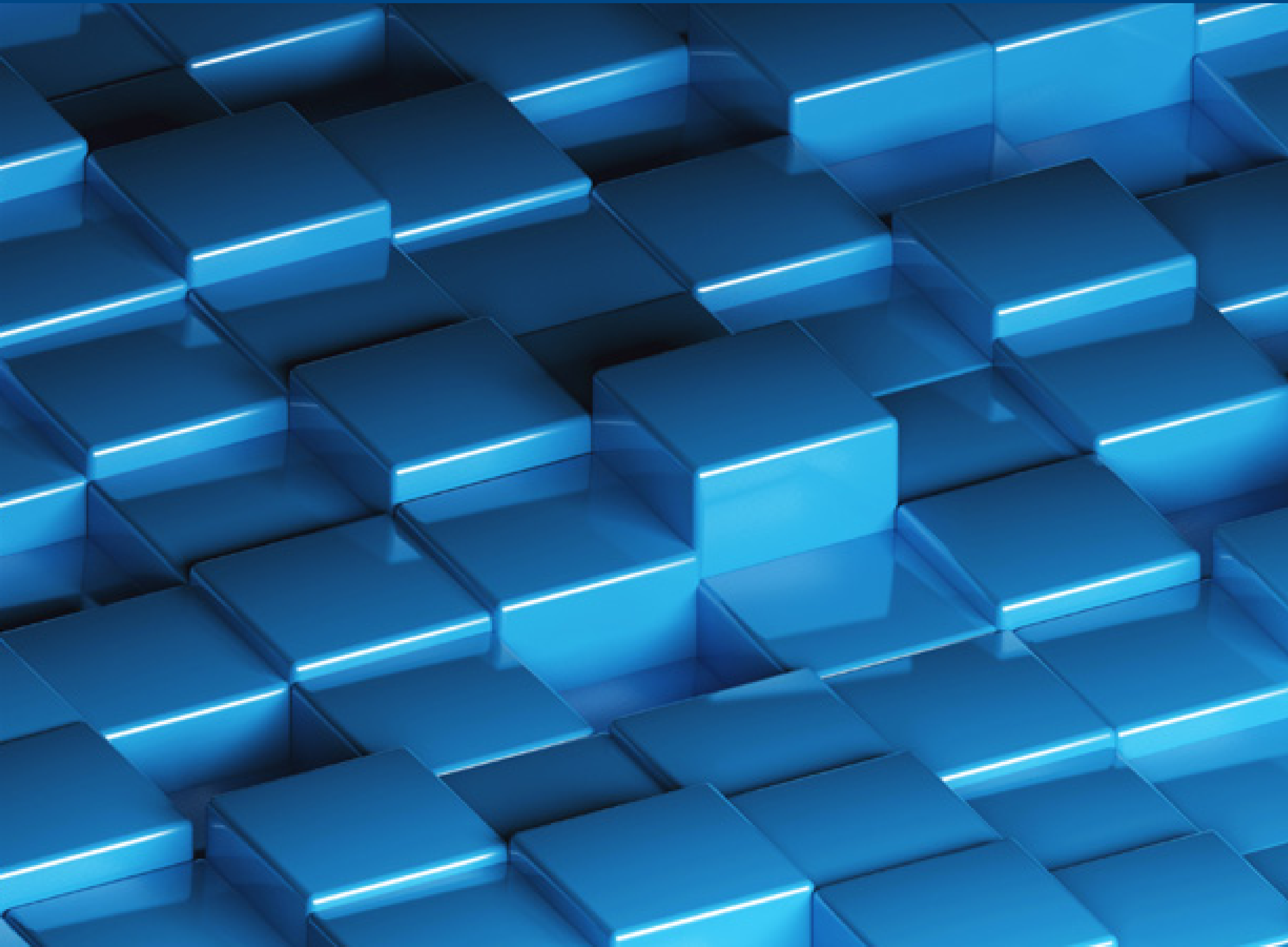
# 2013 Business Expense Benchmark Survey

November 2013

Citi Prime Finance



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# 2013 Business Expense Benchmark Survey

Emerging hedge funds struggle to cover high management company expenses based solely on their management fee collections and do not realize comfortable operating margins at any point below $1.0 billion assets under management (AUM).

- Pressure to offer founders' share classes or accept seed capital to launch with sufficient amounts of AUM have pressured management fees down from the industry's standard benchmark of 2.0%. Our analysis shows average fees for managers with less than $1.0 billion AUM ranging from 1.58% to 1.63%.
- Based on this analysis and our survey responses, we estimate that hedge fund managers need at least $300 million AUM to break even. Firms with lower amounts of AUM will not be able to cover their management company costs without additional capital or incentive fee payouts. These management company costs include third party expenses, salaries for the investment team and total compensation for investment support and business management personnel.
- At $500 million AUM, our model shows emerging firms realizing operating margins of only 69 basis points ($3.4 million). At $900 million AUM, operating margins increase only marginally to 82 basis points ($7.4 million).

Institutional hedge funds begin to realize better operating margins as they surpass $1.5 billion and approach and move beyond the $5.0 billion AUM threshold. The economics of firms in the $5.0 billion band become more attractive as they realize appreciable profits as businesses based solely on management fee collections.

- Average management fees continue well below the historical 2.0% level, ranging from 1.58% to highs of only 1.76% for the largest firms in this band. Management company expenses dip and stabilize, ranging from 63 to 68 basis points. No appreciable economies of scale are realized by firms in the institutional category, as this is a period of ongoing investment into upgrading the firms' capabilities and expanding their teams. During this phase of growth, headcount grows by ~2.0x for every ~3.0x increase in AUM.
- Operating margins based solely on management fee collections average 1.0% for these firms. This indicates that the ability of these managers to absorb continued fee pressure is limited without endangering their ability to keep operations running smoothly, particularly in an environment of rising costs.

The economics of running franchise-sized firms with >$10.0 billion AUM become slightly more profitable, but this is due to a significant change in the profile of the product being offered by these firms.

- Franchise firms in our survey population had an average AUM of $36.4 billion. Only 53% of that AUM was focused exclusively on hedge fund product while regulated alternatives, privately offered long-only and publicly offered long-only funds made up a significant share of these firms' offerings. This compares to 90% hedge fund product for emerging managers and 95% for institutional funds in our survey.
- The shifting product mix worked to lower average management fee collections more than for both emerging and institutional hedge funds. According to our analysis, average management fees for franchise-sized firms were only 1.53%.
- These firms were able to realize economies of scale, however, with average management company costs falling to only 34 basis points. The skills required to support a mixed product set with large amounts of regulated and long-only products were less expensive than for a pure hedge fund firm. Headcount continued to grow in the previous pattern after decelerating toward $10.0 billion AUM. Average compensation for investment support and business management was 24% lower than for firms with $10.0 billion AUM. Other services and expenses were also more commoditized. Overall, these firms were able to realize $374 of AUM for every dollar spent on investment support and business management compared to only $157 to $169 per head for firms in the institutional AUM bands.

- Operating margins based solely on management fee collections were slightly above institutional managers' 1.0% level, rising to 1.2%. This illustrates that adding lower fee products actually helps to expand operating margins—a thesis that has been under much debate since interest in regulated alternative funds began to surge during the past 12 months.

Several important regional differences were shown in the data. The majority of European hedge funds responding to the survey had higher management company expenses than similarly sized U.S. hedge funds.

- In 4 out of the 6 examined AUM bands, European management company expenses were at least 20% higher than U.S. costs.
- Marketing was the single largest category of expense variance between the U.S. and Europe. For smaller hedge funds with $100 million to $500 million AUM, European marketing expenses were 150% to 200% higher than in the U.S., due mostly to compensation differentials. In addition, European funds hired more senior marketing personnel early in their development cycle. This compensation difference evaporated by $5.0 billion AUM as U.S. firms also brought on more senior marketing resources.
- At the upper AUM bands, marketing differentials were higher in Europe because of a larger number of heads devoted to this function. European funds with $5.0 billion AUM had an average of 7.33 heads assigned to marketing versus 6.04 heads in the U.S. At $10.0 billion AUM, the difference was even more pronounced, with European firms registering 20.5 heads versus only 6.6 heads in the U.S.

Asian hedge funds showed the opposite pattern. Survey respondents from Asia were confined to the lower AUM bands in our analysis, $100 million, $500 million and $1.5 billion AUM. At each of these levels, average management company expenses were lower than in both the U.S. and Europe.

- $100 million AUM Asian-Pacific (APAC) hedge funds had average management company expenses 20% lower than the mean costs noted in the U.S. and Europe for similarly sized firms. This differential expanded at $500 million AUM, with APAC funds registering expenses 42% below the mean and staying heavily discounted at 39% under the mean for firms at $1.5 billion AUM.
- From a headcount perspective, APAC hedge funds were nearly on par with European hedge funds, but the total basis points being spent on compensation were significantly lower—by 38% for $100 million AUM funds, by 54% for $500 million AUM funds and by 32% for $1.5 billion AUM funds. Third party expenses for the management company were also significantly lower by a differential of 27 basis points, 13 basis points and 10 basis points respectively.
- Headcount differentials were mixed relative to the U.S., with APAC having fewer heads at the $100 million AUM level (9.3 versus 12.0), but more heads at both the $500 million (18.5 versus 15.8) and $1.5 billion AUM levels (42.7 versus 32.8). Compensation expenses in APAC were lower at each of these bands by 42%, 38% and 36% respectively. Third party expenses showed a mixed picture—higher for $100 million AUM firms (96 versus. 69 basis points), but nearly the same for $500 million (22 versus 25 basis points) and $1.5 billion AUM firms (11 versus 13 basis points).

In addition to management company expenses, this year's survey was also able to delve more deeply into fund level charge backs.

- Firms with $100 million AUM charged the fund an average of 46 basis points of expense. This figure dropped sharply as firms surpassed break-even at $300 million AUM.
- At $500 million AUM, firms charged back 15 basis points of expense to the fund level, and the amount being charged back remained steady (between 14 and 17 basis points) as AUM continued to grow to $10.0 billion.
- It is only after firms surpassed the $10 billion AUM threshold that we saw another appreciable shift. Survey participants that had >$10.0 billion AUM on average charged back only 6 basis points of expense to the fund.
- Charges related to operations were the single largest expense assessed to the fund level across all AUM bands, accounting for at least 63% and up to as much as 71% of the amount being charged back. Charges associated with fund administration were the largest single category of expense within operations, ranging from 37% to 59% of total operational charge-backs.

# Intro & Methodology

Welcome to the second annual Citi Prime Finance Hedge Fund Business Expense survey. This comprehensive, global report builds upon last year's findings, allowing us to provide deeper insight into the expenses associated with running a hedge fund. The detailed expense analysis in this paper provides the hedge fund management firm with three major benefits:

- Provides an independent set of industry metrics that allows a hedge fund to make better budgetary decisions at both the management company and fund levels, with a specific deep-dive focus on the expense impact of global industry regulations
- Informs the strategic direction of the investment manager with regard to their own growth by enabling the investment manager to better understand the maturation of the industry. This insight is possible through analysis of expenses across various hedge fund segments, exploring differences by both firm size and region
- Allows firms to adjust both their marketing to investors and responses to due diligence questionnaires by gaining a better understanding of their own positioning around internal and fund-level expenses. This insight is gleaned via analysis of expenses across functions within each hedge fund segment

## What's new in 2013

The prior year's report explored the effect of compensation and non-compensation related expenses on firms across four different size bands. This year, our augmented dataset enables us to analyze how non-compensation expenses are allocated to both the fund and the management company, while also enabling us to break responses into six different AUM bands at both global and regional levels. Further data was collected on fund strategy and vintage (based on the year the investment management firm was founded). This information is maintained by the Citi Business Advisory team, but is not explicitly explored within this report.

This cross-AUM expense analysis allows us to delve into the implications of asset growth, which provides insight into the effect on firm profitability at the different assets under management levels. This insight is then extended on a regional basis, such that differences in expense profiles among the Americas, EMEA and APAC regions can be explored in detail.

Finally, this year's online questionnaire asked respondents to provide budgetary information around addressing an array of global hedge fund regulations. They were also asked to opine on the level of effort that will be required of their existing staff in meeting these regulations. Lastly, we asked respondents to tell us which functions would require new hires in the coming year as a direct result of the increased regulatory burden on the hedge fund industry. We explore their answers –broken down by size and region – in a deep-dive regulatory expense impact section.

## Data Collection

Our online questionnaire was sent to hedge fund firms globally. Responses have been anonymized, aggregated and analyzed by Citi Prime Finance's Business Advisory team and stored in our proprietary expense database. Profile questions categorized respondents by AUM size, region, strategy, and vintage. Information on firm headcount was provided at a detailed functional level, and compensation was provided at a more-aggregated functional level. Note that compensation information was not collected for the investment management function due to the variable nature of such remuneration, which is highly correlated to the performance of each hedge fund. For similar reasons, other profit-related analysis within this report is centered around management fee collection, as the performance-based revenue is highly variable from fund to fund as well as year-to-year. Non-compensation or "third-party" expense information was collected for consistent functional categories across both management company and fund levels.

To ensure that our questions conform to a common framework that can be applied to hedge funds of different sizes, strategies, and regions, we have again used our hedge fund functional architecture. The elements of this functional framework provide insight into the detailed expense questions that we asked of hedge funds. The individual questions were then aggregated at a higher level, allowing for a consistent comparison of costs across funds of varying profiles. These functional categories, explored in the below chart, include the following:

- Investment management – trading and research-related functions (portfolio management, trading, research, and research-related travel)
- Investment support – marketing and investor relations, risk and compliance
- Operations and Technology – middle office support, fund accounting, treasury and finance/collateral management, fund-level legal expenses, and IT
- Business Management – real estate / facilities, human resources, benefits, management company audit/tax, and legal

The findings explored in this report are based on the quantitative output of this hedge fund questionnaire. By breaking out answers by various profile criteria, the Business Advisory team was able to spot trends and provide commentary around the industry's development with regard to fund and management company expenses.

## Data Analysis

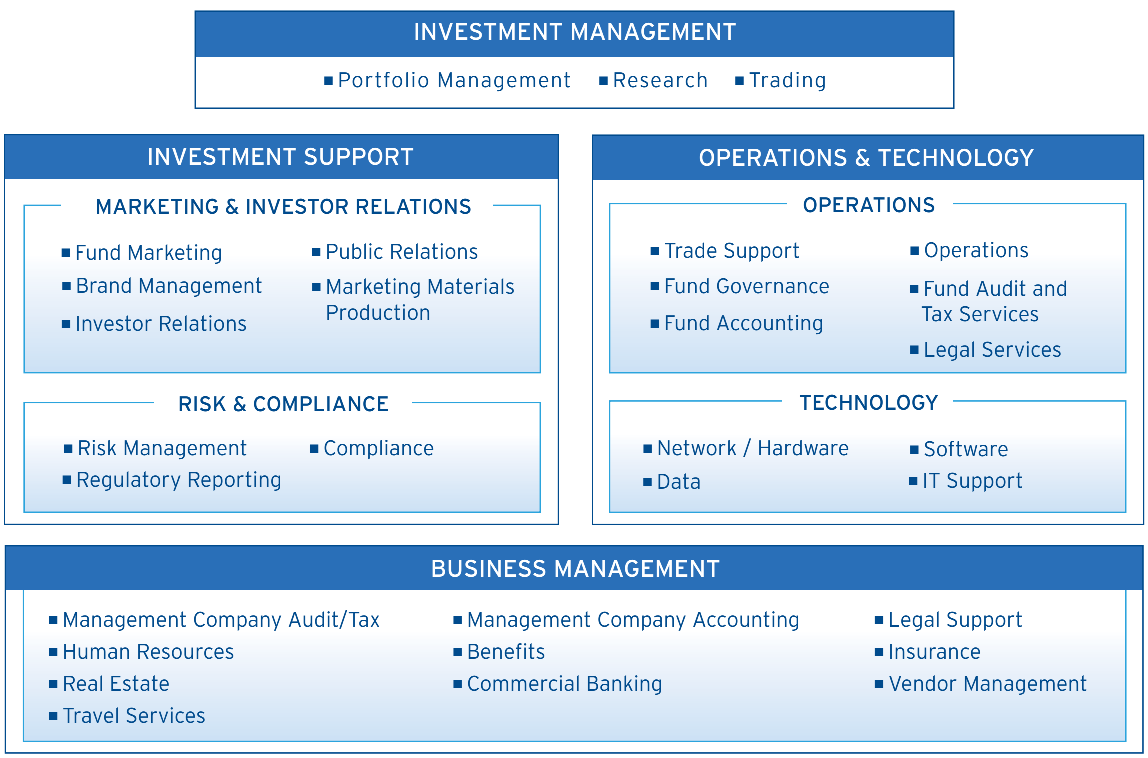
Respondents were grouped into the following six size bands:

- $100 million
- $500 million
- $1.5 billion
- $5 billion
- $10 billion
- Greater than $10 billion

Hedge Fund firms within these bands were then consolidated in the analysis phase around the terms Emerging, Institutional, and Franchise. The implications of these growth phases are explored throughout the paper. Similarities within and differences across these categories form the basis of our analysis.

The calculations that are used throughout this report are centered around converting dollar responses into basis points of assets under management (i.e. BPS of AUM). Expense averages were derived for each category via an equal-weighted method within each size band. These average BPS of AUM were then

Chart 1: Hedge Fund Functional Architecture



calibrated to the above AUM thresholds by taking a ratio of the actual AUM for each band relative to the "standard" AUM levels listed above. For example, the average AUM for those respondents whose AUM was nearest to $10 billion was $9,946,221,786. The ratio of $10 billion to $9.95 billion is 1.005. So, each expense response was then multiplied by 1.005 to derive a "standardized" benchmark at the $10 billion AUM level. This method allows for easier comparison across various benchmarks (e.g. region vs. strategy) given the fixed AUM level. This also allows for an easier customization of benchmarks, such that we can tailor a benchmark based to a client's actual AUM.

## Respondent Profile

In this year's survey, Citi Prime Finance collected information from across a broad spectrum of strategies, vintages and assets under management. In order to better understand thematic changes across the industry and utilize Citi Prime's deep, historical dataset from our successful 2012 survey, we decided to incorporate 2013 and 2012 responses into a master dataset. In total, this integrated dataset accounts for $465.4 Billion or 18.5% of total industry assets and 124 unique firms from across the globe. In looking at the regional base for these firms, our correspondents are based across the following: 62% in the Americas, 36% in EMEA and 2% in APAC.

