asset managers. The sectors in column 1 correspond broadly to the Morningstar Equity category. The number of funds in each category is indicated in column 2. The data in columns 3 to 8 are all generated, directly or indirectly, by the style regression described in the text (see expression (2)). Column 3 presents the average R^2 of each regression; column 4 presents the average, monthly alpha from expression (2); column 5 presents the standard deviation of estimated alphas; column 6 presents the proportion of positive alphas; while columns 7 and 8 present the proportion of statistically significant positive and negative alphas respectively.

	#	R^2	alpha	stdev alpha	alpha +	alpha t p	alpha t n
All	782	88.0%	-0.19%	0.24%	15.0%	0.5%	28.4%
Europe Large Cap	267	90.5%	-0.26%	0.15%	3.4%	0.0%	37.5%
Europe Mid/Small	69	84.8%	0.01%	0.23%	47.8%	2.9%	5.8%
Global Emerging Markets	49	81.9%	-0.19%	0.22%	12.2%	0.0%	8.2%
Global Large Cap	165	94.6%	-0.19%	0.17%	9.7%	0.6%	50.9%
Asia	33	83.8%	-0.21%	0.20%	9.1%	0.0%	15.2%
Country	27	73.4%	-0.18%	0.25%	18.5%	0.0%	7.4%
Europe Emerging Market	9	78.6%	-0.11%	0.20%	22.2%	0.0%	0.0%
Global Mid/Small	10	89.6%	-0.23%	0.27%	30.0%	0.0%	30.0%
Property	25	75.9%	-0.10%	0.24%	24.0%	0.0%	4.0%
Sector	48	80.2%	-0.21%	0.45%	25.0%	0.0%	12.5%
US Large	32	93.8%	-0.12%	0.14%	15.6%	0.0%	21.9%

Table 10: Boutique funds, Net returns, Factor Model

This Table presents descriptive statistics based upon the net-of-fee monthly returns of the sample of 299 funds owned and managed by Boutique asset managers. The sectors in column 1 correspond broadly to the Morningstar Equity category. The number of funds in each category is indicated in column 2. The data in columns 3 to 8 are all generated, directly or indirectly, by the style regression described in the text (see expression (2)). Column 3 presents the average R^2 of each regression; column 4 presents the average, monthly alpha from expression (2); column 5 presents the standard deviation of estimated alphas; column 6 presents the proportion of positive alphas; while columns 7 and 8 present the proportion of statistically significant positive and negative alphas respectively. The final column shows the annualised Boutique premium (comparison of results with those in Table 9) where there are enough observations to make a meaningful comparison.

	#	R^2	alpha	stdev alpha	alpha +	alpha t p	alpha t n	Premium
All	297	84.8%	-0.17%	0.28%	21.89%	2.69%	23.9%	0.23%
Europe Large Cap	117	87.0%	-0.24%	0.20%	8.5%	0.0%	25.6%	0.18%
Europe Mid/Small Cap	43	80.2%	0.09%	0.39%	65.1%	11.6%	7.0%	1.04%
Global Emerging Markets	21	78.6%	-0.05%	0.38%	42.9%	5.4%	7.1%	1.74%
Global Large Cap	77	89.9%	-0.22%	0.25%	14.7%	2.7%	40.0%	-0.29%
Asia	7	69.9%	-0.02%	0.33%	42.9%	0.0%	0.0%	
Country	4	80.1%	-0.21%	0.43%	25.0%	0.0%	50.0%	
Property	2	78.3%	-0.21%	0.05%	0.0%	0.0%	0.0%	
Sector	9	73.6%	-0.06%	0.29%	44.4%	11.1%	11.1%	
US Large Cap	5	91.9%	-0.14%	0.23%	20.0%	0.0%	20.0%	

Figure 1: Alpha distribution (Gross Returns, Style Model)

