

The boutique premium

Affiliated Managers Group | 08 August 2015

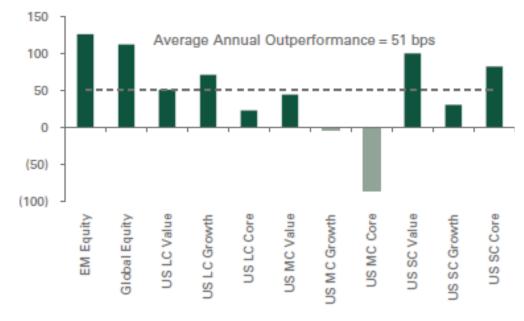
EXECUTIVE SUMMARY

1. Boutique active investment managers outperformed over the last 20 years

While the debate over the value of active investment management has intensified in recent years, the outperformance of boutique managers has been overlooked. A proprietary study of institutional equity strategies from 1995 to 2014 demonstrates that:

- Boutiques significantly outperformed non-boutiques in institutional equity categories (Figure 1);
- Investing exclusively with boutiques would have created 11% greater wealth over 20 years (Figure 2); and,
- Boutiques also generated substantial net excess returns versus indices (Figure 3).

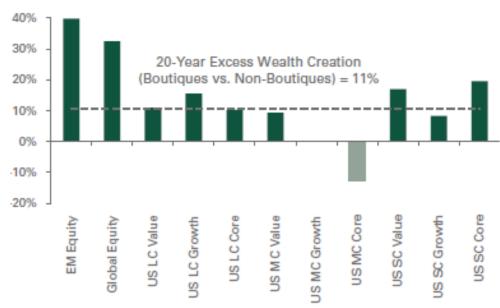
Figure 1: Boutique outperformance vs. non-boutiques Boutiques outperformed by average annual 51 bps



Source: MercerInsight® database used for return data.



Figure 2: Boutique wealth creation
Investing exclusively with boutiques would have created 11% greater wealth



Source: MercerInsight® database used for return data.

Figure 3: Boutique excess returns
Boutiques delivered 141 bps average annual net excess returns vs. indices



Source: MercerInsight® database used for return data. Primary indices include MSCI EM, MSCI World, Russell 1000 Value, Russell 1000 Growth, S&P 500, Russell Midcap Value, Russell Midcap Growth, Russell Midcap, Russell 2000 Value, Russell 2000 Growth, Russell 2000.



2. Core characteristics position boutiques to generate consistent outperformance

Investors around the world are increasingly recognising the ability of focused boutique active investment managers to outperform both non-boutique peers and indices. Several core characteristics of boutiques position them well to consistently outperform in return-seeking asset classes (active equities and alternatives), including:

- Principals have significant direct equity ownership, ensuring alignment of interests with clients;
- Presence of a multi-generational management team, fully engaged across the business;
- Entrepreneurial culture with partnership orientation, which attracts talented investors;
- Investment-centric organisational alignment, including careful management of capacity; and,
- Principals are committed to building an enduring franchise, embedding an appropriately long-term orientation.

3. Seven key insights

- 1. Boutiques broadly outperformed non-boutiques;
- 2. Top-performing boutiques added more value for clients than bottom-performing boutiques detracted;
- 3. Boutiques created significant value versus indices;
- 4. Top-performing boutiques generated exceptional excess returns versus indices;
- 5. Boutique strategies, on average, had a high frequency of outperforming indices;
- 6. Individual boutique strategies outperformed indices more often than not; and,
- 7. Boutique outperformance versus indices was persistent.



METHODOLOGY

1. Primary data sources

The MercerInsight® global database was the primary source used for return data in the analysis, given its deep pool of performance data for institutional equity strategies offered by investment managers around the world.

Classification of individual investment managers (and their corresponding investment strategies in the MercerInsight® database) as either "boutique" or "non-boutique" was based entirely on the author's proprietary analysis, using the SEC database and individual manager disclosures for background information on ownership structure, scope of business, and level of assets under management (AUM).