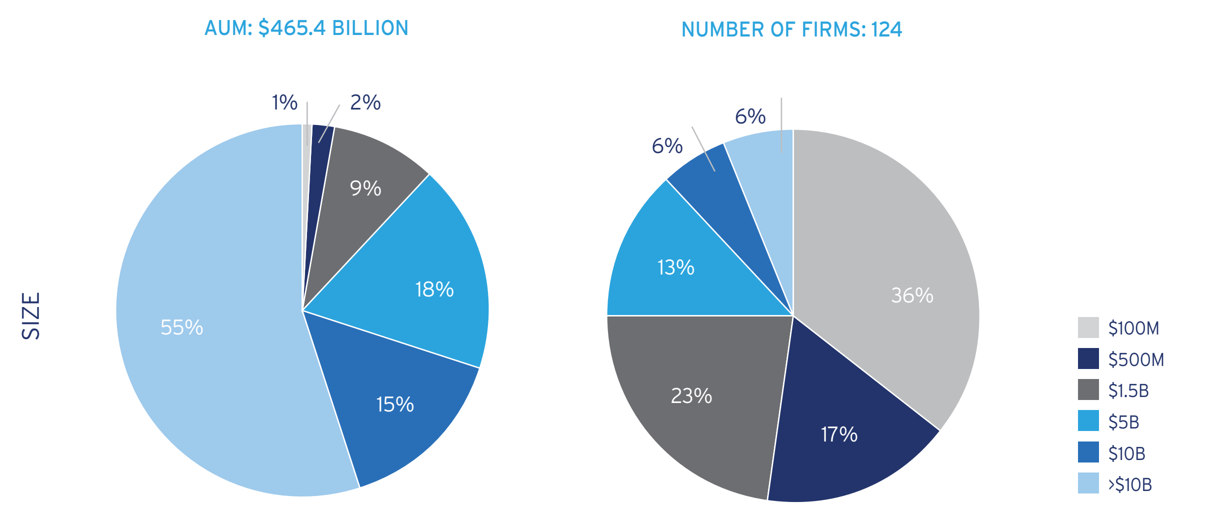
As in previous years, we adopted the Hedge Fund Research (HFR) strategy classifications to evaluate the investment approach of survey respondents. We have further separated hedge funds as pursuing equity hedge strategies, event driven, CTA/macro and fixed income/relative value. The predominant share (43%) of those answering the survey would be considered part of the equity hedge group and the remaining respondents are spread fairly evenly across the following strategies: 21% Event Driven, 19% Macro / CTA and 17% Fixed Income Relative Value.

Our foremost approach to analyzing respondent data was to group according to AUM bands which correspond to important growth and inflection points in a firm's evolution. As we mapped the depth of our respondents to these points we created the following AUM bands: $100 million, $500 million, $1.5 billion, $5 billion, $10 billion and >$10 billion. Our respondents were group into these AUM thresholds in the following manner: 36% in $100million, 17% $500 million, 22% $1.5 billion, 13% $5.0 billion, 6% $10 billion and 6% in >$10 billion.

In looking at the vintage of firms in our database, we have a balanced pool of respondents. Hedge fund firms that were started before 2002 comprise 38% of the total set, those launching between 2002-2008 represent 33% and those launching after 2008 makeup 29%. We believe these time periods represent critical junctures in the industry – a rapid industry growth phase, a pre liquidity crisis phase which saw the rise of institutional investment into hedge funds and a post crisis, maturation phase which industry participants are still experiencing.

If you are a recipient of this report and have questions regarding our approach and methodology or would like to be considered for a more customized review of the data, please feel free to reach out to your Citi sales contact or to us directly at prime.advisory@citi.com

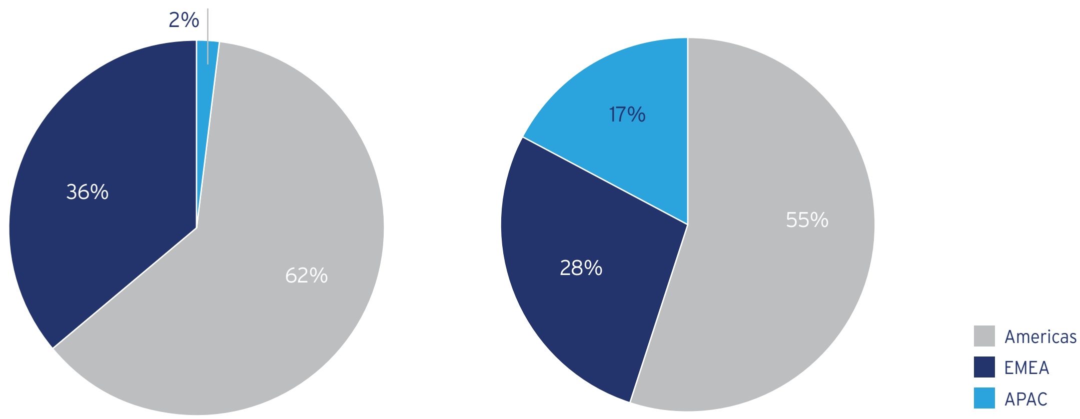
### Chart 2: Profile of Survey Respondents



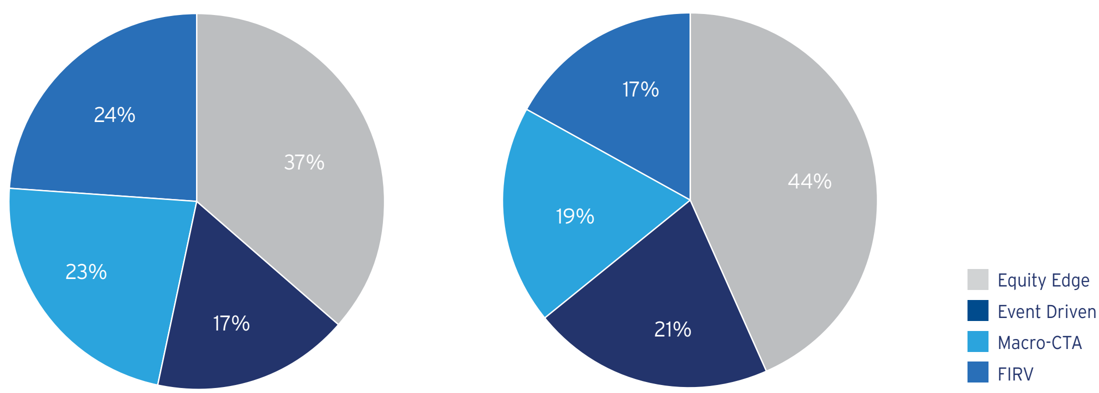
AUM: $465.4 BILLION

NUMBER OF FIRMS: 124

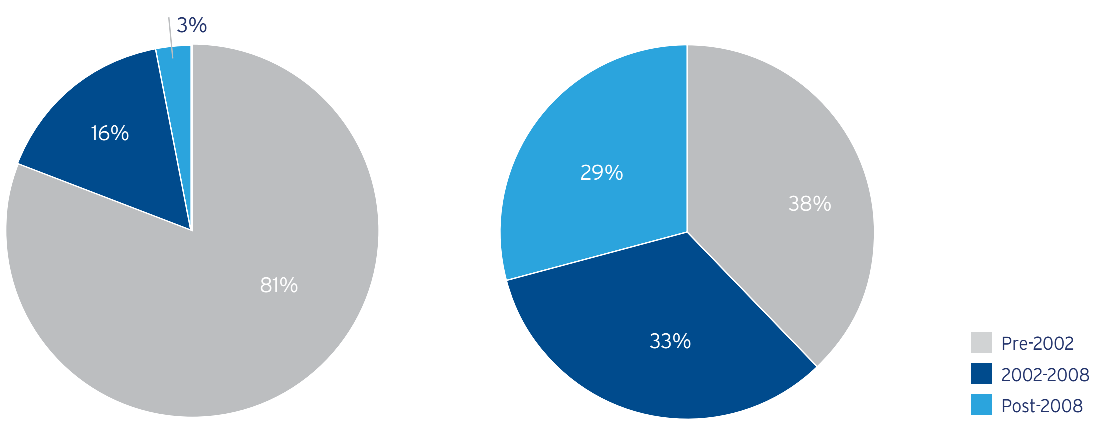
REGION




STRATEGY




VINTAGE



# A Tale of Three Industries

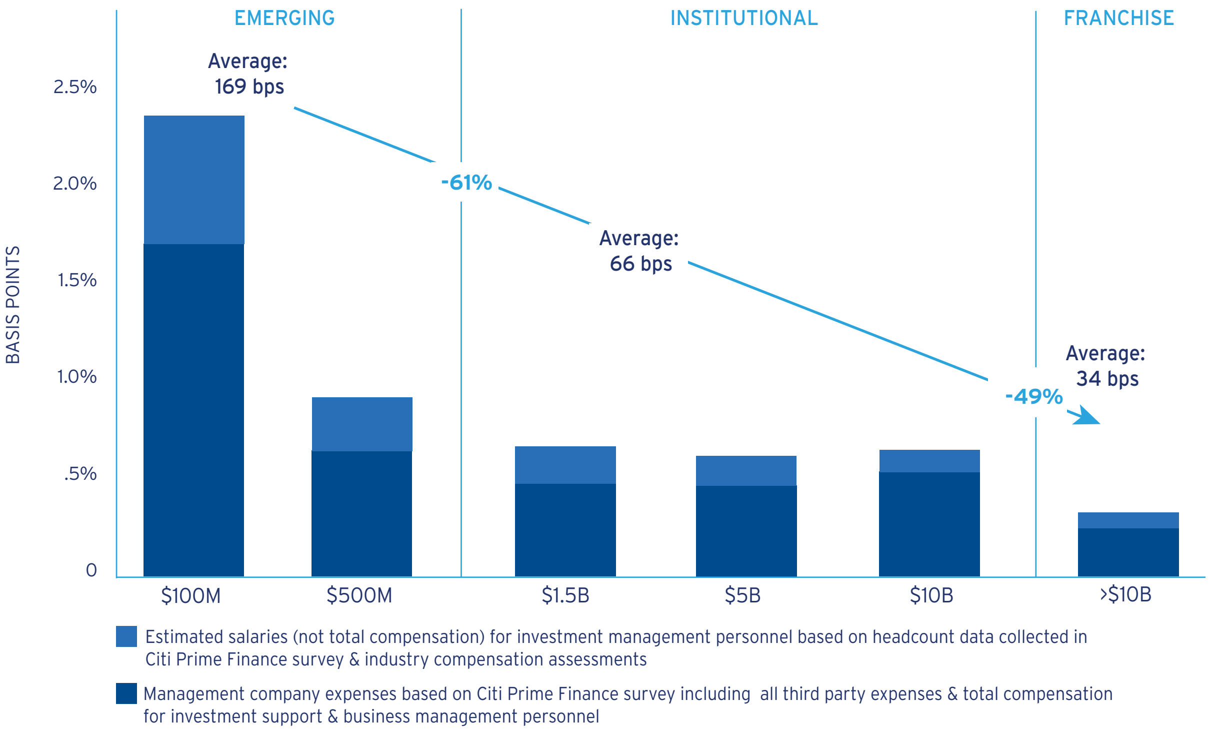
The economics of running a hedge fund firm change in line with AUM growth. The trajectory of change is not consistent, however; instead, it can be seen as occurring across three "stages" of hedge fund development. These stages have distinct profiles and can be broadly broken down as follows:

- Emerging hedge fund firms are those that have not yet accumulated enough AUM to easily absorb large institutional tickets of $50 to $100 million, and for the most part have AUM below the $1.0 billion threshold;
- Institutional firms are those that manage anywhere from just over $1.0 billion to more than $10.0 billion, and are therefore in various stages of building out their platform to extend their marketing, enhance their risk management, improve their reporting and achieve a level of operational professionalism that satisfies their demanding investor base;
- Franchise-sized firms are those that have achieved a robust and effective platform and are looking to leverage their infrastructure to manage a broader pool of assets, either by adding investment professionals or by extending their product suite to include long-only or regulated alternative funds or pursuing both of these paths.

## Expense Figures Confirm Distinct Economics

The depth of this year's data has allowed us to explore the actual costs of running a firm at each of these stages. As noted in the methodology section, our database now contains information on 124 firms that collectively represent $465 billion AUM, or 18.5% of the industry's total assets based on the Q3 Hedge Fund Research(HFR) global AUM figure of $2.51 trillion. Our data analysis confirms that the economics between these three stages are distinct. This is illustrated in Chart 3.

**Chart 3: Total Management Company Expenses**
(Excludes Fund-Level Charges)




Source: Citi Prime Finance. *Average AUM for firms with >$10.0 billion AUM equals $36.4 billion. Total dataset examined (124 firms, $465 billion AUM)

In order to create a consistent basis for comparison, we have adjusted our actual survey results to provide standard measures for firms at regular AUM intervals. We opted to look at results for firms with the following levels of AUM: $100 million, $500 million, $1.5 billion, $5.0 billion and $10.0 billion. For firms that exceeded the $10.0 billion level, we opted to take the average of their actual AUM in our dataset, which equated to $36.4 billion.

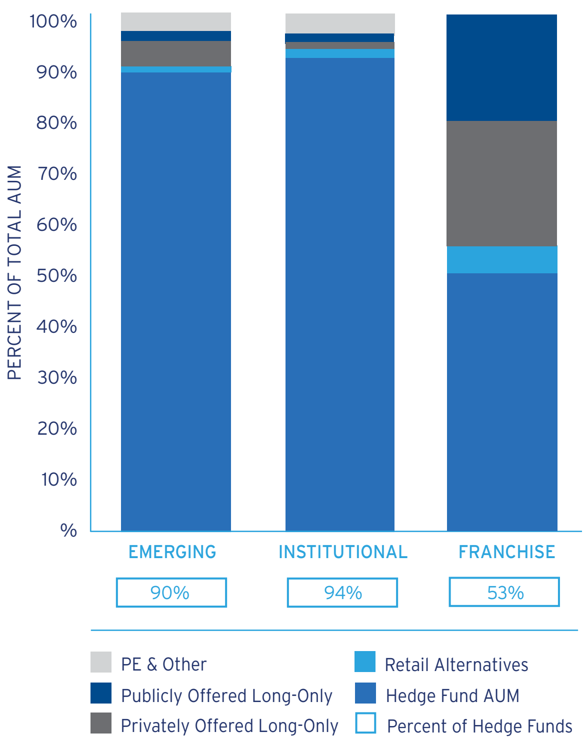
The first significant finding highlighted in Chart 3 is that firms with $100 million AUM had an extremely high cost basis, with management company expenses of 244 basis points. This broke down as follows: salaries for investment personnel (excluding incentive pay) equated to 67 basis points; total compensation (salary and incentive pay) for investment support and business management personnel was 85 basis points and third party expenses charged to the management company equated to 92 basis points.

This figure dropped dramatically as firms grew their AUM to the $500 million threshold, but the total management company expense across the three categories listed above still amounted to 94 basis points, broken out as follows: 37 basis points toward investment personnel salaries; 29 basis points for other compensation and 28 basis points related to third party expense.

High management company expenses are characteristic of emerging funds. Averaged between the two AUM bands, management fees equated to 169 basis points. Registration requirements, compliance expectations, operational standards and the necessity of having a professional administrator have all increased the financial burden that smaller hedge fund firms must support on a limited asset base, thus leading to high basis point charges.

There is a significant contrast to what happens as firms cross into the institutional category. Higher levels of AUM allow for rising expenses to take up a smaller share of assets. Basis point charges come down, but they also level off. There is only a 5 basis point difference between the costs realized by firms at $1.5 billion, $5.0 billion and $10.0 billion AUM levels. Management company expenses for these firms range between 63 and 68 basis points, with an average of 66 basis points across the three size categories, a figure 61% below the average for emerging firms.

**Chart 4: Product Mix**




The stability of these expenses is a key characteristic of the institutional phase. While AUM grows for these firms, their ability to realize economies of scale is limited, as they are constantly being challenged to improve their platform.

It is not until firms pass the $10.0 billion threshold that we begin to see their cost structure decline. The waves of investment that marked these firms' institutional growth phase begin to be monetized as the organizations are able to leverage their platforms to attract increased assets. As this growth occurs, these firms build up name recognition, which in turn attracts investment talent and allows the organizations to consider new products. It is this characteristic that causes us to put these firms into the "Franchise" category.

As shown in Chart 3, the average management company expense for these firms is only 34 basis points. This marks a 49% drop from the average for the Institutional category. The mix of products offered by these Franchise firms also differs dramatically from their smaller hedge fund counterparts. This is illustrated in Chart 4.

Firms in the emerging and Institutional categories are primarily focused on offering hedge fund product. This accounts for 90% of the AUM listed for emerging firms and 94% for institutional respondents. The profile of their offering shifts completely, however, as they reach the franchise stage.

As shown in Chart 4, only 53% of franchise firm assets are now deemed as belonging solely to the hedge fund space. There is also a fairly significant set of long-only offerings being put forward by these funds in both publicly and privately offered vehicles. There is also now a noticeable band of AUM being described as retail alternatives.

These findings mirror those of our 2012 business expense survey, and tie into the forecasts that we made earlier in 2013 as part of our Industry Evolution survey that focused on the Rise of Liquid Alternatives.

One of the reasons that we see many large hedge funds that surpass the $10.0 billion AUM threshold begin to consider liquid alternatives and long-only product is that they are exploring ways to expand their trading book and diversify their investor base. The extreme fee differentials between these long-only or retail products and the traditional hedge fund product have been narrowing, making it easier for investment managers to consider moving into lower-fee products. A large part of this shift has been a gradual reduction in hedge fund fees.