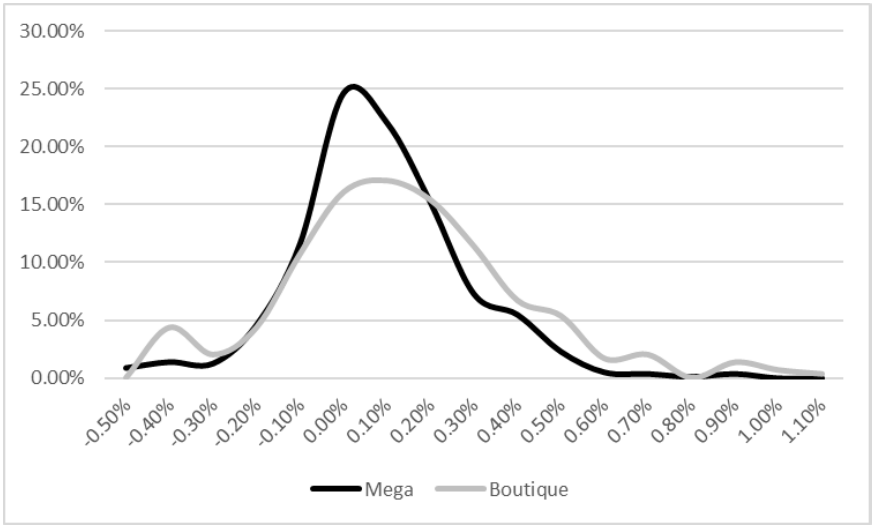


Figure 2: Alpha distribution (Net Returns, Style Model)

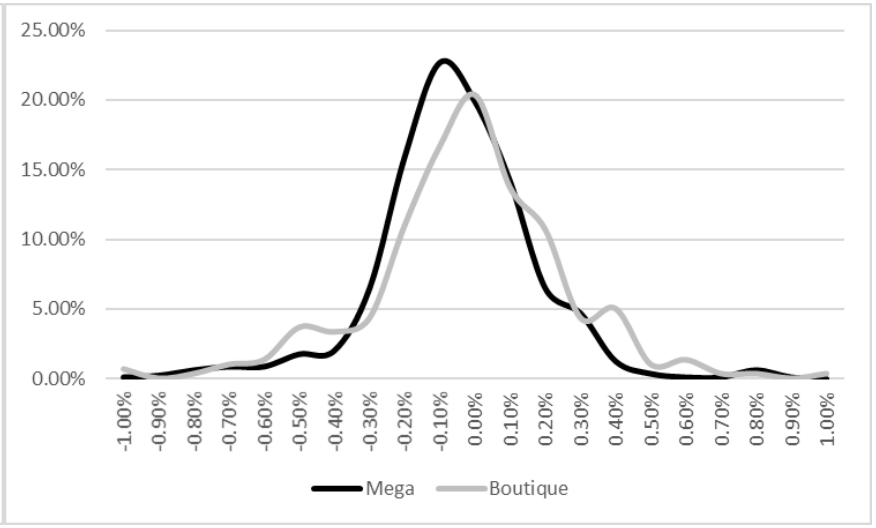


Figure 3: Alpha distribution (Gross Returns, 5-Factor Model)