2. Scope and process of the analysis

The analysis incorporated more than 1,200 individual investment management firms around the world and nearly 5,000 institutional equity strategies comprising approximately \$7 trillion in AUM. Rolling one-year returns were analysed for the trailing 20-year period ending 31 December 2014, across 11 different investment product categories, on a strategy-by-strategy basis. More specific details regarding the data set behind the analysis are as follows:

- 11 investment product categories the analysis spanned the 11 broadest institutional equity product categories, as defined by Mercer:
 - Emerging Markets Equity
 - Global Equity
 - US Large Cap Value Equity
 - US Large Cap Growth Equity
 - US Large Cap Core Equity
 - US Mid Cap Value Equity
 - US Mid Cap Growth Equity
 - US Mid Cap Core Equity
 - US Small Cap Value Equity
 - US Small Cap Growth Equity
 - US Small Cap Core Equity



- Return-focused returns were the primary measure of boutique manager value creation used in the analysis. Gross returns, a primary metric reported in the MercerInsight® database, were used for comparing boutique returns relative to non-boutique returns, given the minimal disparity of fee rates between boutique and non-boutique strategies. Meanwhile, net excess returns were estimated versus indices incorporating boutiques' available published or "rack" fee rates in MercerInsight® in order to approximate net value creation for investors.
- Trailing 20-year time horizon the analysis is based on rolling one-year returns over the trailing 20 years ending 31 December 2015 (i.e., 20 individual measurement periods based on calendar years 1995 to 2014). The rolling one-year focus ultimately yielded a larger sample size than rolling three- or five-year returns.
- Equal-weighted basis importantly, the analysis represents a measure of performance by strategy, instead of performance by manager. In order to avoid bias to any one investment strategy, each individual strategy was given an equal weighting when aggregating results for each product category. Duplicate strategies (typically sub-advisory) were excluded from the analysis in order to avoid excessive weighting to any single strategy by double counting, although this had minimal impact on the results given the small number of duplicates broadly observed.
- Accounting for survivorship bias the analysis captured each individual strategy reporting gross returns to MercerInsight® in all 11 product categories at any point during the trailing 20-year period, including deleted strategies (strategies and/or managers no longer in existence, or no longer covered by MercerInsight®). Thus, the analysis minimised the impact of survivorship bias.

3. Classification of boutique and non-boutique investment managers

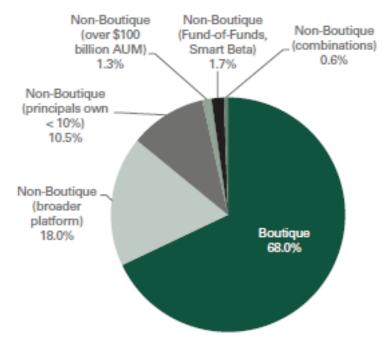
The proprietary classification of over 1,200 individual investment managers and their corresponding investment strategies in the MercerInsight® database as either "boutique" or "non-boutique" (Figure 4) was an integral component of the analysis. Boutiques ultimately comprised 68% of the investment managers, but just 47% of the investment strategies captured in the data set.

• Significant principal ownership – determined by whether principals held a significant amount of equity in their own firm, defined as a minimum of 10%. The 10% threshold was set to both exclude firms whose principals have received small amounts of equity as part of their annual compensation and to align with a cut-off point in the SEC database (individuals or entities with ownership below 10% appear as either "NA" or "A" in the SEC database). However, principals at the vast majority of boutique investment managers held a significant minority, majority, or 100% of their firms' equity.



- Investment management is sole business investment managers exclusively focused on investing were the only firms eligible to be classified as boutiques in the analysis. This effectively excluded managers that were part of broader financial services platforms, including banks, life insurers, and wealth managers providing a broad suite of advice-based services.
- Manage less than \$100 billion in AUM investment managers with over \$100 billion in AUM were excluded from being classified as boutiques. While some investment managers with over \$100 billion in AUM could certainly be considered boutiques, the purpose of this criterion was to increase the objectivity of the analysis while simultaneously eliminating certain firms that have accumulated large levels of AUM by offering a wide variety of products across various asset classes, styles, and geographic regions.
- Not exclusively smart beta or fund-of-funds managers exclusively offering smart beta or fund-of-funds platforms were removed from consideration as boutiques. Instead, the firms classified as boutiques in the analysis included active managers with teams focused on adding value through distinct investment philosophies and highly focused investment processes.