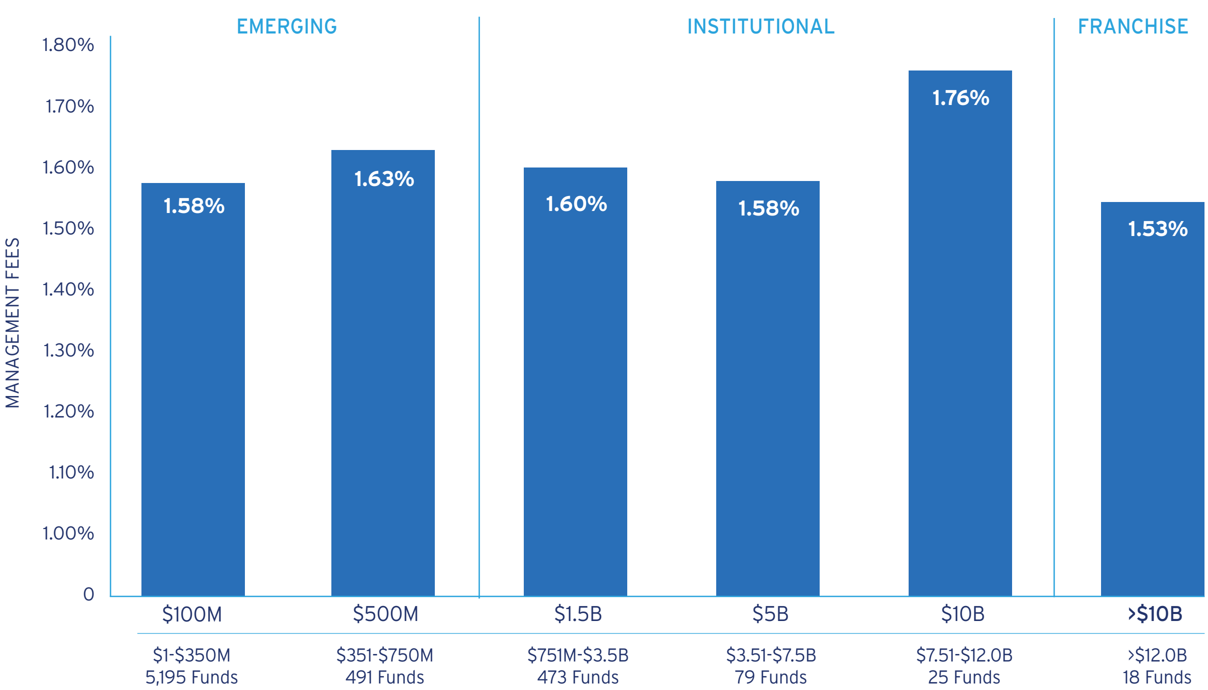
Another important driver for this diversification into lower-fee products is borne out in the results of this survey: The economies of scale realized by franchise investment management firms has afforded them a lower cost structure, affording them the ability to branch out into these less lucrative product lines. One key outcome of this shift has been a gradual reduction in hedge fund fees.

## Hedge Fund Fees Decline as the Industry Becomes More Institutional

The majority of hedge fund managers persist in citing their private fund fees as holding to the "2&20" regime that marked the industry for most of the past two decades. The reality, however, is that the institutionalization of the industry has worked to lower average management company fees, as illustrated in Chart 5.

To compile the data in Chart 5, we normalized fund records across the HFR and the Hedge Fund Intelligence (HFI) dataset, coming up with 6,281 individual funds that also listed their management fee totals. We then divided those funds up by AUM and determined those bands most closely aligned with the 6 standard AUM targets highlighted within this paper. For example, we looked at 5,195 funds that had AUM between $1 and $350 million and calculated the average management fee charged by this group

**Chart 5: Average Management Fees by Fund Size**




Source: Citi Prime Finance analysis based on firms reporting across the HFR & HFI dataset to determine a "standard" management company fee for a $100 million AUM fund. We looked at 491 funds with between $351 and $750 million of AUM to determine a standard management company fee for funds at the $500 million AUM band. The AUM bands, and the number of funds considered at each interval, are illustrated on the x-axis of Chart 5.

The first finding that jumps out is that while individual funds may still be getting a 2.0% management fee, the industry is realizing average fees below that level, with fees in our analysis ranging from 1.53% to 1.76%. There are several factors driving this trend.

Small hedge funds are looking to attract capital and are often incenting investors to allocate money to them by offering founders' share classes. These share classes typically offer steeply discounted management fees for the first wave of investors into the fund. Most founders' share classes expire after either a limited window of time or when the fund hits a certain AUM target. Those investors that buy in to the founders' share class may also be offered an opportunity to increase their allocation at a later time at preferential terms. These discounts can lower the average overall fee collected by the fund.

Large institutional investors in many instances are also able to negotiate with hedge fund managers to receive lower fees, even after the founders' share class has closed. Many funds now have additional share classes that offer management fees below the 2.0% standard for those investors able to write tickets of a certain size. Other firms that decide to allow one institutional investor to allocate money at a lower management fee may, because of their "most favored nation" documentation, be forced to offer similar fees to their other investors in the fund.

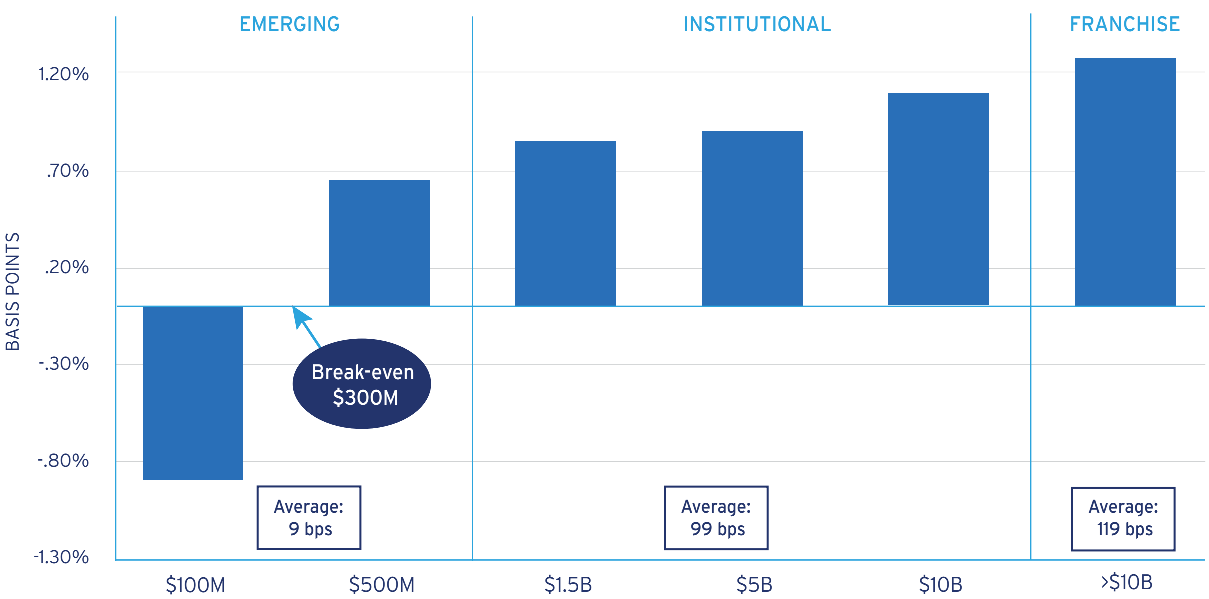
With assets in the industry having become predominantly institutional, all three of these factors are working to slowly lower the average management fees across the board.

As Chart 5 shows, the lowest management fees being collected in the industry are actually being registered by the largest funds. Funds with greater than $12.0 billion AUM are only taking in an average management fee of 1.53% on their hedge fund product. With many privately offered long-only funds commanding a 1.0% management fee and publicly offered long-only and retail alternative funds commanding anywhere from 0.60% to 1.50%, the management fee differential between hedge funds and other products is no longer as significant as it was in the past.

## Operating Margins Show Industry's Prolonged Path to Profitability

Armed with an average management fee for each of our size bands, and knowing total expenses being carried by the management company, we are able to calculate operating margins. These operating margins are for the management company only. They exclude any fund-level charges that are being passed through to the investor, and they also exclude any capital being

**Chart 6: Operating Margins Based on Average Management Company Fees & Expenses**




Source: Citi Prime Finance. *Average AUM for firms with >$10.0 billion AUM equals $36.4 billion. Total dataset examined (124 firms, $465 billion AUM) awarded to the General Partners (GPs) in the form of incentive fee payouts. Our calculations on operating margin are highlighted in Chart 6.

The figures clearly illustrate how difficult it is for emerging hedge fund firms to become established. By our calculations, survey participants with $100 million AUM would lose an average of 86 basis points at the management company level. These losses are likely to lessen, but continue until assets near the $300 million mark, which is where our analysis places break-even for the industry. Even with AUM reaching $500 million, firms would be realizing margins of only 69 basis points. Indeed, for all the funds across our pool of emerging survey participants, the average operating margin equated to only 9 basis points.

These economics shift to a more favorable position as firms surpass the $1.0 billion institutional threshold. Our analysis shows firms with $1.5 billion AUM earn an operating margin of 92 basis points, a figure 33% higher than for firms at $500 million AUM. This is a significant jump in profitability, but from this point forward, growth in margins flattens.

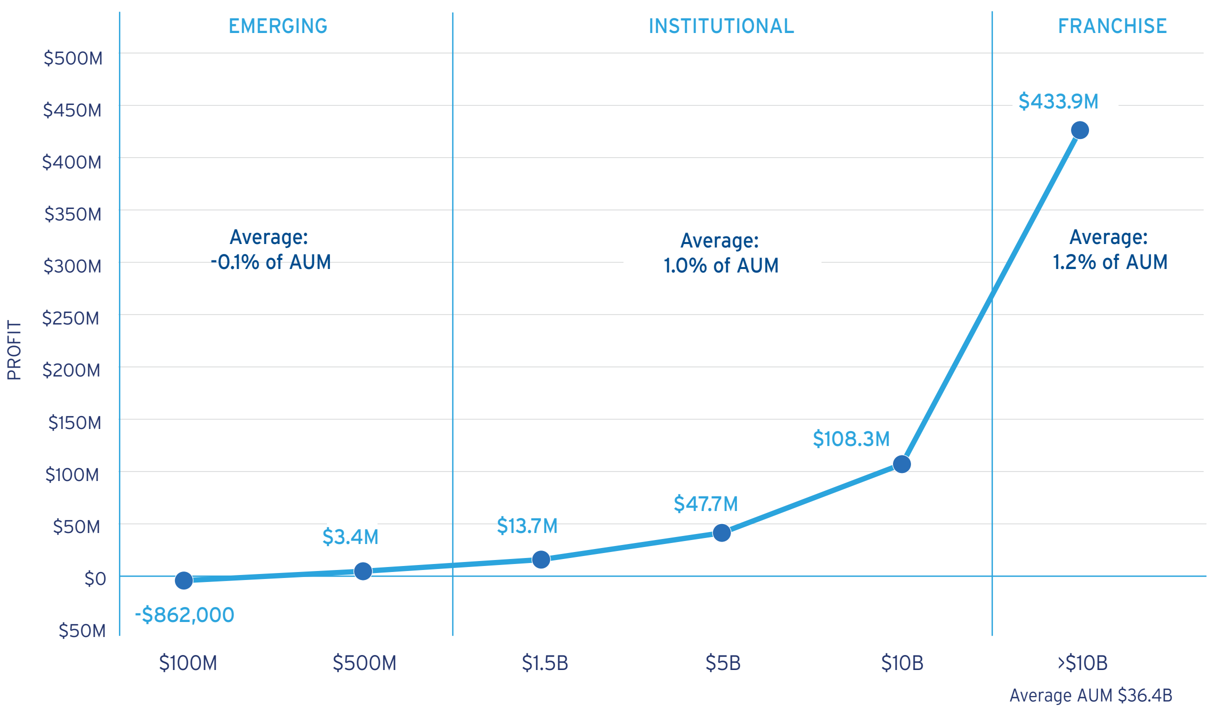
Chart 6 shows how little margins change at various AUM bands within the institutional category. Between $1.5 billion and $5.0 billion AUM, operating margins increase from 92 to 95 basis points—a gain of 4% against a 3.3x increase in AUM. The gain noted between $5.0 and $10.0 billion AUM is somewhat better, as margins increase from 95 to 108 basis points—a gain of 13% against a 2x increase in AUM. Taken collectively, average operating margins for the institutional category are 99 basis points.

Even at the significantly higher $36.0 billion AUM mark (the average for our >$10.0 billion AUM category), our model shows operating margins have only risen to 119 basis points—a gain of 10.0% against a 3.6x increase in AUM.

While the growth in operating margins is limited after a fund surpasses $1.0 billion AUM, the base against which these profits are realized becomes increasingly higher. This results in very large dollar margins for the industry's biggest hedge funds. Yet, only a small subset of hedge fund firms reaches those bands at which the profitability of their management company is an attractive financial proposition.

Chart 7 shows that there is very little excess cash generated by the management company even at the top of the emerging category, as firms with $500 million AUM are only clearing an estimated $3.4 million annually. Even at $1.5 billion AUM, that figure increases to only $13.7 million in profits. While this is a very large amount of money, it does not mesh

**Chart 7: Firm Profitability Based on Average Management Company Fees & Expenses**




Source: Citi Prime Finance. Total dataset examined (124 firms, $465 billion AUM)

with the stereotype that many hold of hedge funds being high fee-generating ventures. Indeed, without performance and the payout of incentive fees, the industry is not a highly profitable one until a manager reaches $5.0 billion and above in AUM. According to HFR's Q3 global industry survey, only 6.0% of all hedge funds fall into this category.

Moreover, these figures illustrate that there is likely to be a floor to how much fee pressure the industry can sustain. There is already no appreciable management company profit being realized by emerging hedge fund managers, even at $500 million AUM. Any further decline in fees for these managers would push the industry break-even out beyond $300 million AUM and increase the pressure on smaller managers to be more aggressive in their investments in order to earn incentive fees to help keep their firm afloat.

Even at higher AUM bands, firms are only netting 1.0% to 1.2% profit on the AUM they are managing. This leaves hedge funds having only a limited cushion to absorb rising expenses that have already been spotted on the horizon. For example, with the onset of AIFMD, there are likely to be increased regulatory charges that must be factored into managers' expense calculations. Higher capital charges and new regulatory liquidity and leverage ratios are making it more expensive for hedge funds' financing partners to extend their balance sheet, which is likely to result in rising costs for the fund itself down the road.

Thus, there is a prolonged path along which a hedge fund must build up its AUM to a sufficiently large level to become profitable. It is also likely that those same hedge funds will be hard-pressed to maintain their margins, as they remain under fee pressure from their investors at a time when their expense base is increasing.

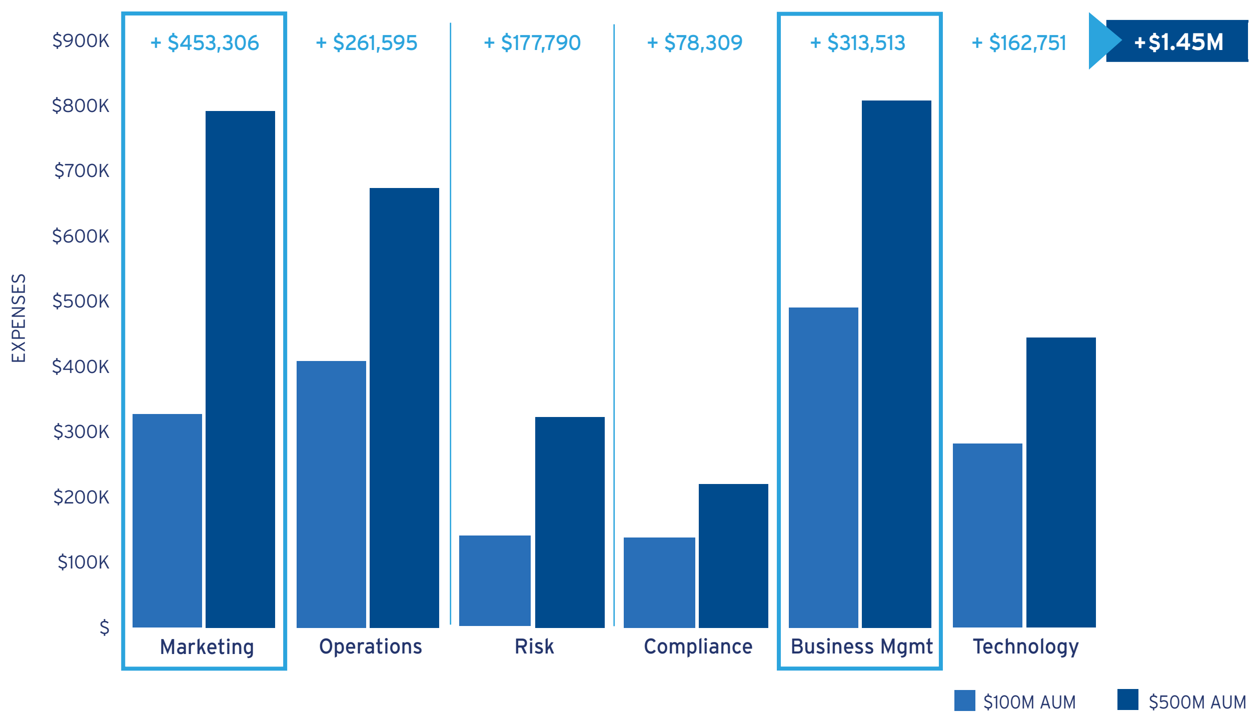
Choosing which noninvestment functions to invest in to optimally speed their company's growth is a key decision that the chief operating officer must guide, and one that shifts as the size of the firm increases. In this section, we will examine how the amount that hedge funds spend across several functions changes as AUM grows. To facilitate this analysis, we will be looking at two main areas–investment support and business management.

As noted back in Chart 1 in the methodology section, there are several functions grouped within the investment support category of our functional architecture. These are marketing, risk, compliance, operations and technology. Each of these functions is a major bucket of expense that the COO must cross-allocate while trying to grow the firm. There is also a set of business management expenses associated with the management company that accrue at every stage of a fund's development. Collectively, these business management expenses include human resources/administration, real estate/facilities, benefits, insurance, travel and management, company legal, audit and tax and accounting.

## Breaking Even: Moving from $100 Million to $500 Million AUM

Chart 8 shows the actual dollars spent by category for hedge funds at both $100 million and $500 million AUM. The chart also shows where spending increases, and by how much in each of these areas. On average, our survey population with $500 million AUM spent $1.45 million more on investment support and business management when compared to firms with $100 million AUM—a figure nearly double the total being spent by the smaller sized firms, which spend $1.72 million in total on investment support and business management.

**Chart 8: Emerging Firms' Management Company-Level Expenses**
(Investment Support & Business Management)




Source: Citi Prime Finance. Management company expenses exclude expenses charged back at the fund level and excludes compensation and third party expenses for investment management. Total dataset examined (44 firms, $125 billion AUM)

More money was spent on business management by small hedge funds with $100 million AUM than on any other category of expense. This remains the highest area of spend for firms with $500 million AUM as well. Managers in this AUM band upped their average business management spend by $313,513–23% of the total increase. However, business management remains steady, in terms of the share of expense it represents for these firms. Business management represented 27% of dollars spent by $100 million AUM firms and 25% of dollars spent by larger organizations that manage $500 million.