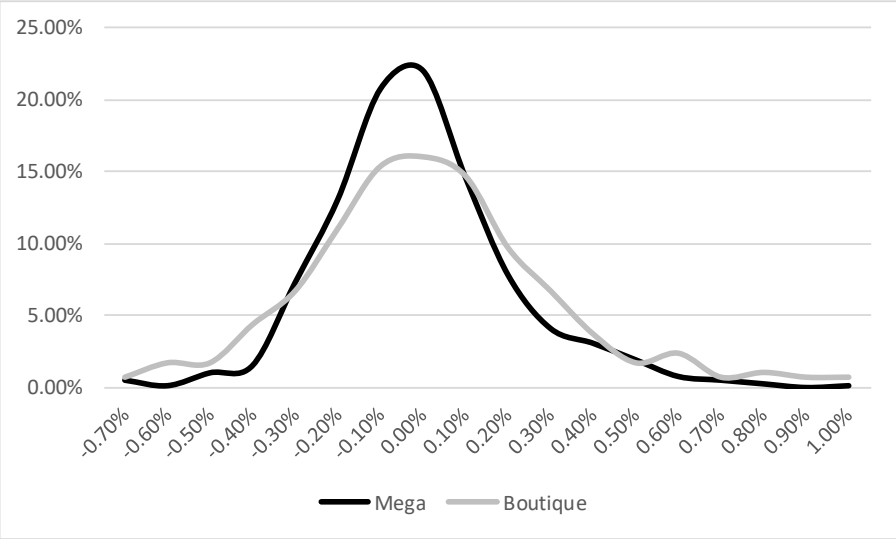


Figure 4: Alpha distribution (Net Returns, 5-Factor Model)

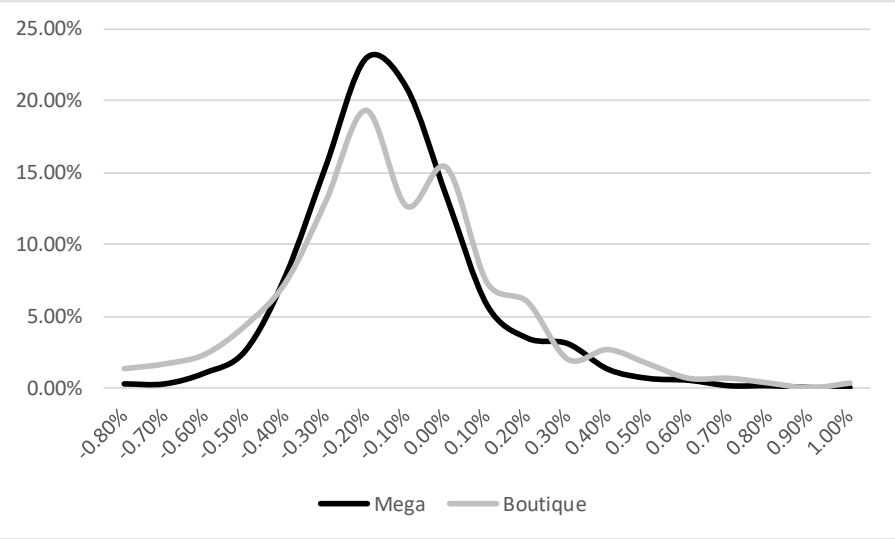


Figure 5: Difference in Average Betas (Boutique minus Mega)

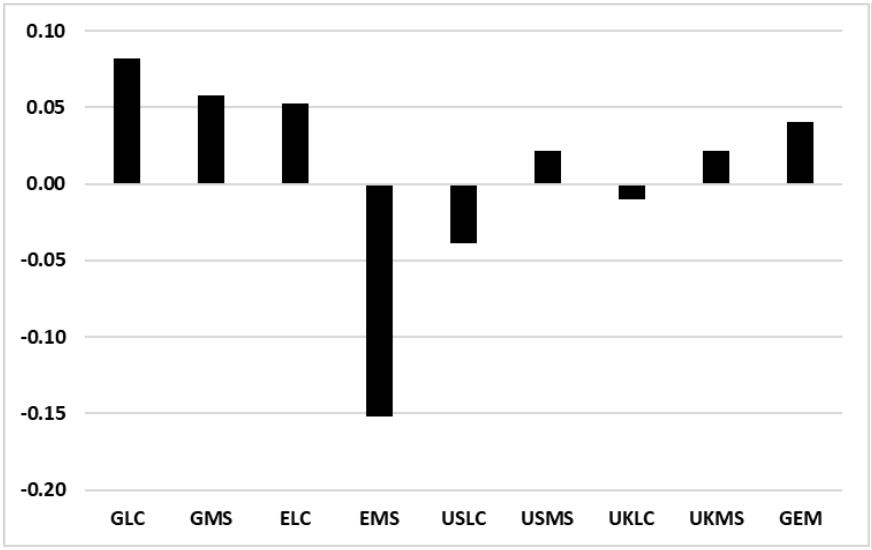
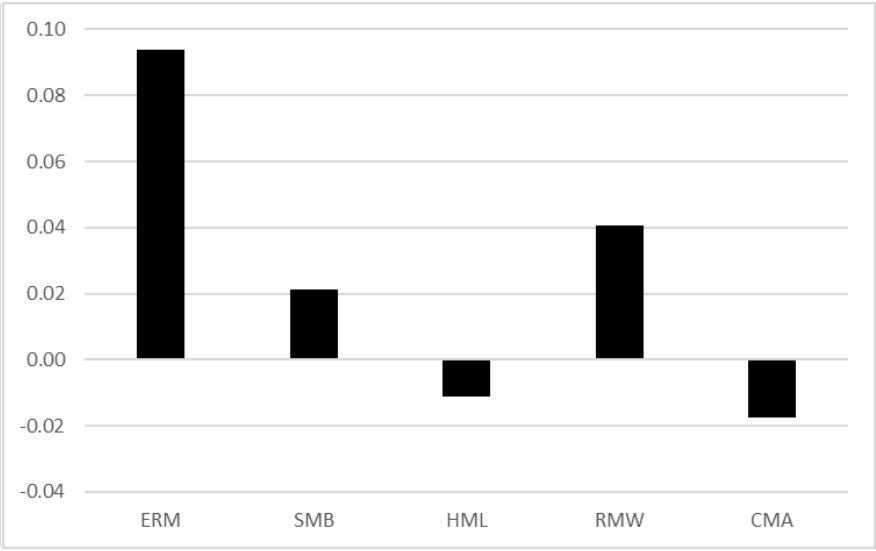