Figure 4: Classification of investment managers 68% boutiques, 32% non-boutiques



Source: AMG proprietary classification of investment managers in the MercerInsight® database.



BACKGROUND INDUSTRY DEBATE - DOES ACTIVE MANAGEMENT ADD VALUE?

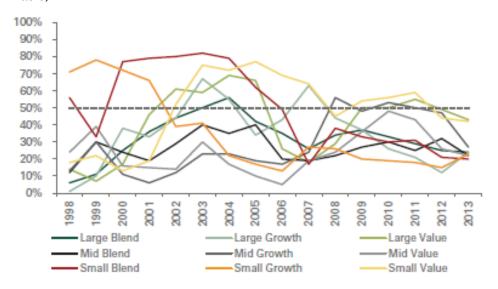
The value of active investment management has been a spirited industry debate for nearly half a century, perhaps beginning in earnest when Michael C. Jensen's study found that mutual funds on average were unable to outperform a buy-the-market-and-hold policy from 1945 to 1964¹. The debate has intensified in recent years, with many third-party reports characterising all of active management as flawed.

Skepticism surrounding the value created by active management has picked up since the Global Financial Crisis, particularly as passive index and ETF providers have weighed in more prominently on the debate.

For example, Vanguard found in a recent study² that a majority of active equity managers had underperformed benchmarks (net of fees) in most US open-end fund strategies and for most time periods (Figure 5). The study also found that a majority of active mutual funds in less saturated sectors (e.g., EM Equity) underperformed over longer time horizons after accounting for closed funds.

Figure 5: Vanguard study of active equity managers

Percentage of active equity managers beating benchmark (Trailing 1-Year Basis)



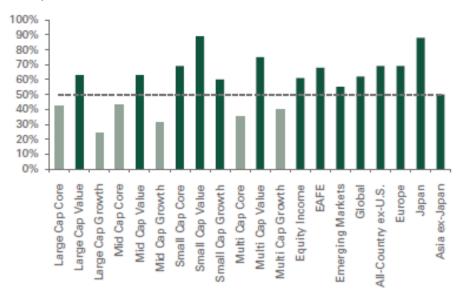
Source: Vanguard, "The Case For Index-Fund Investing," Figure 8.

However, this is not a one-sided debate, as other investment managers have argued that active management adds significant value for clients over various time horizons.

A recent J.P. Morgan Asset Management study³ found that more than 50% of institutional-focused investment managers outperformed benchmarks in the majority of broad equity product categories over the trailing five- and seven-year periods.



Figure 6: J.P. Morgan Asset Management study of equity managers Percentage of active equity managers beating benchmark (Trailing 1-Year Basis)



Source: J.P. Morgan Asset Management, "A Search For Intelligent Life In The Active Equity Management Universe," Exhibit 4.

Still other industry participants, including certain institutional consultants, have recommended a combination of active and passive management. Many of these recommendations incorporate a theory that active management is best used in less efficient asset classes.

SEVEN KEY INSIGHTS - STRONG EVIDENCE THAT BOUTIQUES HAVE ADDED VALUE

The author's analysis of institutional equity strategy returns for the trailing 20-year period provides strong evidence that active boutique investment managers generated significant value for clients, both relative to non-boutique managers and to indices. The data also demonstrates that top-performing boutique strategies created tremendous value for clients; that the majority of boutique strategies outperformed indices on a net basis; and, that boutique outperformance was persistent.

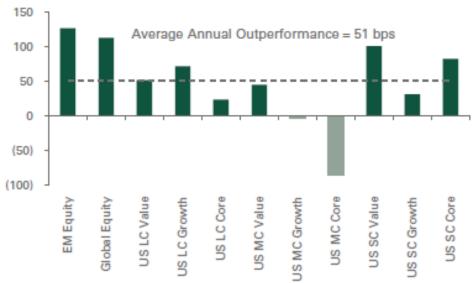
Seven key insights from the analysis are outlined below.