In contrast, the sharp spike in dollars spent on marketing by firms with $500 million AUM shows a shift in emphasis. Hedge funds with $100 million AUM only spent 18% on marketing across their total spend for investment support and business management. That figure rises to 24% for firms with $500 million AUM. Indeed, higher spending on marketing is the single largest jump noted, at $453,306, which accounted for 32% of the total $1.45 million increase. This was the largest percentage increase in spend between $100 million and $500 million AUM firms as well, registering a 143% jump.

The other area that showed a substantial increase on a percentage basis was risk. Spending on risk jumped 131% for firms with $500 million AUM versus their level of spend at $100 million AUM. On a dollar basis, spending on risk is substantially lower than in many other areas, but this category takes on increased importance as a firm begins to grow, rising from 8% of total spend across investment support and business management for $100 million AUM firms to 10% for $500 million AUM firms.

## Crossing the Institutional Threshold: Moving from $500 Million to $1.5 Billion AUM

There is a substantial rise in spending noted as firms move above $1.0 billion AUM, a level typically seen as the institutional threshold due to the large tickets these investors write and their desire to be no more than 10% of any manager's total assets. As shown in Chart 9, firms with $1.5 billion AUM increase their

**Chart 9: Crossing the Institutional Threshold: Management Company Expenses**
(Investment Support & Business Management)


Source: Citi Prime Finance. Management company expenses exclude expenses charged back at the fund level and excludes compensation and third party expenses for investment management. Total dataset examined (44 firms, $125 billion AUM)

average spend by $4.03 million to reach a total of $7.2 million—127% more than the $3.17 million spent on investment support and business management from firms with $500 million AUM.

The emphasis of where they invest in their business also shifts.

As in the earlier period, investments in business management remain a substantial outlay, rising by $946,343 in our model – 23% of the total increase in spend. Also, as before, business management remains the single largest expense for these hedge funds, accounting for 24% of their total spend across investment support and business management. Our model shows total expenditures on business management by firms at the $1.5 billion AUM threshold equating to $1.73 million.

Outlays in other areas are beginning to rival the amount spent on business management, however. As shown in Chart 9, spending in both operations and technology jumps sharply as firms extend beyond the institutional threshold. Collectively, investment in these two functions amount to $1.89 million, or 47% of the total rise in expenditures. Spend across operations and technology accounts for 41% of the total for firms at $1.5 billion AUM, up from 35% of total for firms with $500 million AUM.

While not as substantial an outlay as that allocated to operations and technology, expenditure on compliance is the other area that shows a sharp jump on a percentage basis as firms move from $500 million to $1.5 billion AUM. Our model shows that outlays on compliance jump from $212,611 to $607,115, a rise of 186%. A likely driver for this increased compliance expense for funds managing $1.5 billion is the "large filer" status that goes along with this increased asset level. Surpassing this threshold requires a more frequent and more in-depth regulatory filing to the SEC and/or CFTC via Form PF, per the provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

All of these investments in operations, technology and compliance are hallmarks of firms moving into a more institutional phase. Ensuring more professional operations and oversight, and upgrading systems to meet institutional demands for a strong control environment, are required to attract institutional dollars. These investors typically rely on industry consultants to perform operational due diligence on the hedge funds they are considering for an allocation. A key milestone for firms rising above the institutional threshold is passing the robust due diligence exams performed by the industry consultants and qualifying to be placed on their "approved list" of hedge funds deemed suitable for their clientele.

## Becoming Profitable: Moving from $1.5 Billion to $5.0 Billion AUM

While passing the $1.0 billion AUM threshold qualifies a firm to be institutional, reaching the $5.0 billion AUM threshold is where the venture becomes highly profitable based on the size of their assets alone, regardless of their investment performance. This was illustrated in Chart 7. Our analysis indicated that while firms with $1.5 billion AUM were generating a $13.7 million operating margin, the size of this margin increased dramatically, to $47.7 million, for firms at the $5.0 billion AUM mark, a rise of 3.5x in profitability versus a 3.3x increase in AUM.

This analysis supports the "sweet spot" identified back in our 2011 Industry Evolution survey that focused on those institutional investors that chose to directly allocate their capital. In that report, we noted that leading investors sought firms above the institutional threshold but with less than $5.0 billion AUM. The reasoning of these investors was that firms at $5.0 billion AUM and above were not as incented by performance, and that they were not as willing to negotiate with investors on terms and customizations because they were already highly profitable based solely on the level of assets they were managing.

The changes in expenditures that characterize a $5.0 billion versus a $1.5 billion AUM firm are noted in Chart 10. As shown, this is the largest jump yet in spending as outlays rise to $21.7 million, up $14.5 million from the level being spent at $1.5 billion AUM and 301% more than the total spend for those firms.

Large increases occur across several categories, but by far the most dramatic increase is around the amount spent on technology. Technology expenditures increase by 418% as a firm moves from the $1.5 billion to the $5.0 billion AUM level. This sharp jump reflects an important developmental shift that occurs.

Many hedge fund managers that have been performing upgrades to their original launch infrastructure now reconsider the efficacy of their platform and may choose to make a more substantial and strategic investment. Much of this has to do with the need to better manage data. Often, firms have put into place different order and portfolio management, risk, compliance, financing and accounting systems that are each generating their own data outputs. Pressure to integrate these systems builds as a firm nears $5.0 billion AUM.

Some of this pressure arises from stakeholders within the firm. Overseeing and optimizing the firm's use of capital and collateral becomes increasingly important, especially because this is also the threshold where, developmentally, many of these organizations begin

**Chart 10: Institutional Firms' Management Company-Level Expenses**
(Investment Support & Business Management)


Source: Citi Prime Finance. Management company expenses exclude expenses charged back at the fund level and excludes compensation and third party expenses for investment management. Total dataset examined (44 firms, $125 billion AUM)

to create their own treasury and financing desks. Obtaining cross-functional views and normalizing data across these multiple systems is a major undertaking, but one that repositions the firm's capabilities.

Investors, too, begin to demand more customization from their larger hedge fund managers. In the years following the 2008 Global Financial Crisis, there has been a dramatic increase in investor demands for transparency into portfolio holdings. Many want the managers to create customized reports for them that reflect the manner in which the investor prefers to calculate exposures and risk. Others want their hedge funds feeding risk data directly into the investors' risk system. Achieving this level of flexibility is also an expensive and difficult process that requires substantial changes in a hedge fund's technology.

Based on our data, outlays on technology become the single largest cost for firms at the $5.0 billion AUM level, rising from only 18% of the firm's overall expenses at the $1.5 billion AUM level to 32% of expenditures. As the systems change, there is a corresponding need to enhance the firm's operations and spend in this area also rises sharply, by $2.01 million.

After technology and operations, the next largest increase in spending occurs in business management, where there is a $2.96 million jump in investment. Average headcount at the hedge fund tends to surpass the 50-person threshold somewhere between $1.5 billion and $5.0 billion AUM. This is an important point from a benefits perspective and may result in firms moving from an outsourced to a self-funded and self-administered plan. This requires the expansion of the internal human resources function: Headcount related to human resources rose from an average of 1 head for firms with $1.5 billion AUM to 2.67 heads for firms with $5.0 billion AUM. Average third party spending related to benefits and insurance rose from $202,891 for firms with $1.5 billion AUM to $886,227 for firms at $5.0 billion AUM.

The final area where spend jumps significantly is in marketing, with gains of $2.11 million versus the amount being spent by firms with $1.5 billion AUM. Firms near the $5.0 billion AUM threshold often begin to invest more heavily into an investor relations function. Whereas much of the emphasis to date has been on capital raising, the need to retain capital becomes equally important for larger firms. These professional investor relations individuals and teams begin to actively engage the clients of the firm, and become a day-to-day point of contact to ensure responsible and frequent communications.

## Completing the Institutional Journey: Moving from $5.0 Billion to $10.0 Billion AUM

Enhancements to the platform continue as hedge funds move from $5.0 to $10.0 billion AUM, with our model showing overall spend across investment support and business management rising from $21.7 to $55.0 million. This equates to a 2.54x increase in expenditures versus a 2.0x increase in AUM, demonstrating that hedge funds at this level of AUM remain in an investment mode. Where spending increases occur is illustrated in Chart 11.

Increased expenditures in the business management category account for the single largest rise at $13.2 million — 40% of the total $33.3 million more spent by firms with $10.0 billion AUM versus those with $5.0 billion. Delving into the stated business management expenses of firms at both AUM points, it became clear that outlays on real estate escalate sharply. Whereas the average amount spent on real estate by firms with $5.0 billion AUM was $2.1 million, that figure jumped to an average $8.6 million for firms with $10.0 billion AUM.

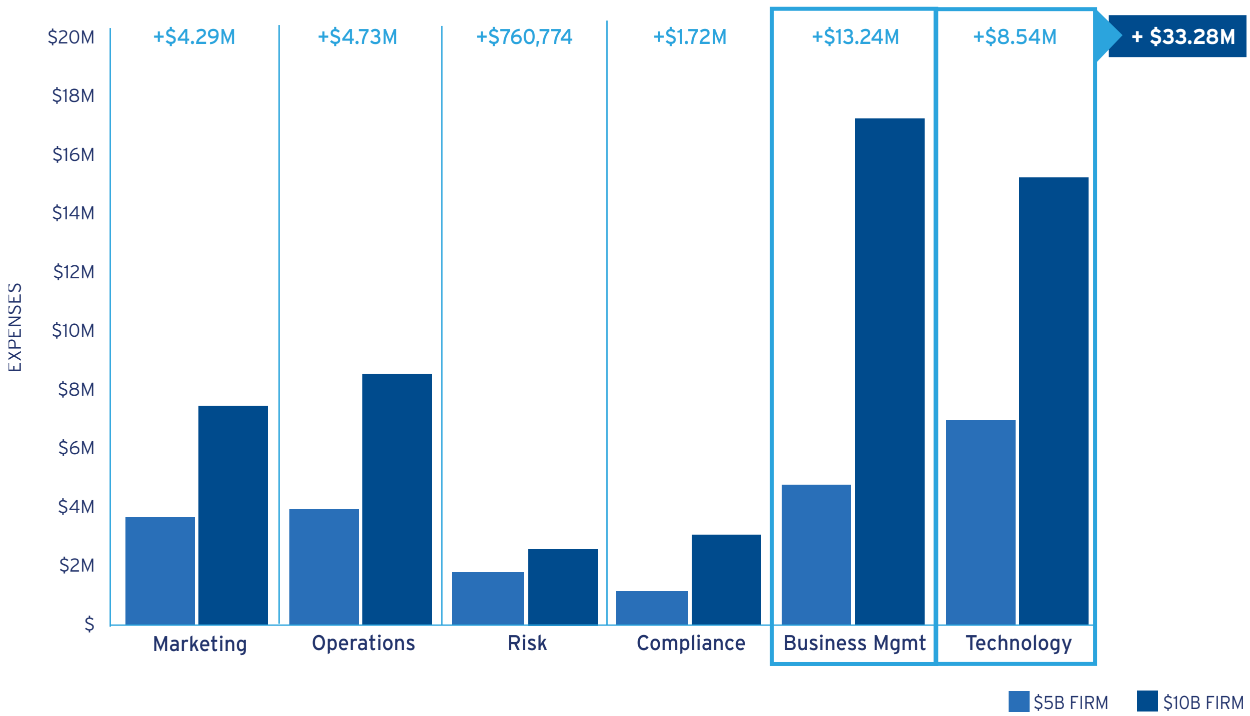
Geographic expansion is a key characteristic of firms at the $10.0 billion AUM level. The vast majority (83%) of the hedge funds in our survey with $5.0 billion AUM had 2 offices: 1 office in the U.S. and 1 office in the United Kingdom. Survey participants with $10.0 billion AUM were more global, with 85% of the firms noting that they had offices in at least the U.S., U.K. and Asia. Moreover, their presence in the U.S. was more developed, with an average of 2.3 offices.

As a firm's footprint firm increases, there is an increased need to have business management personnel in key offices to oversee the expansion. Business management personnel increased from 8.6 to 18.6 heads on average in our models, as firms rose from having $5.0 billion to $10.0 billion AUM. Projected compensation tied to business management increased 253% from an estimated $2.1 million to $7.6 million as a result of these gains.

Rising outlays on technology were the other major contributor to increased spending at the $10.0 billion AUM level. Of the backbone costs for a firm, the expenditures on networks, hardware and software jumped 77% to $6.5 million versus $3.7 million for firms at the $5.0 billion AUM threshold. Compensation expenses also rose sharply by 167%, from $2.2 million for firms at the $5.0 billion AUM level to $6.0 million at the $10.0 billion AUM mark as technology headcount increased from 8.8 to 26.3 individuals.

Our model shows that, having reached the $10.0 billion AUM threshold, firms conclude their period

**Chart 11: Institutional Firms' Management Company-Level Expenses**
(Investment Support & Business Management)




Source: Citi Prime Finance. Management company expenses exclude expenses charged back at the fund level and excludes compensation and third party expenses for investment management. Total dataset examined (44 firms, $125 billion AUM)

of intensive investment back into their business and that they are well positioned to begin monetizing their earlier spend, as they are now positioned to become more franchise-like in their profile.

## Crossing the Franchise Threshold: Moving Above $10.0 Billion AUM

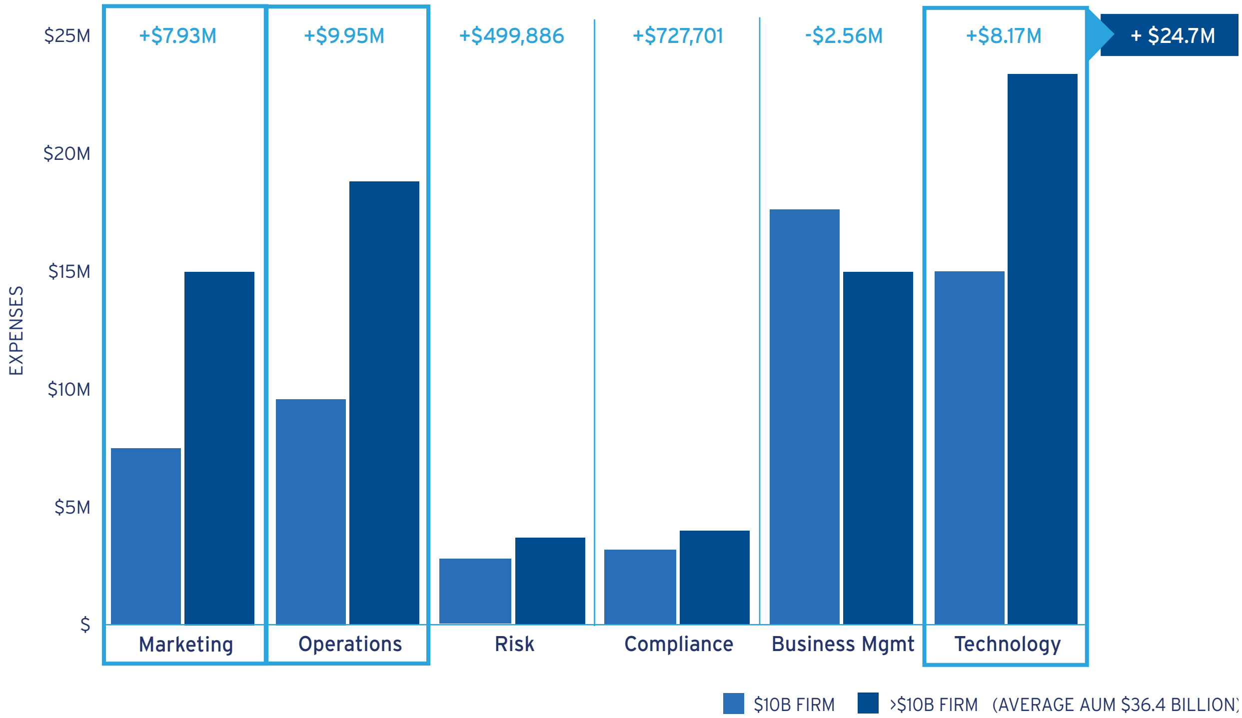
The pace at which investments are being made back into their business slows after hedge fund firms surpass the $10.0 billion threshold. The move from $1.5 billion to $5.0 billion AUM—a 3.3x increase in assets—was matched by a 3.0x increase in spending. The move from $5.0 billion to $10.0 billion AUM—a 2.0x increase in assets—was matched by a 2.5x increase in spending. This contrasts sharply to what happens above $10.0 billion. The average AUM of our survey participants in this category was $36.4 million AUM, a 3.6x increase in assets from the $10.0 billion AUM level. Yet, expenditures by these firms with >$10.0 billion AUM rose by only 1.5x, from $55.0 million to $79.7 million. This is illustrated in Chart 12.

Most of the increased spend registered by firms with >$10.0 billion AUM can be traced back to operations and technology. These two categories together showed a rise of $18.1 million—73% of the total increase of +$24.7 million. As shown in Chart 4, the product mix of our survey participant firms with >$10.0 billion AUM changes dramatically, with long-only, regulated alternatives and other products accounting for 47% of these firms' assets and traditional hedge fund product representing only 53% of AUM.

Processing and oversight demands are significantly different for these products and to accommodate the expansion in their product suite, these firms are forced to support a broader set of functions and capabilities. There is a sharp expansion in the number of operational headcount focused on trade and portfolio operations at firms >$10.0 billion AUM. Firms with $10.0 billion AUM have an average of 29.5 heads devoted to the overall category of operations, of which 12.3 heads are assigned to trade and portfolio operations with the remainder focused on accounting or finance/treasury support. Our >$10.0 billion AUM firms in the survey had, on average, 60.5 heads assigned to overall operations, with 48.1 heads focused on trade and portfolio operations.

Although the headcount spikes, there is a decline in the average per-head cost of operations for firms with >$10 billion AUM. Per-head compensation for $10.0 billion AUM operations teams averages $251,902 according to our model; that figure drops

**Chart 12: Crossing the Franchise Threshold: Management Company-Level Expenses**
(Investment Support & Business Management)




Source: Citi Prime Finance. Management company expenses exclude expenses charged back at the fund level and excludes compensation and third party expenses for investment management. Total dataset examined (44 firms, $125 billion AUM)

to only $186,934 for firms with >$10.0 billion AUM. New products being added tend to fall into the long-only or regulated alternatives categories where there is a wider pool of talent from which to draw experienced personnel. Trade and portfolio support for regulated or long-only products is much less complex than for most privately traded hedge fund strategies and there are expansive operations teams' at large asset managers that can be mined for experienced employees.