Figure 6: Difference in Average Betas (Boutique minus Mega)



NB: Figures 5 and 6 have been generated from net return data.

Appendix 1: The original list of Boutique asset managers

This list of Boutique managers was used for the initial search. If a manager on the list managed an equity fund, denominated in Euros with 3 years of continuous gross and net-of-fee returns on the Morningstar database the oldest share class of this fund was included in the set of Boutique funds analysed in the study.

Aberforth Partners LLP	De Lisle Partners	Halo Global Asset Management Ltd	Milkwood Capital	
Actis Asset Management SA	Decalia	Heronbridge Investment Management LLP	Mirabaud Asset Management	Skagen AS
Adelphi Capital LLP	DNCA	Highclere International Investors LLP	Mirante Fund Management	Somerset Capital Management LLP
Albrecht von Witzleben AM	DOM Finance SA	HMG Finance SA	Miton	Spaengler IQAM Invest GmbH
Alder Capital DAC	Dominice	Horos AM	Mondrian Investment Partners Limited	Sparinvest Holdings SE
Alken	Dorval Asset Management SA	Hosking Partners LLP	Moneta Asset Management SAS	St Olive Gestion SNC
Alto Invest SA	Dundas Partners LLP	IDAM	Montaigne Capital SAS	SVG
Amati Global Investors	Edgbaston Investment Partners LLP	Impax Asset Management	Montanaro Asset Management Limited	SVM Asset Management
Amilton Asset Management SA	Edinburgh Partners Limited	Independence et Expansion	Montpensier Finance SAS	SW Mitchell
Amiral Gestion	EFG Asset Management	Independent Franchise Partners, LLP	Montsegur Finance SAS	Sycomore Asset Management
Amplegest SA	Efigest Asset Management SA	Inocap Gestion SAS	Morant Wright Management Limited	Sydbank A/S
Aquila Capital	Eichert & Mehlert	Intermede Investment Partners	Multiplicity Partners	Symbiotics
Arabesque Asset Management Ltd.	Eleva Capital	IVI LLP	New Alpha	SyQuant
Aramea	Entheca Finance SAS	J O Hambro Capital Management Limited	New Smith	Talence Gestion SAS
Arctic Fund Management AS	Equigest SAS	J.Chahine Capital	Nextam Partners	Tangible Investment Management
Ardevora Asset Management	Erasmus Gestion SAS	JabreCapital	North Asset Management	Tellworth Investments
Artemis Investment Management LLP	Ethenea	JOHCM	North of South Capital	THE L.T. FUNDS
Artico Partners	Exane Capital	John Locke	NS Partners Ltd	TOBAM SAS
Atlanticomniun	EyB & Wallwitz	Jyske Capital	Nykredit Asset Management	Tower
ATLAS Infrastructure	Ferox	Kairos	Octopus	Trecento Asset Management SAS
Atonra Partners	Fideas Capital SAS	KBI Global Investors (North America) Ltd.	ODDO	Trinetra Investment Management LLP
Aubrey Capital Management Limited	Fidecum AG	Kennox Asset Management	Odey Asset Management LLP	Trinity Street Asset Management LLP
Auris Gestion SA	Finance SA	Keren Finance SAS	Oldfield Partners LLP	Troy Asset Management Limited