1. Boutiques broadly out-performed non-boutiques

Over the past 20 years, the average boutique strategy outperformed the average non-boutique strategy in nine out of 11 product categories examined, by an annual average 51 bps across all categories (Figure 7). Boutique outperformance was most significant in Emerging Markets Equity (\pm 127 bps annually), Global Equity (\pm 113 bps), and US Small Cap Equity (ranging from \pm 31 bps to \pm 101 bps) strategies.

Figure 7: Boutique outperformance vs. non-boutiques Boutiques outperformed by average annual 51 bps



Source: AMG proprietary analysis and classification of firms and strategies. MercerInsight® database used for return data. Firms represented include AMG Affiliates. Analysis based on rolling one-year gross returns for institutional strategies during trailing 20-year period ending 31 December 2014.

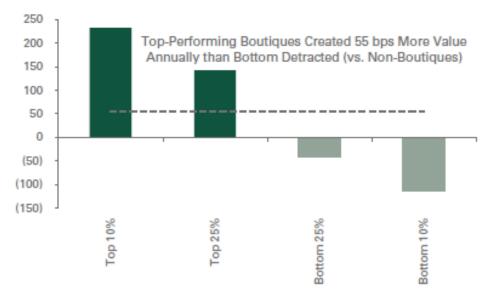


2. Top-performing boutiques added more value for clients than bottom-performing boutiques detracted

The analysis demonstrates that top-decile and top-quartile boutique strategies outperformed their non-boutique counterparts by a wide margin (average annual 232 bps and 142 bps, respectively – Figure 8). However, just as notable was the fact that bottom-quartile and bottom-decile boutique strategies lagged their non-boutique counterparts by a much narrower margin (41 bps and 115 bps, respectively). This suggests that any outsized boutique risk-taking didn't necessarily result in excessive downside for bottom performers.

Figure 8: Boutique outperformance vs. non-boutiques

Top performers added 55 bps more value annually (vs. non-boutiques) than bottom performers detracted

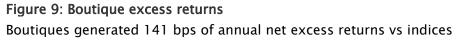


Source: AMG proprietary analysis and classification of firms and strategies. Firms represented include AMG Affiliates. MercerInsight® database used for return data. Analysis based on rolling one-year gross returns for institutional strategies during trailing 20-year period ending 31 December 2014. Top and bottom performers incorporate investment strategies in the 10th, 25th, 75th, and 90th percentile on an annual basis.



3. Boutiques created significant value versus indices

In sharp contrast to industry reports finding that a significant majority of active managers have underperformed benchmarks, our analysis determined that boutique institutional equity strategies were able to deliver significant net excess returns relative to indices over the trailing 20-year period. Across the 11 product categories examined, boutique net returns outpaced primary indices by an average annual 141 bps (Figure 9). In fact, the average boutique strategy outperformed its primary index net of fees – in most cases by a wide margin – in 9 out of 11 product categories.





Source: AMG proprietary analysis and classification of firms and strategies. Firms represented include AMG Affiliates. MercerInsight® database used for return data. Net returns estimated by taking one-year rolling gross returns for institutional strategies during trailing 20-year period ending 31 December 2015 less estimated average boutique fee rates based on available data for each product category. Primary indices include MSCI EM, MSCI World, Russell 1000 Value, Russell 1000 Growth, S&P 500, Russell Midcap Value, Russell Midcap Growth, Russell Midcap, Russell 2000 Value, Russell 2000 Growth, Russell 2000.



4. Top-performing boutiques generated exceptional excess returns versus indices

The analysis also demonstrates that the top-performing boutique strategies added a tremendous amount of value relative to indices net of fees. Top-decile boutique strategies added an average annual 1,133 bps versus primary indices, while top-quartile boutiques added an average annual 589 bps (Figure 10). Similar to our analysis of average boutique outperformance, top-decile boutique outperformance was most pronounced in Emerging Markets Equity, Global Equity, and U.S. Small Cap Equity. Meanwhile, despite more modest levels of outperformance for average boutique strategies in the U.S. Large Cap Equity and U.S. Mid Cap Equity categories, the top performers generated significant excess returns.