Overall technology spend also increases sharply by $8.2 million—33% of the total $24.7 rise in expenditures. The bulk of that gain can be traced to higher data costs for firms with >$10.0 billion AUM. Data costs rise to $9.0 million for these firms, up from an average of only $3.0 million for firms at the $10.0 billion AUM threshold. Regulated and long-only products require daily pricing and performance attribution, both of which require the firm to bring in substantially more data than when their product suite focused almost exclusively in the hedge fund space.

The final area where spend spikes higher is in the marketing realm; overall marketing expenses rise by $7.9 million. There are two ways in which the marketing team grows. The number of individuals focused on marketing and investor relations grows from 10.6 to 31.7, but the seniority of the team erodes as evidenced by the decline in average compensation noted in our model. The per head compensation for marketing and investor relations professionals at the $10.0 billion AUM firms averaged $615,907 versus $364,125 at the firms with >$10.0 billion AUM.

The other facet of marketing where there is significantly more spend is on third party marketers. Firms with $10.0 billion AUM spent on average $2.0 million for this support whereas managers with >$10.0 billion AUM spent $4.3 million. Accessing new channels for regulated alternative products or making inroads into the long only allocators requires a dedicated focus and there are often firms better suited to make those initial introductions than having the manager themselves invest in building out an overly large team.

While it is informative to see how expenditures change as firms surpass the $10.0 billion AUM threshold, it is clear that this increased spending is being done to support a shift in firm strategy. What prompts this shift in strategy will be explored in the coming section.

Our analysis reveals that there is a distinct change in some key underlying patterns around headcount and profitability that occur at the $10.0 billion AUM threshold. The coming section explores how these changes influence a firm's overall positioning and can help to explain why it is at this point in their development cycle that managers often shift from being a classic hedge fund to being a more diversified alternative asset manager or a multi-manager platform.

## The Illusion of a Steady Progression in Firm Growth

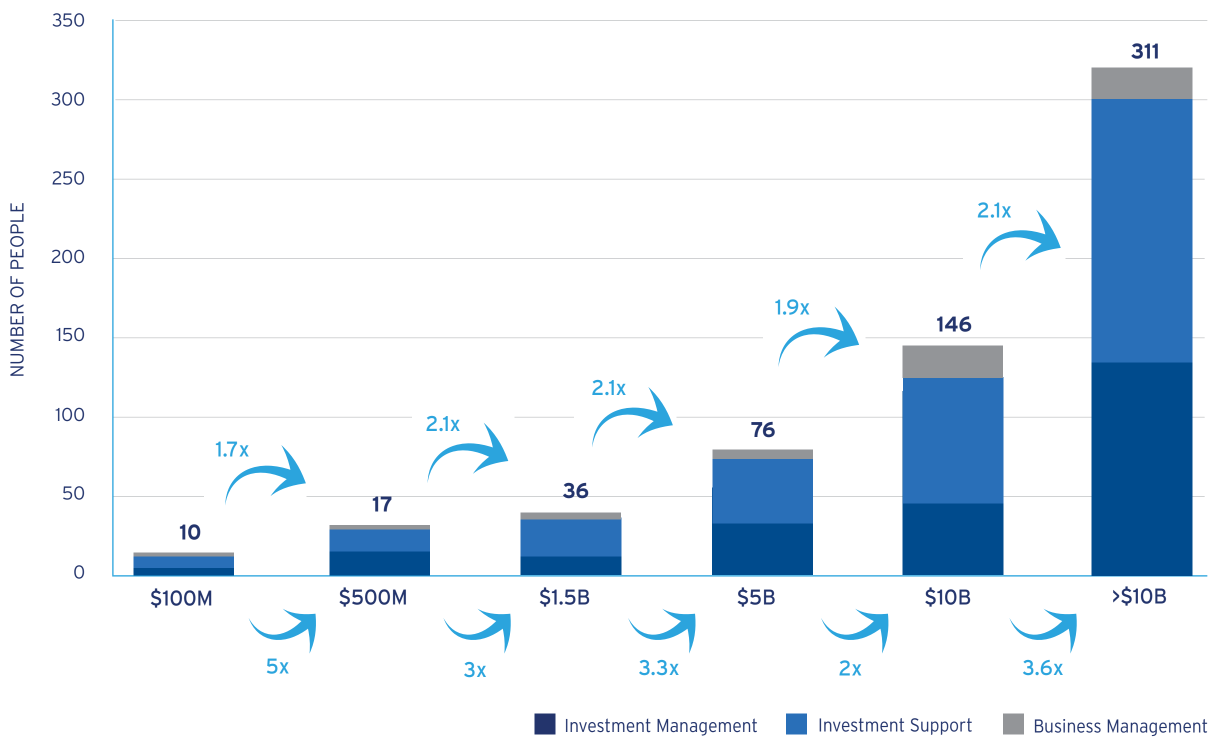
One of the patterns we noted in last year's Business Expense survey and that the data continued to show in this year's analysis is that there is a steady increase in the size of a hedge fund's headcount as they grow to significant AUM milestones. This is illustrated in Chart 13.

As noted in Chart 6, our model shows that break-even for hedge funds looking to cover their costs based solely on their management fee collections is $300 million AUM. Because the margins even above this AUM band are so tight, there is a general reluctance to add headcount too aggressively early in a firm's development. Headcount only increases by 1.7x from an average 10 individuals for firms with $100 million AUM to 17 people at managers with $500 million AUM. This is despite a 5x increase in assets.

Therefore, it appears that managers will make do with only limited headcount growth until their assets reach a sufficient size to begin to qualify them for institutional tickets. At this point, the need to have a more professional operations and control environment encourages an accelerated pace of growth.

Chart 13 goes on to show that as AUM increases from $500 million to $1.5 billion, headcount increases by 2.1x, rising from 17 to 36 individuals. This rate of growth in total headcount continues at each of our

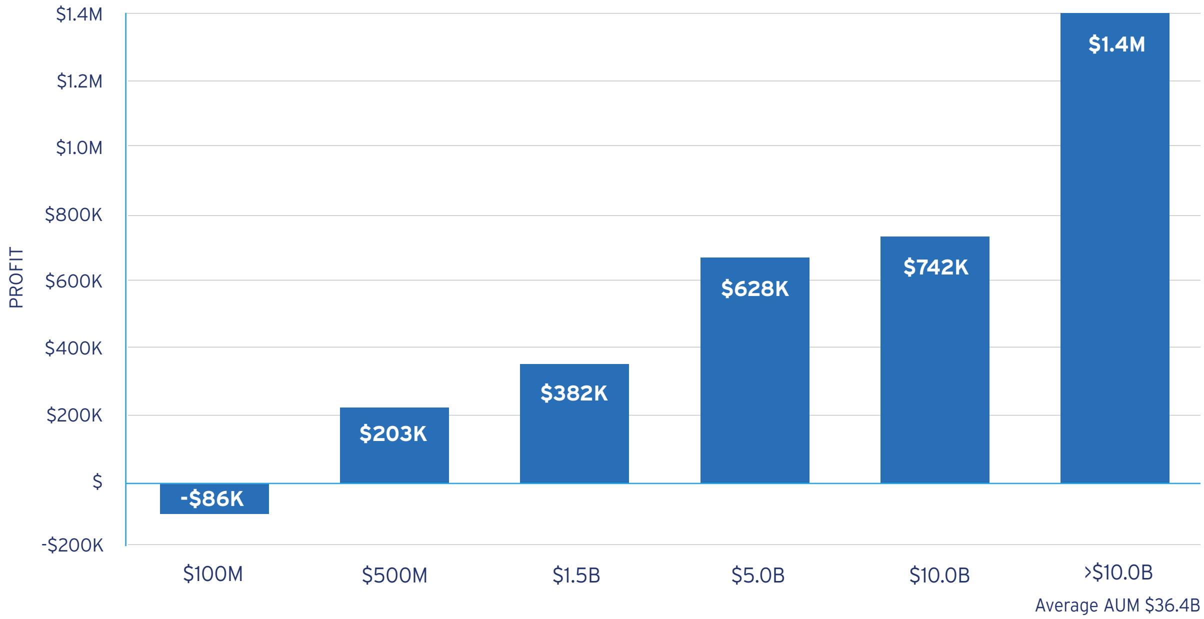
**Chart 13: Average Headcount per Firm Size**




Source: Citi Prime Finance. Total dataset examined (124 firms, $465 billion AUM)

**Chart 14: Profitability per Head**

(Based on Operating Margins & Average Management Fee Collections)




Source: Citi Prime Finance. Total dataset examined (124 firms, $465 billion AUM

highlighted AUM bands, maintaining a 1.9x to 2.1x rate of growth. This seems to show a steady progression, but when viewed against the underlying level of AUM, this growth is not as even as it appears.

There is headcount growth of ~2.0x after a firm reaches $500 million AUM compared to about a ~3x increase in assets for most of our key AUM milestones. Headcount increases by 2.1x as AUM grows from $500 million to $1.5 billion. Headcount again increases by 2.1x as AUM rises from $1.5 billion to $5.0 billion AUM. This same pattern is true as a firm's assets rise from $10.0 billion to $36.4 billion AUM.

A very different pattern is noted between $5.0 and $10.0 billion AUM, however. Headcount rises by 1.9x between these two bands, but AUM only doubles, not triples. This causes the profitability per head to show a sharp deceleration in growth, as shown in Chart 14.

Based on our model, hedge fund firms realize an 88% jump in profitability per head as they grow from $500 million to $1.5 billion AUM. This rapid growth continues as their assets increase from $1.5 to $5.0 billion AUM. The next jump in AUM does not allow for this same improvement, however; as firms rise from $5.0 to $10.0 billion AUM, profitability per head increases by only 18%. One key factor accounting for this slowdown is a dramatic shift in the ratio of investment management to investment support personnel.

## Slowing Expansion of the Investment Management Team

Chart 15 shows a steady progression of growth in investment management personnel as AUM increases from $100 million, to $500 million, to $1.5 billion and to $5.0 billion. In each instance, the number of investment management personnel—a figure that encompasses research analysts, traders and portfolio managers—nearly doubles. In line with that, there is an average $42 million increase in the amount of AUM per head being managed.

Our model shows that AUM per investment management head increases by $38 million as firms grow from $100 to $500 million AUM; by $43 million as they grow from $500 million to $1.5 billion and by $45 million as they grow from $1.5 billion to $5.0 billion AUM. If the pattern in headcount growth and average AUM being managed per investment management head were to continue, the number of investment management personnel should increase from 34 to about 68 heads, and the AUM they are managing per head should increase from $151 to about $193 million as firms move from the $5.0 billion to the $10.0 billion AUM level.

Instead, the pattern partially breaks. There is a rise in AUM per head fairly close to the indicated level as total AUM per investment management head increases from $151 million to $211 million, but to achieve that performance, there is a dramatic decrease in the pace of investment management personnel growth. After having doubled at each interval previously, there is instead only a 38% rise in the average number of investment management personnel, from 34 to 47 heads, that occurs as firms grow from $5.0 to $10.0 billion AUM.

The reason that this is so noticeable is that the pattern picks back up as firms grow from $10.0 billion to our >$10.0 billion AUM average of $36.4 billion AUM. Headcount rises to 137 investment management personnel—a figure almost double the 68 who would have been expected at the $10.0 billion AUM threshold, and the amount of AUM per investment management head increases $55 million/head, from $211 to $266 million.

Our explanation of this slowdown in investment management personnel growth toward the $10.0 billion AUM mark is that firms must realign their operational strategy and their technology platform in order to continue growing their investment management team, and to continue to increase their AUM.

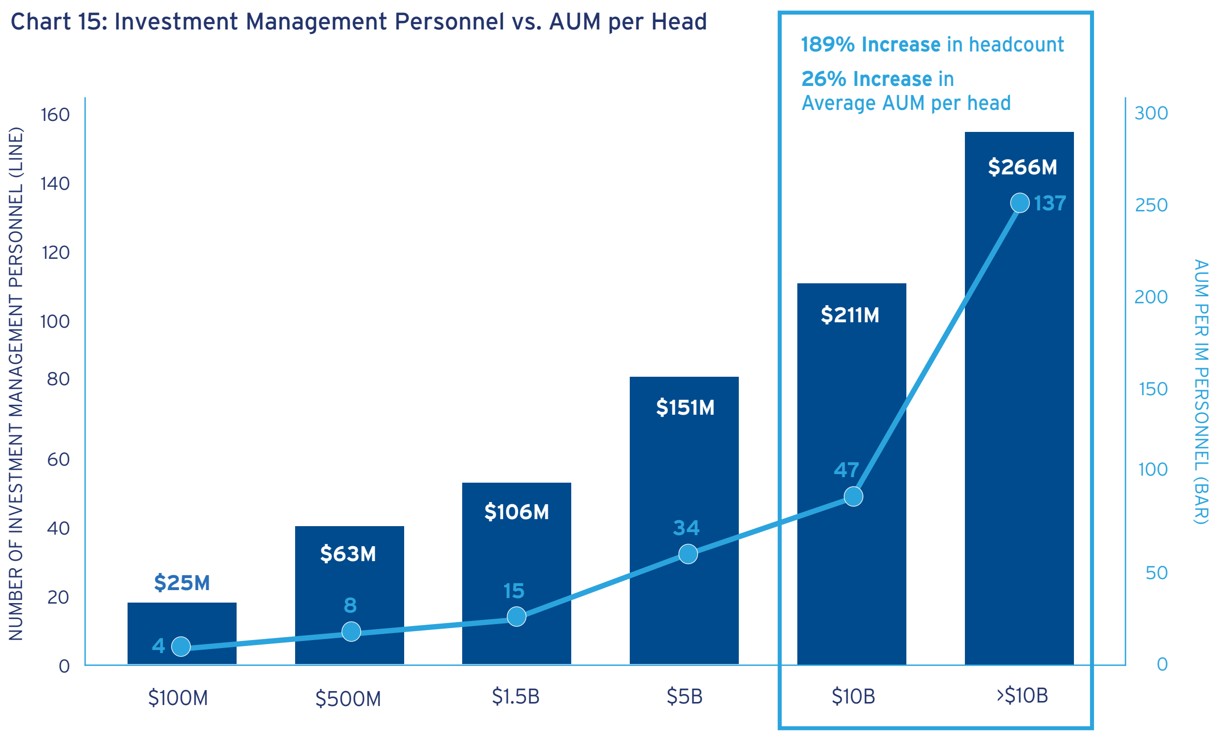
## Positioning for a New Wave of AUM Growth

Most firms under the $10.0 billion AUM level build their organization around a primary portfolio manager and fund. The majority of firms that are larger than $10.0 billion AUM are either multi-manager platforms or are expanding their product range to incorporate long-only and /or regulated alternative offerings. Realigning their team and their capabilities to support this shift in approach requires an investment in support personnel before the firm is ready to reinvigorate their growth in investment management personnel.

Chart 16 shows a dramatic spike in the ratio of investment support to investment management personnel at the $10.0 billion AUM level. This marks a significant variance from what is evident at every other AUM mark. At $100 million, $500 million, $1.5 billion, $5.0 billion and $36.4 billion AUM, 40% to 47% of the personnel at the hedge fund are in the investment management function and 53% to 60% of the personnel are in either investment support or business management. At the $10.0 billion AUM threshold, 32% of the personnel are in investment management and 68% are in investment support.

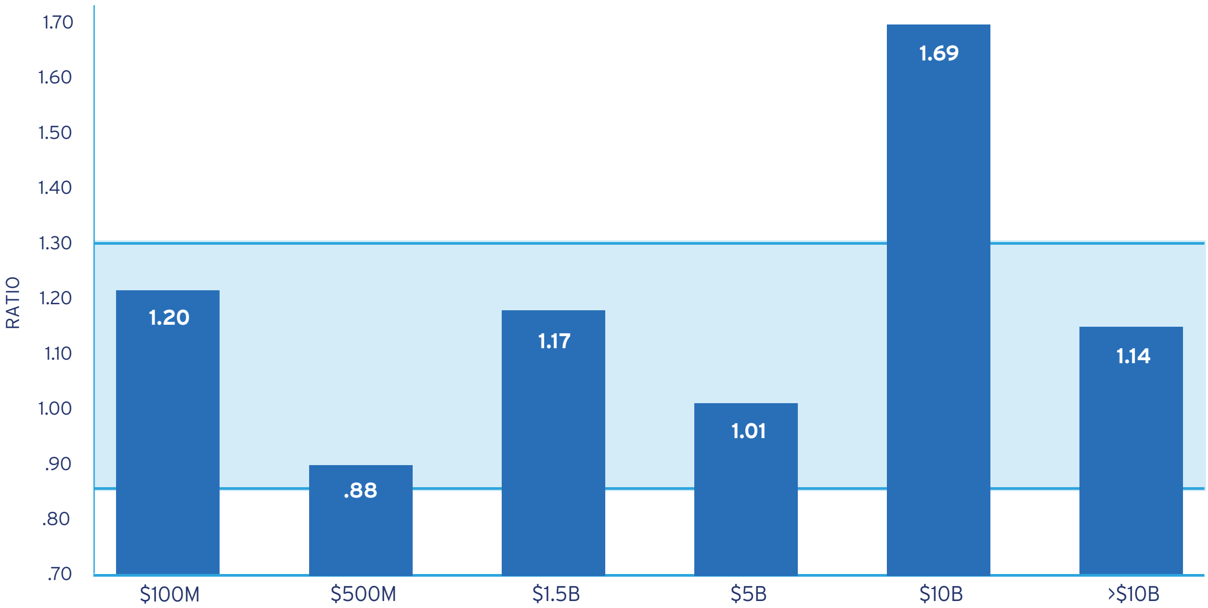
What is also quite interesting is that this spike in investment support personnel at the $10.0 billion AUM mark occurs in every cut of our survey data. Chart 17 shows that the ratio of investment support to investment management personnel jumps whether we look at the data by region, by strategy or by vintage. In all these instances, there is a clear imbalance as firms move from about a 55/45 split to a 65/35 split or greater. It is thus clear that there is a significant

**Chart 15: Investment Management Personnel vs. AUM per Head**




Source: Citi Prime Finance. Total dataset examined (124 firms, $465 billion AUM)

Chart 16: Ratio of Investment Support to Investment Management Personnel




Source: Citi Prime Finance. Total dataset examined (124 firms, $465 billion AUM)

change occurring at the $10.0 billion threshold and to continue beyond that point, a major realignment of skills is taking place.