Axiom Alternative Investments	Financière Arbevel	Kiltearn Partners LLC	Origin Asset Management LLP	Trusteam Finance Sca
Azvalor	Financière de la Cite SAS	KIRAO SAS	Osmosis Investment Management	TT International
Bakersteel Capital Managers	Financière de l'Arc SAS	La Financière de l'Echiquier	Ownership Capital B.V.	Turenne Capital
BDL Capital Management SAS	Financière de L'Echiquier SA	La Financière Responsable	Perdurance Asset Management Ltd	Unicorn
Belgrave Capital Management Ltd	Financière de L'Oxer SAS	Lansdowne Partners (UK) LLP	Pilgrim	Unigestion
BLS Capital Fondsmæglerselskab A/S	Financière Tiepolo SAS	Larrain Vial	Polar Capital LLP	Varenne Capital Partners SAS
BlueOrchard	First Avenue	Levendi	Portland Hill Asset Management Ltd	Vergent Asset Management LLP
Boussard & Gavaudan	First Private	Lindsell Train Ltd	Praude AM	Veritas Asset Management LLP
Braun	Fisch AM	Liontrust Asset Management PLC	Premier	Vestathena SAS
Burggraben	Flornoy & Associes Gestion SAS	Lofoten Asset Management Ltd.	Prosperity	VIA AM
C&M Finances SA	Flossbach von Storch AG	Longview Partners (Guernsey) Limited	Pyrford International Ltd	Walter Scott & Partners Limited
Cape Ann Asset Management Limited	Focus Asset Managers	Lupus alpha Asset Management AG	Quaero Capital	Waverton Investment Management Ltd
Capital Fund Management	Fondsmæglerselskabet Maj Invest A/S	M.M.Warburg & CO	Quantica Capital Zurich	WHEB Asset Management LLP
Capula Investment Management	Four Capital Partners	Magallanes Value Investors	Quoniam Asset Management GmbH	Woodford Investment Management Limited
Cardiff Coupland	Fourpints IM	MainFirst Affiliated Fund Managers GmbH	RAM Active Investments	Xaia
Carmignac Gestion	FPM Franfurt Performance Management	Majedie Asset Management	River and Mercantile Asset Management LLP	Zadig
Carrhae Capital LLP	Friedland Gestion SAS	Mandarine Gestion SA	Roche-Brune Asset Management	zCapital
Cavendish	Fundsmith	Marathon Asset Management LLP	RWC	
Chahine Capital	Garraway	March	RWC Partners Ltd	
Chareteris	Gaspal Gestion	Marlborough	S. W. Mitchell Capital	
CHOM CAPITAL	Gemway Assets	Martin Currie Investment Management Ltd	Sabre Fund Management	
City of London Investment Group PLC	Genesis Asset Managers, LLP	Mattioli Woods	Sanderson Asset Management LLP	
Columbus Point LLP	Gestion 21	Mayar Capital Management Ltd	Sanlam Investments	
Comgest	Goodhart	McInroy Wood	Saracen Fund Managers Ltd	
Crux Asset Management	Guinness Asset Management Ltd	Mensarius AG	Sarasin & Partners LLP	
Cryder Capital Partners LLP	H2O Asset Management	Metropole Gestion SA	Security KAG	
Davy Asset Management Limited	Haas Gestion SAS	Metropolis Capital Limited	Shareholder Value Management AG	