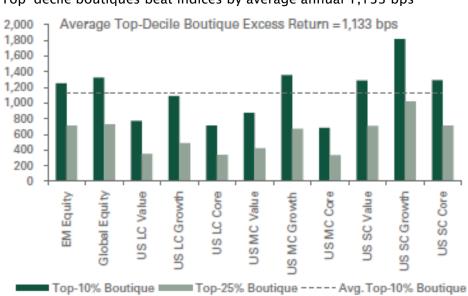


Figure 10: Top-performing boutiques versus indices
Top-decile boutiques beat indices by average annual 1,133 bps

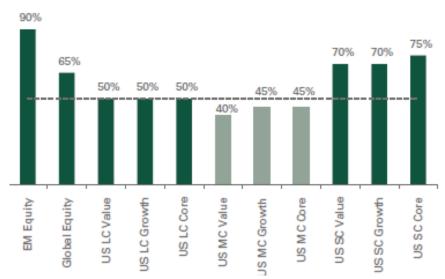
Source: AMG proprietary analysis and classification of firms and strategies. Firms represented include AMG Affiliates. MercerInsight® database used for return data. Net returns estimated by taking one-year rolling gross returns for institutional strategies during trailing 20-year period ending 31 December 2014 less estimated average boutique fee rates based on available data for each product category; top performers include boutique strategies in the top 10% and top 25%. Primary indices include MSCI EM, MSCI World, Russell 1000 Value, Russell 1000 Growth, S&P 500, Russell Midcap Value, Russell Midcap Growth, Russell Midcap, Russell 2000 Value, Russell 2000 Growth, Russell 2000.



5. Boutique strategies, on average, had a high frequency of outperforming indices

Across all product categories examined, the average boutique strategy outpaced its primary index 59% of the time over the trailing 20-year period net of fees (Figure 11). In addition, the average boutique strategy beat its primary index in at least half of the 20 one-year rolling periods in eight out of 11 product categories.

Figure 11: Boutique outperformance frequency Average boutique strategy beat index 59% of the time



Source: AMG proprietary analysis and classification of firms and strategies. Firms represented include AMG Affiliates. MercerInsight® database used for return data. Net returns estimated by taking one-year rolling gross returns for institutional strategies during trailing 20-year period ending 31 December 2014 less estimated average boutique fee rates based on available data for each product category. Primary indices include MSCI EM, MSCI World, Russell 1000 Value, Russell 1000 Growth, S&P 500, Russell Midcap Value, Russell Midcap Growth, Russell Midcap, Russell 2000 Value, Russell 2000 Growth, Russell 2000.



6. Individual boutique strategies outperformed indices more often than not

The analysis also found that over half of the boutique strategies in the data sample beat their primary indices net of fees in seven out of 11 product categories (Figure 12). The proportion of boutiques outperforming indices was particularly high in the Emerging Markets Equity, Global Equity, and US Small Cap Equity categories. Across all 11 product categories, an aggregate 52% of boutique strategies beat their primary indices net of fees. This is quite constructive given recent industry reports suggesting that a significant majority of active managers have underperformed indices.

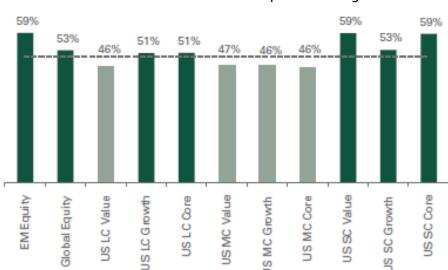


Figure 12: Proportion of boutiques beating indices

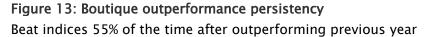
Over 50% beat indices in seven out of 11 product categories

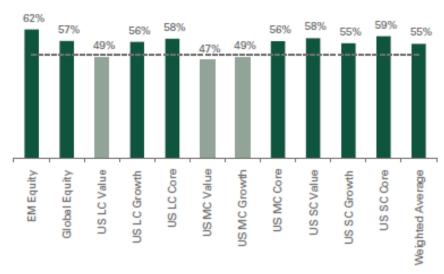
Source: AMG proprietary analysis and classification of firms and strategies. Firms represented include AMG Affiliates. MercerInsight® database used for return data. Net returns estimated by taking one-year rolling gross returns for institutional strategies during trailing 20-year period ending 31 December 2014 less estimated average boutique fee rates based on available data for each product category. Primary indices include MSCI EM, MSCI World, Russell 1000 Value, Russell 1000 Growth, S&P 500, Russell Midcap Value, Russell Midcap Growth, Russell Midcap, Russell 2000 Value, Russell 2000 Growth, Russell 2000.