By far the largest jump in personnel at the $10.0 billion AUM threshold occurs in operations and technology. The number of heads cited for these functions increases from 20.8 to 55.9 in our model—a 169% rise as firms grow from $5.0 billion to $10.0 billion AUM. Risk and compliance heads are the next largest category of growth, rising from 6.9 to 13.3 individuals—an increase of 93%. Regardless of whether the firm is pursuing an expansion from a single to a multi-manager platform or looking to extend their product range, there is a fundamental change required in their operational processes and technology platforms, as well as their risk and compliance capabilities to support that shift in approach.

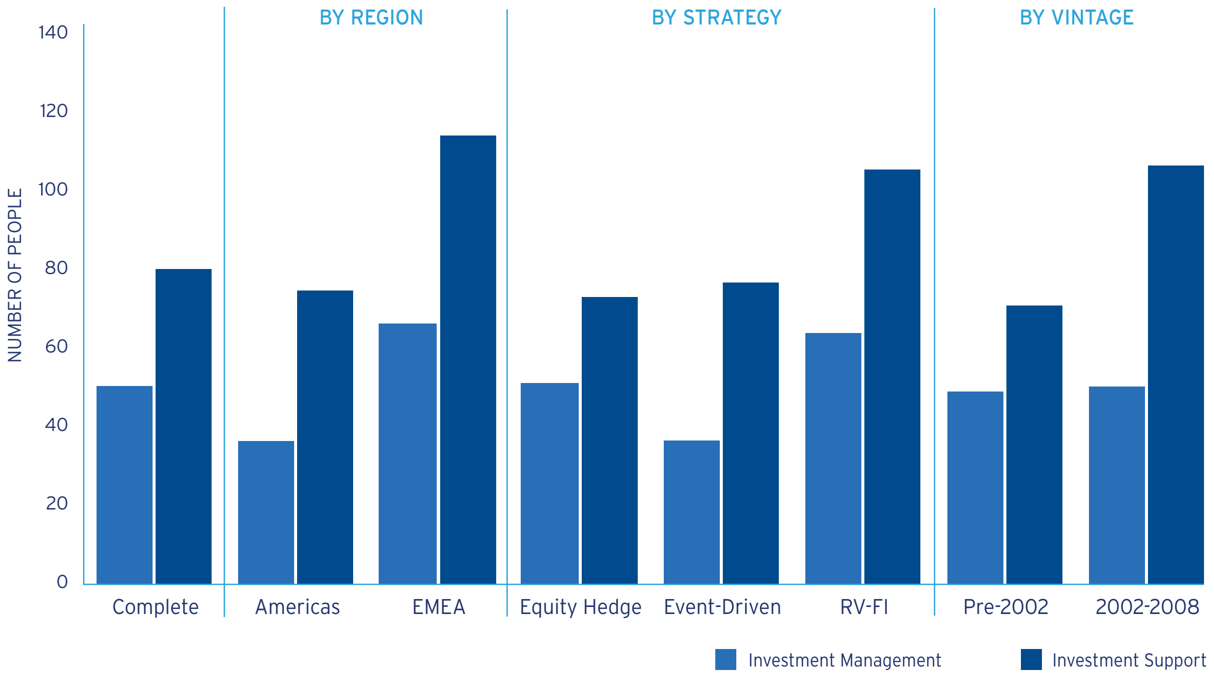
Marketing-related heads also increase, but only from 6.3 to 10.6 individuals. The big gain in marketing headcount occurs in the next wave of growth. Our average number of marketing personnel for firms >$10.0 billion AUM is 31.7 heads—triple the level seen at $10.0 billion AUM. This sharp increase confirms to us that these larger firms are now repositioned to support multiple product lines to potentially new client bases, and are ready to resume their focus on capital raising.

The impact of this investment in building out new capabilities at the $10.0 billion AUM threshold is noticeable when viewing the dollars of AUM realized for every dollar spent on investment support and business management. This is illustrated in Chart 18. As shown, once firms surpass the $500 million AUM mark, there is a gradual build-up in the effectiveness of their expenditures toward supporting increased amounts of AUM. At $500 million AUM, a firm realizes $134 dollars of AUM for every dollar spent on investment support and business management. At $1.5 billion, that figure increases to $160, and at $5.0 billion it nudges up to $169. This is where the growth stalls.

As firms move from $5.0 billion to $10.0 billion AUM and their ratio of investment support to investment management personnel spikes, there is a modest contraction in the dollars of AUM realized for every dollar spent on investment support and business management. Levels decrease from $169 to $157. Yet, the increased focus on investment support pays off dramatically from that point forward.

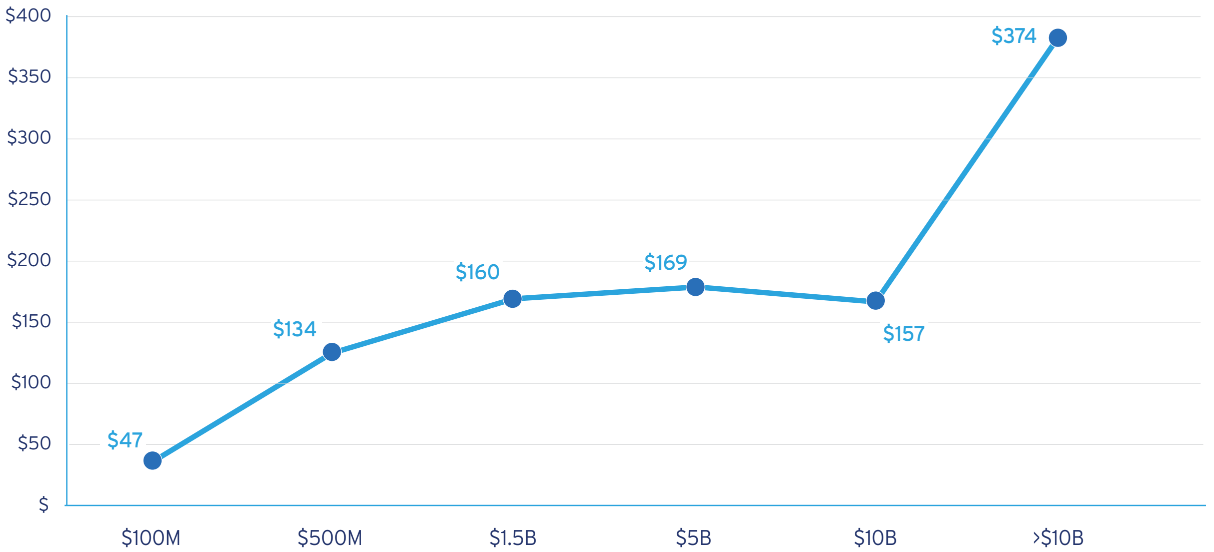
Dollars of AUM realized for every dollar spent on investment support and business management more than double, rising from $157 for firms with $10.0 billion AUM to $374 for a hedge fund with $36.4 billion AUM. This 138% growth is similar to the 185% growth noted when hedge funds move from $100 million to $500 million AUM and they begin their first wave of build-out. This confirms to us the importance of the $10.0 billion AUM threshold as another launch point of growth for the firm.

### Chart 17: Spike in Investment Support Headcount at the $10 Billion AUM Threshold




Source: Citi Prime Finance. Various datasets

### Chart 18: Dollars of AUM Realized For Every Dollar Spent on Investment Support & Business Management




Source: Citi Prime Finance. Total data set examined (124 firms, $465 billion AUM)

# The Fund Chargeback "Smile"

One of the areas that we delved into in depth in this year's report was the treatment of third party expenses and the proportion of those outlays that are charged back to the fund level as opposed to being paid by the management company. The results of that analysis showed a very interesting pattern. This is illustrated in Chart 19.

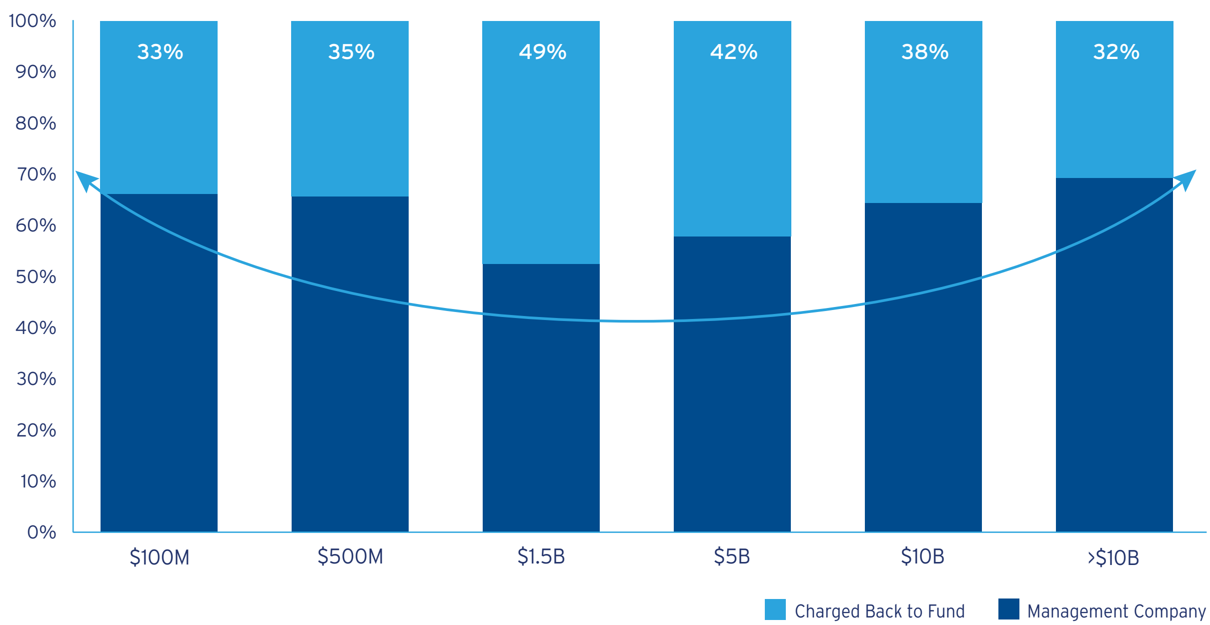
Firms with $100 million AUM charged back 33% of their third party expenses to the fund level, and covered the remaining 67% of these outlays through their management company. This percentage being charged back to the fund increased modestly to 35% for firms with $500 million AUM, and then jumped appreciably to 49% for firms at $1.5 billion AUM. This is the peak percentage of charge-backs noted in our analysis. As noted in the earlier sections, firms at $1.5 billion AUM are just beginning to spend significant sums on building out their capabilities and infrastructure as they surpass the institutional threshold. This increases the pressure on their still relatively small operating margins, encouraging them to pass through as many costs as possible.

The percentage being charged back at the fund level begins to decline as AUM and operating margins continue to expand—falling to only 42% for firms with $5.0 billion AUM, 38% for hedge funds with $10.0 billion AUM and returning almost to their starting point at only 32% for firms with >$10.0 billion AUM.

When viewed on a percentage basis, this pattern of charge-backs looks very much like a smile, as shown in Chart 19.

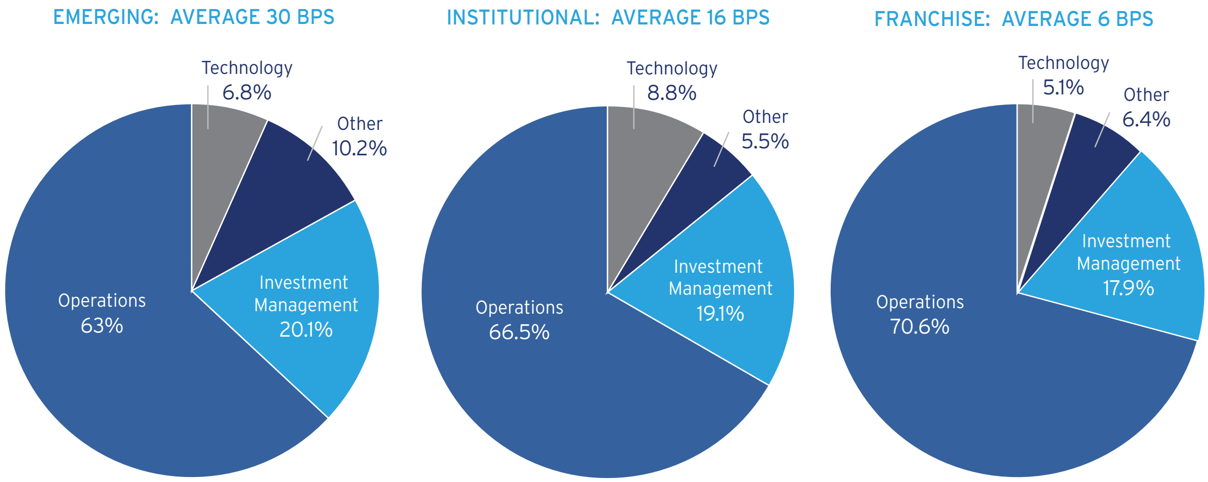
Actual basis points being charged back to the fund follow a different pattern, however. Firms with $100 million AUM charge the fund an average of 46 basis points across our survey population. This figure drops sharply as firms surpass break-even at $300 million AUM. At $500 million AUM, firms charge back 15 basis points and the amount being charged back remains steady, between 14 and 17 basis points as AUM continues to grow. It is only after firms surpass the $10 billion AUM threshold that we see another appreciable shift. Survey participants that had >$10.0 billion AUM on average charged back only 6 basis points of expense to the fund.

**Chart 19: Treatment of Third Party Expenses**
(Management Company Charge vs. Fund-Level Chargeback)




Source: Citi Prime Finance. Total dataset examined (124 firms, $465 billion AUM)

### Chart 20: Fund-Level Expenses




Source: Citi Prime Finance. Other includes marketing, risk, compliance and business management.
Total dataset examined (124 firms, $465 billion AUM)

When we look at the source of these chargebacks, we see that there is very little variation in what gets assigned as firms' progress through our various stages of maturity. Chart 20 illustrates the breakdown of charge-backs for emerging, institutional and franchise-sized firms. As shown, in all instances the largest charge-back is for operations, followed by third party charges related to investment management.

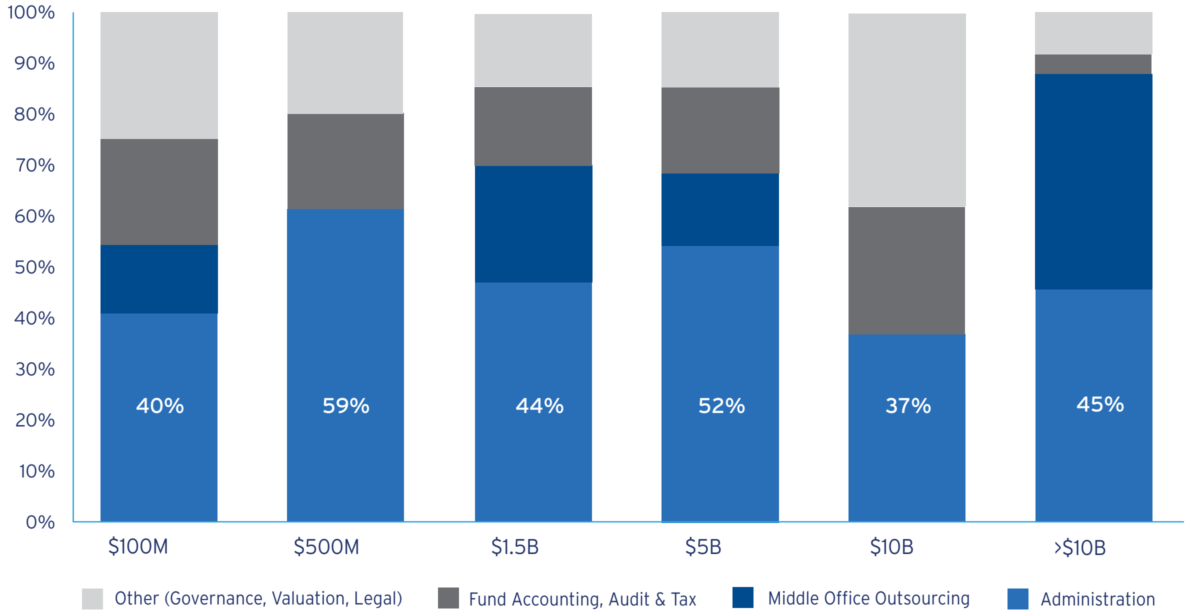
Within the operations category, third party expenses are spread out across the following subcategories: administration, middle office outsourcing, fund accounting, audit and tax and then an "other" subcategory that encompasses legal and valuation charges for the fund, as well as governance. The category that accounts for the bulk of the operational charge-backs is administration.

Prior to the GFC, many firms opted to do their own fund accounting and investor reports as opposed to assigning those functions to a neutral third party administrator. Relying solely on internal books and records became a questionable practice post-2008. Now, nearly all hedge funds engage a professional administrator to fulfill these functions. This is to ensure a level of comfort for their investors, but, as such, it is also a function that is typically charged back to the fund for those investors to cover.

While we do not have the back data to test this proposition, we have heard anecdotally from several U.S.-based funds that the amount they are choosing to charge back to the fund has increased in the years post-GFC as they have come under pressure from investors to lower their overall management fees. This is a pattern that we will probe in coming reports as we monitor both average management company fees and fund-level chargebacks.

Since administration costs make up a substantial share of fund-level charge-backs, we also decided to test our "smile" hypothesis if we were to look at third-party expense charge backs to the fund level without administration. This is illustrated in Chart 22. As shown, though the pattern is not quite as clear, the same overall principles hold true, and it is again firms at the $1.5 billion AUM level that charge back the most on a percentage basis to the fund.