7. Boutique outperformance versus indices was persistent

For purposes of measuring the persistency of boutique net excess returns, the analysis considered the percentage of boutiques beating the index in a year following one in which they outperformed. The results reflect favorably on boutique managers, as their strategies beat indices 55% of the time in years following one in which they outperformed (Figure 13). Further, boutique outperformance persistency was greater than 50% in eight out of 11 product categories.





Source: AMG proprietary analysis and classification of firms and strategies. Firms represented include AMG Affiliates. MercerInsight® database used for return data. Boutique persistency measured as percentage of boutiques beating their primary index (net of estimated fees) in successive years (after they had beaten the index in the previous year). Primary indices include MSCI EM, MSCI World, Russell 1000 Value, Russell 1000 Growth, S&P 500, Russell Midcap Value, Russell Midcap Growth, Russell Midcap, Russell 2000 Value, Russell 2000 Growth, Russell 2000.



CONCLUSION

1. Analysis reflects favourably on boutique investment managers

While a considerable amount of research has focused on the perennial active versus passive debate, this analysis focused on an important industry subset – active boutique investment managers. The analysis illustrates that boutiques have outperformed non–boutique peers and delivered significant net excess returns versus indices over the past 20 years. It also suggests that top boutiques generate significant alpha and that the strongest boutique outperformance came in the Emerging Markets Equity, Global Equity, and US Small Cap Equity categories.

2. Core boutique characteristics position them to generate long-term outperformance

Investors around the world are increasingly recognising the ability of focused boutique active investment managers to outperform both non-boutique peers and indices. Many of these investors follow a barbell strategy, where they complement their core passive exposures with allocations to active equity and alternative strategies managed by boutiques.

Core characteristics that position boutiques well to consistently outperform in return-seeking asset classes (active equities and alternatives) include:

- Alignment of interests direct equity ownership ensures that key principals have a vested interest in the long-term success of a boutique. Many of the most talented investment professionals in the world are drawn to the boutique structure, where the incentive system allows them to own the results of their investment performance.
- Multi-generational management the presence of a multi-generational management team, including a succession plan, is another core foundation of a boutique. This ensures that key principals will continue to remain motivated and highly involved in business development.
- Entrepreneurial culture with partnership orientation key partners control the daily operations of a boutique and are actively involved in business planning and building an enduring franchise. Great investors are more likely to be drawn to boutiques that offer an entrepreneurial culture and allow them to have a direct impact on the future success of their business.
- Investment-centric a boutique has an investment-centric organizational alignment, typically geared to a distinct investment philosophy (e.g., value-oriented with strong focus on purchasing securities below their intrinsic value) with a highly focused investment process (e.g., bottom-up stock picking). These investment considerations have primacy at a boutique, which is more likely to manage towards optimal risk-



- adjusted returns, often setting capacity limits to remain nimble in its investment approach.
- Commitment to building an enduring franchise key principals are committed to the long-term growth and success of a boutique, often signaled by their willingness to sign multi-year employment agreements. A stable, long-term environment is ideal for generating investment success, and a group of principals bound together by long-term equity is best positioned to deliver this success.

Figure 14: Boutique Model

Core characteristics giving boutiques an advantage in generating alpha



Source: AMG



APPENDIX

Figure 15: Boutique strategies vs. non-boutique strategies - Average annual outperformance