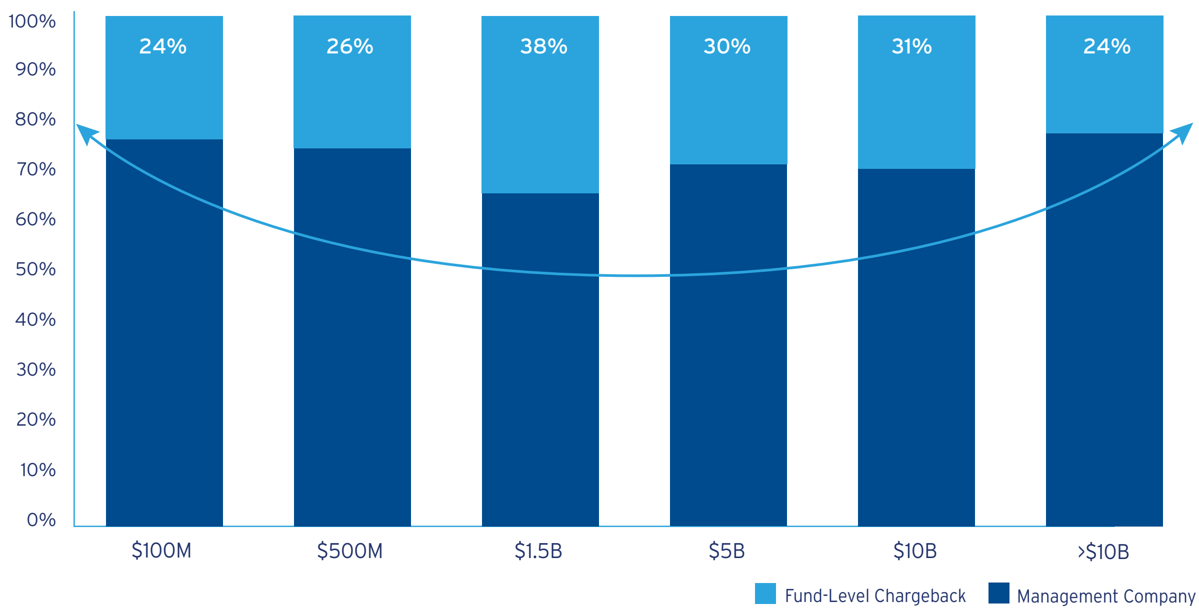
## Chart 21: Operational Chargebacks to the Fund Level




Source: Citi Prime Finance. Total dataset examined (124 firms, $465 billion AUM)

## Chart 22: Treatment of Third Party Expenses – Ex-Administration Costs

(Management Company Charge vs. Fund-Level Chargeback)




Source: Citi Prime Finance. Total dataset examined (124 firms, $465 billion AUM)

# The European "Premium" for Running a Firm

The majority of the industry's AUM and the majority of our survey participants' AUM is held by firms located in the U.S., but in our report this year, we were able to obtain an extremely strong representation from European firms, thus enabling us to draw some interesting conclusions about the European industry relative to their U.S. counterparts.

In its H1 2013 report on the location of industry assets, HFI put total assets managed out of the U.S. at $1.66 trillion out of an industry total of $2.34 trillion (71%). Our 68 U.S. survey respondents together had $288.0 billion AUM, 17% of the total U.S. population. By comparison, HFI had assets managed out of Europe at $414 billion and the 35 participants in our survey collectively managed $168.5 billion, 41% of the European total.

One factor that stood out in examining this group of European participants was that their management company costs appeared to be higher than the same charges being realized by U.S. firms. This is illustrated in Chart 23.

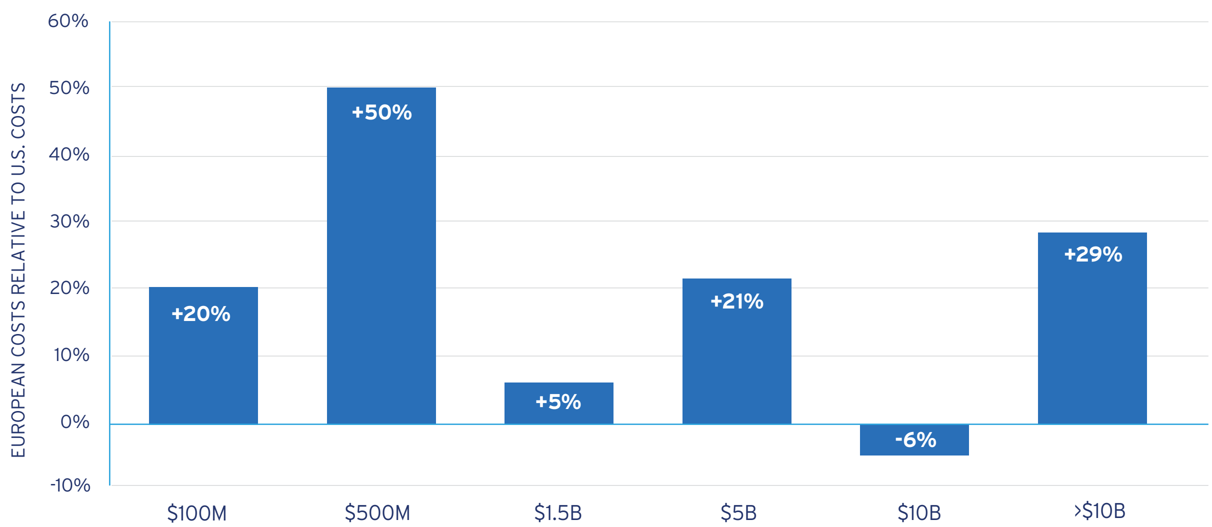
In 4 out of 6 of our size bands, there was a noticeable premium of at least 20% in terms of expenses being cited by European survey participants versus U.S. firms. This was true for hedge funds with $100 million, $500 million, $5.0 billion and >$10.0 billion AUM. For those firms with $1.5 and $10.0 billion AUM, the costs were within +/- 6% of each other—thus much more in line.

Delving into the numbers, one area stood out more than any other in terms of explaining the expense differences between the two regions: This was regarding expenses attributed to marketing. Unlike the U.S. where there is one contiguous market across which hedge funds are looking to raise capital, this is not the case in Europe. Instead, each country in that region is able to dictate its own private placement regime, and marketers must be able to understand and apply various sets of rules in looking to offer their product.

Chart 24 shows the variance between European and U.S. firms in terms of marketing expenses realized by the management company. This includes compensation for marketing-related headcount as well as third-party expenses.

Smaller hedge fund managers in Europe show the most variance in terms of their marketing spend,

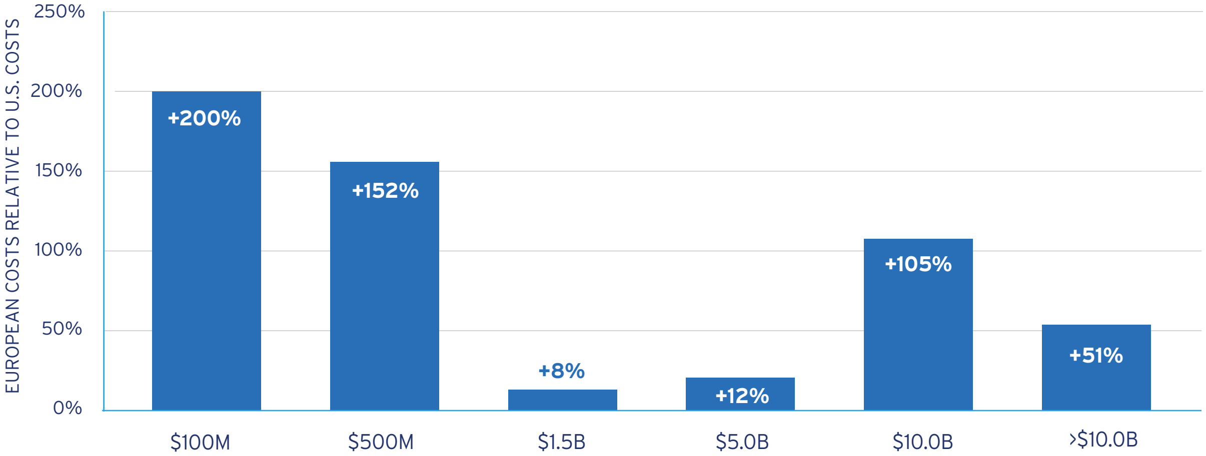
**Chart 23: European vs. U.S. Management Company Expenses**
(Excluding Investment Management)




Source: Citi Prime Finance. EMEA dataset reflects 35 firms with total AUM of $168.5 billion. U.S. dataset reflects 68 with total AUM of $288 billion

## Chart 24: European vs. U.S. Management Company Expenses: Marketing

(Excluding Investment Management)




Source: Citi Prime Finance. EMEA dataset reflects 35 firms with total AUM of $168.5 billion. U.S. dataset reflects 68 with total AUM of $288 billion

with $100 million AUM firms registering costs 200% greater and $500 million AUM firms continuing to show marketing expenses 152% higher. For smaller firms, much of that differential can be attributed to compensation.

In Europe, $100 million AUM firms spent 32 basis points on compensation for 1.07 heads, or the equivalent of $299,065 per head. This differs from the U.S., where total marketing compensation amounted to 10 basis points on 0.92 heads–the equivalent of $108,696 per head. This cost differential continued to be evident at $500 million AUM firms. European firms had an average compensation level of 7 basis points across their 1.32 heads ($265,151 per head) while U.S. firms had spent an average of 4 basis points across 1.21 heads ($165,289 per head) on marketing compensation.

By the time these firms reached $5.0 billion AUM, the compensation differential narrowed, however, with the average compensation in Europe for marketing personnel rising to $545,898, and U.S. counterparts rising to $528,247. Average compensation levels were also similar at the $10.0 billion AUM threshold ($631,500 in Europe versus $597,700 in the U.S.). This shows that although the U.S. adds its marketing personnel later in its development cycle, there is not as much of a compensation differential for larger firms, as both U.S. and European firms look to have senior resources in these roles by the time they are into their institutional phase of development.

Differences in the number of marketing personnel account for much of the variance at higher AUM bands, however. European funds with $5.0 billion AUM had an average of 7.33 heads assigned to marketing versus 6.04 heads in the U.S. At $10.0 billion AUM, the difference was even more pronounced, with European firms registering 20.5 heads versus only 6.6 heads in the U.S.

Chart 25 shows that, on average, marketing costs account for significantly more of the management company's total expenses in Europe than in the U.S. at nearly all major AUM levels.

The other area of expenditures where there was a noticeable European premium was operations and technology. The level of spend on these functions in Europe was larger than in the U.S., but by much smaller margins than were noted in marketing. This is illustrated in Chart 26.

The greatest differentials in operations and technology spend was at our lowest and highest levels of AUM: $100 million and greater than $10.0 billion. Firms in the mid-AUM range were more in line, falling within a -1% to +9% differential.

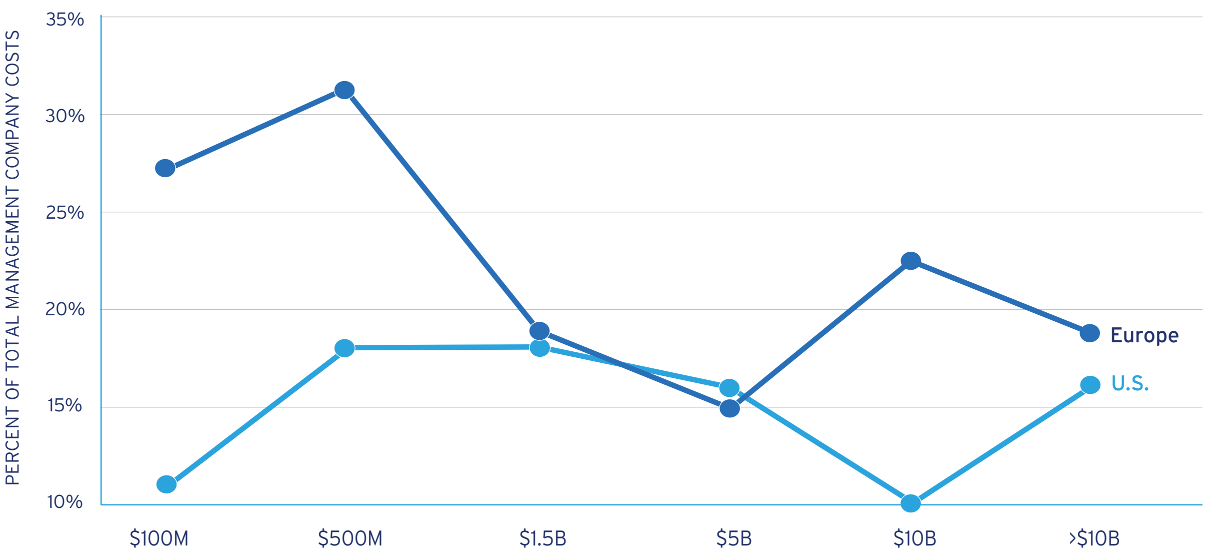
Small European firms with $100 million AUM registered expenses 30% higher than their U.S. counterparts. The difference in operations and technology spend can be attributed to sharply higher third-party expenses. European firms of this size cited 40 basis points of third-party spend versus only 15 basis points for similarly sized U.S. firms. Much of this difference can be attributed to data costs, as there is a substantially more fragmented set of markets to monitor in the European landscape.

The largest European firms with greater than $10.0 billion AUM also showed operations and technology costs that were 21% higher than their U.S. competitors. This, however, was due to headcount. Total operations and technology headcount at the largest European firms averaged 135.2 heads versus only 73.7 heads in the U.S. As a result, compensation-related expenditures on operations and technology for these large European firms were 8 basis points versus only 4 basis points at similarly sized U.S. hedge funds.

While noticeable, these differences are not nearly as great as those due to marketing costs. Chart 27 shows little differentiation in the pattern of spending on operations and technology between the two regions. Indeed, although the absolute basis point spend by European firms might have been higher in this category, the percentage of total management company spend is lower in Europe than for similarly sized U.S. firms in nearly all instances.

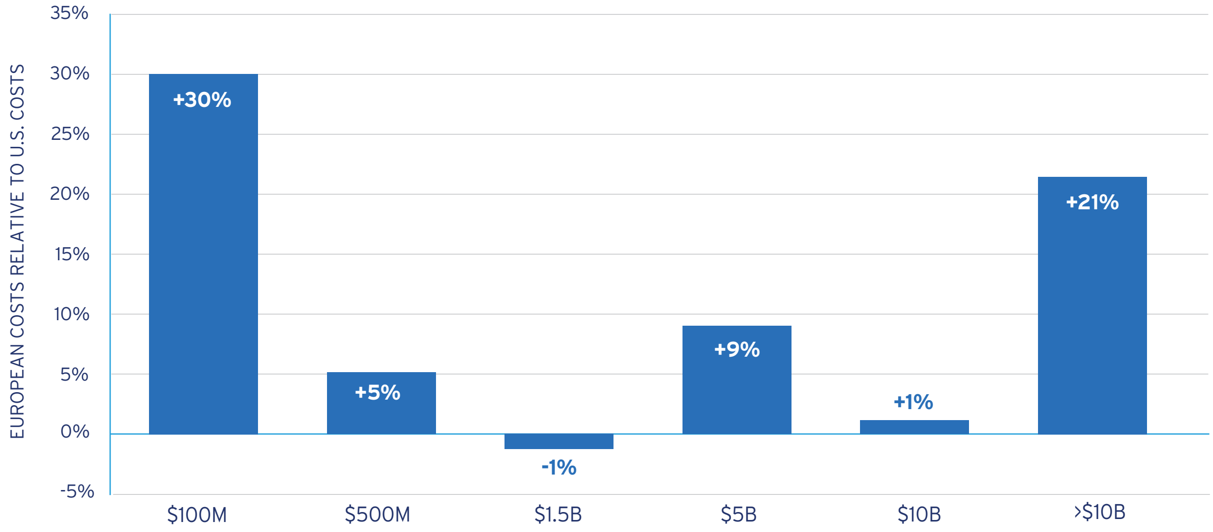
The remaining management company costs reported by our European versus our U.S. survey respondents showed a mixed bag. Risk and compliance and business management costs were higher at some AUM levels in Europe and lower in others. The same held true for business management. On the whole, however, the pattern of European firms registering higher management company expenses (ex-investment management) proved out. The average management company spending for the 35 European firms was $15.8 million versus only $14.6 million across the 68 U.S. firms in our sample. This equates to an overall premium of 8.0% in terms of costs.

**Chart 25: European vs. U.S. Marketing Costs as Percentage of Management Company Costs**
(Excluding Investment Management)



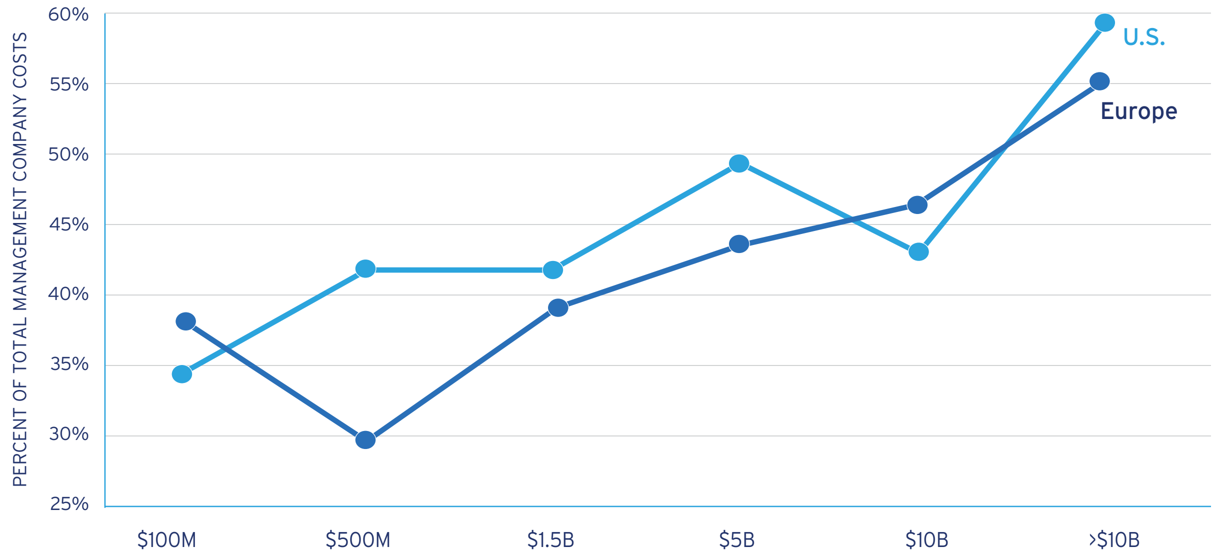

Source: Citi Prime Finance. EMEA data set reflects 35 firms with total AUM of $168.5 billion. U.S. data set reflects 68 with total AUM of $288 billion

**Chart 26: European vs. U.S. Management Company Expenses: Operations & Technology**
(Excluding Investment Management)




Source: Citi Prime Finance. EMEA dataset reflects 35 firms with total AUM of $168.5 billion. U.S. dataset reflects 68 with total AUM of $288 billion

**Chart 27: European vs. U.S. Operations & Technology Costs as Percentage of Management Company Costs**
(Excluding Investment Management)




Source: Citi Prime Finance. EMEA data set reflects 35 firms with total AUM of $168.5 billion. U.S. data set reflects 68 with total AUM of $288 billion

# The APAC "Discount" for Running a Fund

The opposite pattern was evident in reviewing APAC funds in our dataset, where the management company expenses were consistently lower than for similarly sized U.S. and European firms. Survey respondents from this region were confined to smaller-sized firms in the $100 million, $500 million and $1.5 billion AUM bands. We did not receive any results from APAC firms in the higher AUM bands; yet, in each instance, these APAC firms were being run at a substantial discount to similarly sized U.S. and European firms.