Average a	Percentage of Years Outperforming						
	Top 10% boutique	Top 25% boutique	Average boutique	Bottom 25% boutique	Bottom 10% boutique	Average boutique > Non- boutique	Median boutique > Non- boutique
Emerging Markets Equity	321	262	127	(7)	(103)	80%	70%
Global Equity	360	300	113	(59)	(90)	70%	70%
U.S. Large Cap Value Equity	211	98	52	(19)	(100)	75%	60%
U.S. Large Cap Growth Equity	365	138	72	(49)	(110)	70%	60%
U.S. Large Cap Core Equity	120	70	24	(45)	(49)	55%	50%
U.S. Mid Cap Value Equity	240	143	45	(83)	(125)	60%	55%
U.S. Mid Cap Growth Equity	222	149	(4)	(97)	(144)	40%	35%
U.S. Mid Cap Core Equity	(140)	(88)	(85)	(53)	(117)	40%	40%
U.S. Small Cap Value Equity	313	197	101	(3)	(87)	75%	65%
U.S. Small Cap Growth Equity	294	167	31	(49)	(247)	50%	30%
U.S. Small Cap Core Equity	249	126	83	15	(94)	70%	65%
Mean	232	142	51	(41)	(115)	62%	55%
Median	249	143	52	(49)	(103)	70%	60%

Source: AMG proprietary analysis and classification of firms and strategies. Firms represented include AMG Affiliates. MercerInsight® database used for return data. Analysis based on rolling one-year gross returns for institutional equity strategies during trailing 20-year period ending 31 December 2014.



Figure 16: Boutique strategies vs indices - average net excess returns

	Averag	e annual va	Other statistics				
	Top 10% boutique	Top 25% boutique	Average boutique	Bottom 25% boutique	Bottom 10% boutique	Freq of avg boutiques > index	% of boutiques > index
Emerging Markets Equity	1,252	710	283	(230)	(607)	90%	61%
Global Equity	1,324	727	216	(406)	(816)	65%	56%
U.S. Large Cap Value Equity	774	350	7	(378)	(744)	50%	45%
U.S. Large Cap Growth Equity	1,088	486	88	(420)	(819)	50%	50%
U.S. Large Cap Core Equity	713	337	30	(320)	(656)	50%	50%
U.S. Mid Cap Value Equity	873	424	(1)	(465)	(838)	40%	46%
U.S. Mid Cap Growth Equity	1,358	627	70	(585)	(1,073)	45%	47%
U.S. Mid Cap Core Equity	685	335	(10)	(397)	(762)	45%	46%
U.S. Small Cap Value Equity	1,287	709	241	(291)	(763)	70%	59%
U.S. Small Cap Growth Equity	1,818	1,021	356	(406)	(1,019)	70%	54%
U.S. Small Cap Core Equity	1,293	711	274	(247)	(706)	75%	61%
Mean	1,133	589	141	(377)	(800)	59%	52%
Median	1,252	672	88	(397)	(763)	50%	50%

Source: AMG proprietary analysis and classification of firms and strategies. Firms represented include AMG Affiliates. MercerInsight® database used for return data. Net returns estimated by taking one-year rolling gross returns for institutional equity strategies during trailing 20-year period ending 31 December 2014 less estimated average boutique fee rates based on available data for each product category. Primary indices include MSCI EM, MSCI World, Russell 1000 Value, Russell 1000 Growth, S&P



500, Russell Midcap Value, Russell Midcap Growth, Russell Midcap, Russell 2000 Value, Russell 2000 Growth, Russell 2000.

IMPORTANT INFORMATION

FOR INSTITUTIONAL/WHOLESALE OR PROFESSIONAL CLIENT USE ONLY - NOT FOR RETAIL DISTRIBUTION This material has been prepared by Affiliated Managers Group, Inc. ("AMG") and is provided for informational purposes only. This material is only directed at persons who may lawfully receive it, and you should satisfy yourself that you are lawfully permitted to receive this material. AMG is in the business of making investments in boutique investment management firms, and is not in the business of providing investment advice. This material is not intended to be relied upon as a forecast or research and is not a recommendation, offer or solicitation to buy or sell any securities or to adopt any investment strategy, nor is it investment advice. The views and opinions expressed in this material are those of AMG, are as of the date hereof and are subject to change based on market and other conditions and factors. AMG makes no representation or warranty as to the accuracy of the data, forwardlooking statements or other information in this material and shall have no liability for any decisions or actions based on this material. AMG does not undertake, and is under no obligation, to update or keep current the information or opinions contained in this material. The information and opinions contained in this material are derived from proprietary and nonproprietary sources considered by AMG to be reliable but may not necessarily be all-inclusive and are not guaranteed as to accuracy. Past performance is not a reliable indicator of future performance. In addition, forecasts, projections, or other forward-looking statements or information, whether by AMG or third parties, are similarly not guarantees of future performance, are inherently uncertain, are based on assumptions at the time of the statement that are difficult to predict, and involve a number of risks and uncertainties. Actual outcomes and results may differ materially from what is expressed in those statements. Any changes to assumptions that have been made in preparing this material could have a material impact on the performance presented herein. No part of this material may be reproduced in any form, or referred to in any other publication, without our express written permission.

Portions of this material are copyright MSCI 2015. Unpublished. All Rights Reserved. This information may only be used for your internal use, may not be reproduced or re disseminated in any form and may not be used to create any financial instruments or products or any indices. This information is provided on an "as is" basis and the user of this information assumes the entire risk of any use it may make or permit to be made of this information. Neither MSCI, any of its affiliates or any other person involved in or related to compiling, computing or creating this information makes any express or implied warranties or representations with respect to such information or the results to be obtained by the use thereof, and MSCI, its affiliates and each such other person hereby expressly disclaim all warranties (including, without limitation, all warranties of originality, accuracy, completeness, timeliness, non-infringement, merchantability and fitness for a particular purpose) with respect to this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any other person involved in or related to compiling, computing or creating this information have any liability for any direct, indirect, special, incidental, punitive, consequential or any other damages (including, without limitation, lost profits) even if notified of, or if it might otherwise have anticipated, the possibility of such damages. MSCI is a registered trademark of MSCI, Inc.



Russell Investment Group is the source and owner of certain of the data contained or reflected in this material and all trademarks and copyrights related thereto. The material may contain confidential information and unauthorized use, disclosure, copying, dissemination or redistribution is strictly prohibited. This is a user presentation of the data. Russell Investment Group is not responsible for the formatting or configuration of this material or for any inaccuracy in presentation thereof. Russell indices are trademarks/service marks of the Russell Investment Group. Russell(r) is a trademark of the Russell Investment Group.

Standard & Poor's information contained in this document is subject to change without notice. Standard & Poor's cannot guarantee the accuracy, adequacy or completeness of the information and is not responsible for any errors or omissions or for results obtained from use of such information. Standard & Poor's makes no warranties or merchantability or fitness for a particular purpose. In no event shall Standard & Poor's be liable for direct, indirect or incidental, special or consequential damages from the information here regardless of whether such damages were foreseen or unforeseen.

This document may be distributed in Europe by Affiliated Managers Group Limited which is authorised and regulated by the U.K. Financial Conduct Authority ("FCA"). When distributed by Affiliated Managers Group Limited, this material is directed only at persons (Relevant Persons) who are classified as Eligible Counterparties or Professional Clients under the rules of the FCA. This document may be distributed in the Middle East by Affiliated Managers Group Limited which is regulated by the Dubai Financial Services Authority as a Representative Office. This document may be distributed in Australia and New Zealand by Affiliated Managers Group (Pty) Limited (ABN 68 123 448 984; ARN 315813; AFSL No. 443903) which is licensed and regulated by the Australian Securities & Investments Commission. When distributed by Affiliated Managers Group (Pty) Limited this material is directed only at persons who are classified as Wholesale Clients (as defined in the Corporations Act 2001). This document may be distributed in Asia by Affiliated Managers Group (Hong Kong) Limited which is licensed and regulated by the Securities and Futures Commission of Hong Kong for Type 1 (dealing in securities). When distributed by Affiliated Managers Group (Hong Kong) Limited this material is directed only at persons who are classified as Professional Investors as defined in the Securities and Futures Ordinance. This document may also be distributed by AMG Funds LLC ("AMG Funds"), which is the U.S. retail distribution arm of AMG, or by AMG Funds' wholly-owned subsidiary Aston Asset Management LLC ("Aston"). AMG Funds is registered as an investment adviser with the Securities and Exchange Commission and as a Commodity Pool Operator with the Commodities Futures Trading Commission, and is a member of the National Futures Association. Aston is registered as an investment adviser with the Securities and Exchange Commission.

<u>Affiliated Managers Group</u> is a global asset management company with equity investments in leading boutique investment management firms.