Chart 28 shows the results for managers with $100 million AUM. Across our sample of managers at this size, the average management company expenses for U.S. firms amounted to $1.92 million versus $2.18 for European firms. The mean of these two figures was $2.04 million. This compares to $1.46 million in costs for APAC firms—a figure 28% below the mean.

To understand why costs for APAC funds were so much lower, we took the mean spend per category across our management company expenses and compared how much they varied across regions. The results of this analysis are highlighted in Chart 29.

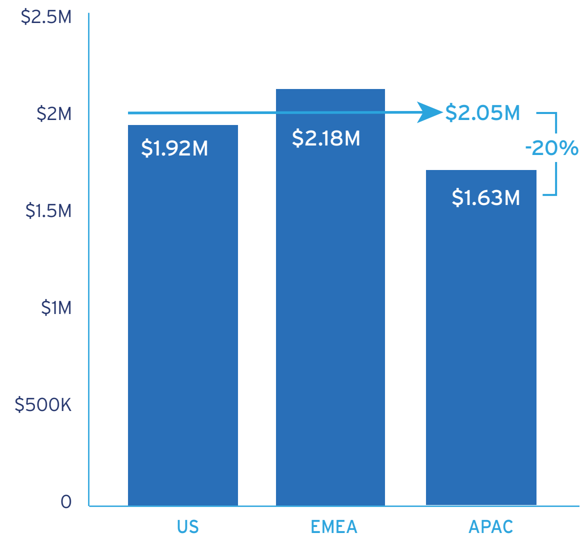
As shown, there is very little differentiation in the amounts being spent across regions in terms of operations and technology, where expenditures by APAC funds with $100 million AUM were almost exactly on mean. Nor was there much difference in terms of risk and compliance, where the same pattern held true. A slightly more noticeable difference was registered on spend for business management, where APAC funds had expenses 13% below the mean.

Marketing was the area where the largest variation in spending between regions was registered. As already discussed, $100 million AUM European firms have extremely high marketing costs when compared to their U.S. counterparts, but these costs were only slightly less pronounced when viewed against the APAC funds. In total, APAC funds spent $232,137 on marketing across personnel and third-party expenses versus $182,136 in the U.S. and $549,587 in Europe.

The size of the APAC discount grows, however, when firms with $500 million AUM are considered. This is shown in Chart 30.

As was previously the case, the total spend by firms in Europe was higher for managers at this size than for either the U.S. or APAC. In the U.S., managers with $500 million AUM spent an average of $3.2 million for their management company expenses, excluding investment management costs. In Europe, the figure was substantially higher, at $4.4 million. The mean between these two regions was $3.8 million, a total that was 42% higher than the $2.2 million being spent in APAC.

**Chart 28: Relative Management Company Expenses: $100 Million Fund**
(Excluding Investment Management)



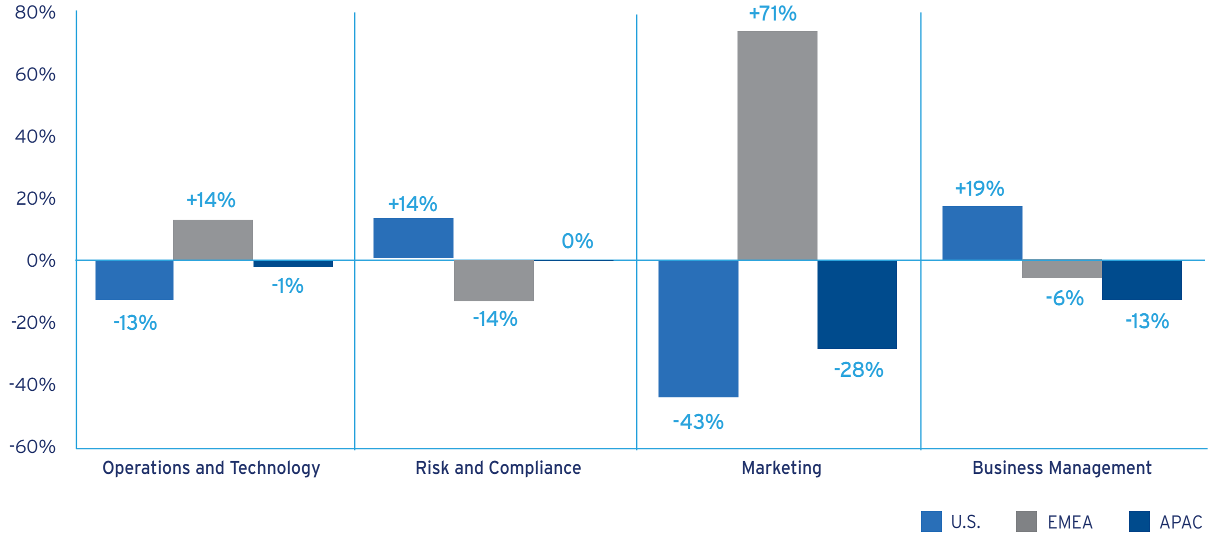

Source: Citi Prime Finance. U.S. data set reflects 20 firms with $2.3. billion AUM. EMEA data set reflects 13 firms with total AUM of $1.2 billion. APAC data set reflects 12 firms with total AUM of $1.2 billion

Differences in headcount between the regions offer little explanation as to why it costs less in APAC. The average $500 million AUM APAC fund has 18.5 heads, of which 9.8 are focused outside investment management. This compares to a total of 15.8 heads in the U.S., 8.1 of which are outside investment management and to a total of 20.0 heads in Europe, 11.0 of which are focused outside investment management.

The average compensation being realized across these regions has much more to do with the cheaper APAC expense load. Across their investment support and business management headcount, $500 million AUM firms in APAC pay on average only $115,492 per person versus $224,287 in the U.S. and $224,254 in emerging markets in Europe and Asia (EMEA).

## Chart 29: Management Company Expenses By Category: $100 Million Fund

(Variance to Mean Spend by Region)

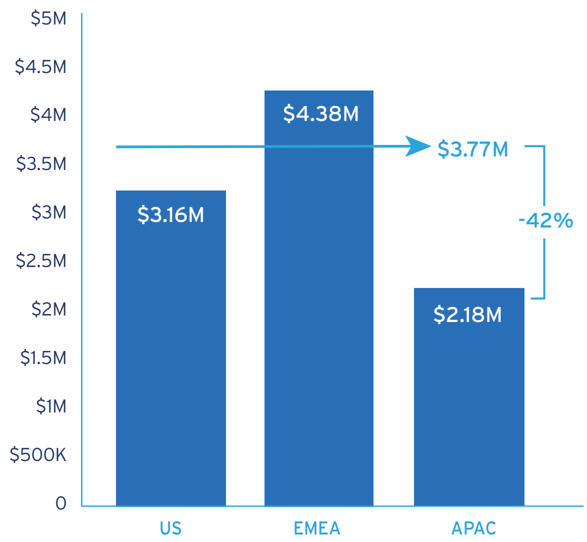



Source: Citi Prime Finance. U.S. dataset reflects 20 firms with $2.3 billion AUM. EMEA dataset reflects 13 firms with total AUM of $1.2 billion. APAC dataset reflects 12 firms with total AUM of $1.2 billion

Chart 31 shows that less expensive APAC headcount costs are impacting the overall level of spending in each major management company expense category outside investment management. As shown, costs in APAC are lower across the board than in other regions. The bulk of this is due to compensation.

In operations and technology, third-party expenses in APAC at 8 basis points are actually higher than in the U.S. (5.3 basis points) and in EMEA (7.1 basis points). In risk and compliance, APAC and EMEA third-party expenses are on par at 1.0 and 0.9 basis points, respectively, lower than the 5.3 basis points in the U.S. A similar pattern holds true for business management, where APAC and Europe are on par (5.0 and 5.3 basis points, respectively) and U.S. third-party expenses are higher, at 6.9 basis points.

## Chart 30: Relative Management Company Expenses: $500 Million Fund




Source: Citi Prime Finance. U.S. dataset reflects 10 firms with $5.3. billion AUM. EMEA dataset reflects 6 firms with total AUM of $3.3 billion. APAC dataset reflects 5 firms with total AUM of $2.4 billion

The only area where APAC third-party expenditures are noticeably lower than in the other regions is marketing. For this function, APAC registers only 5.0 basis points of average cost compared to 17.2 basis points in EMEA and 6.2 basis points in the U.S.

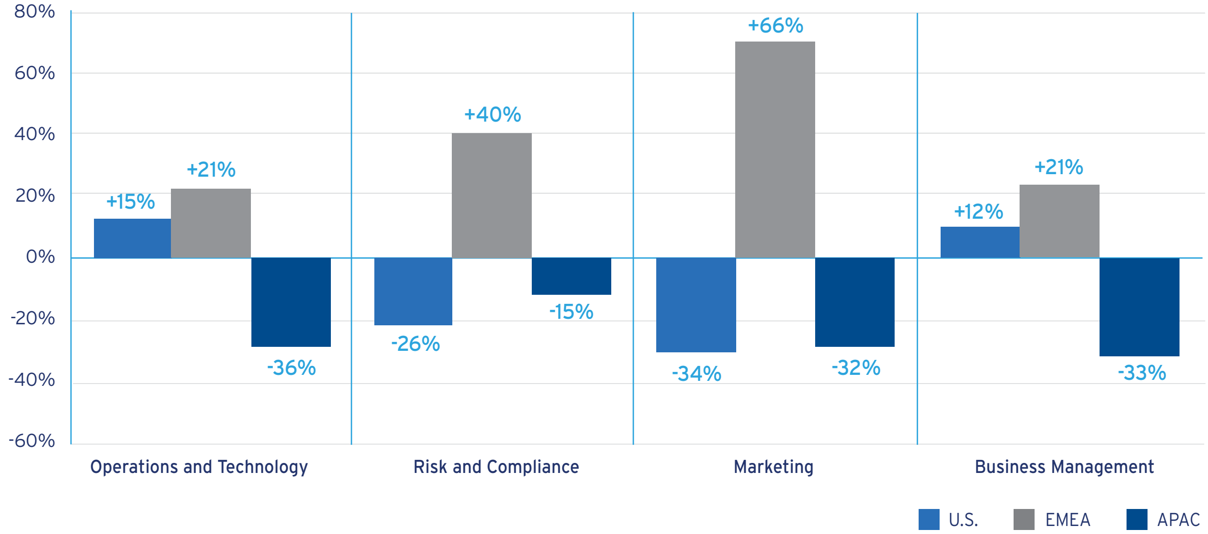
A very similar set of results is evident when we compare APAC funds with $1.5 billion AUM. This is shown in Chart 32.

U.S. funds with $1.5 billion AUM spend $7.6 million on average on management company expenses outside of investment management. This compares to $8.4 million for EMEA funds. The mean between those two sets of firms is $8.0 million. This compares to total expenditures outside investment management of only $4.9 million in APAC—a figure 39% lower than the mean.

As was previously the case, firms with $1.5 billion AUM in APAC have total headcount that lines up closely with similarly sized European firms. APAC hedge funds have 42.7 total headcount, of which 23.0 are focused outside investment management. European firms have 43.4 headcount, of which 28.6 work in investment support and business management. U.S. firms continue

## Chart 31: Management Company Expenses by Category: $500 Million Fund

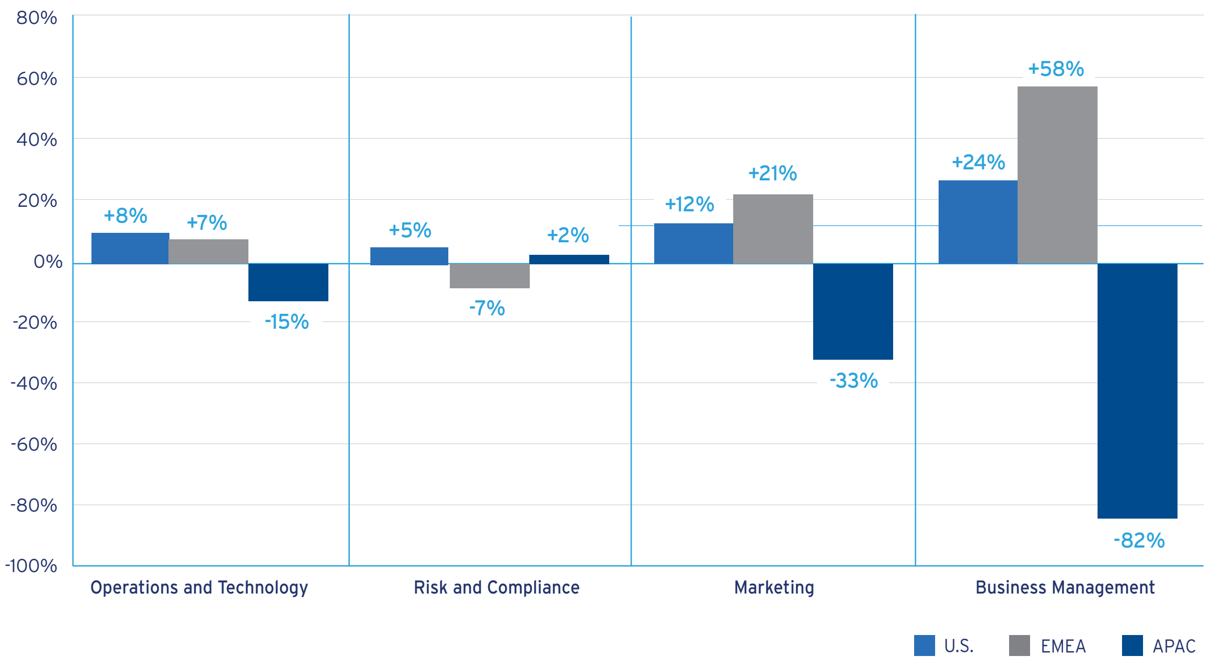
(Variance to Mean Spend by Region)




Source: Citi Prime Finance. U.S. dataset reflects 10 firms with $5.3. billion AUM.
EMEA dataset reflects 6 firms with total AUM of $3.3 billion. APAC dataset reflects 5 firms with total AUM of $2.4 billion

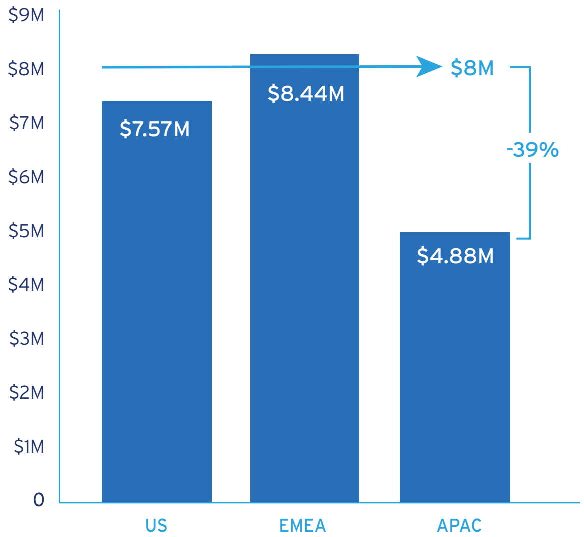
## Chart 32: Management Company Expenses by Category: $1.5 Billion Fund

(Variance to Mean Spend by Region)




Source: Citi Prime Finance. U.S. dataset reflects 16 firms with $26. billion AUM.
EMEA dataset reflects 8 firms with total AUM of $12.7 billion. APAC dataset reflects 4 firms with total AUM of $5.1 billion.

**Chart 33: Relative Management Company Expenses: $1.5 Billion Fund**




Source: Citi Prime Finance. U.S. dataset reflects 16 firms with $26 billion AUM. EMEA dataset reflects 8 firms with total AUM of $12.7 billion. APAC dataset reflects 4 firms with total AUM of $5.1 billion.

to operate with fewer resources. In total, U.S. firms have 32.8 heads, of which 18.9 are focused outside investment management.

Average compensation per head for investment support and business management roles also continues to lag in APAC. On a per-head basis, our model showed that APAC hedge funds were only paying $129,320 versus $189,557 in EMEA. In the U.S., there is a sharp jump in average compensation that takes place at the $1.5 billion AUM mark; this is where many organizations begin to hire professional operations and investor relations teams. This boosts their average per-head compensation expense to $316,495.

APAC firms with $1.5 billion AUM also pay much less in third-party expenses than their peers in other regions. Our model shows these firms registering a total third-party spend of 10.8 basis points. This is lower than in the U.S., where the total is 12.7 basis points and substantially less than for EMEA firms, where the figure was 20.9 basis points.

Chart 33 shows the breakdown of combined compensation and third-party costs by category.

There is not the same across-the-board difference in spend for APAC firms at $1.5 billion average AUM. Expenditures on risk and compliance are on par with those being registered in the other regions, and outlays on operations and technology are only modestly lower. The big differences in spend are focused on marketing and in business management.

For marketing, APAC firms at this AUM level are spending only 6.4 basis points across compensation and third-party expenses compared to 9.2 basis points in EMEA and 8.3 basis points in the U.S. Business management expenditure gaps are even larger, although it appears that there may be some missing data points; APAC funds at 1.9 basis points had no listed third-party expenses. This compares to total basis points of 12.8 in EMEA, 5.3 of which were related to third-party expense and to total basis points of 9.8 in the U.S., of which 6.1 were related to third parties.

# Deep Dive: The Expense Impacts of Hedge Fund Regulation

This year's Business Expense survey asked respondents to provide a deep dive into their firm's plans in regards to spend related to regulation. Survey respondents were asked to consider various regulations in terms of their impact on resources, software and third-party expenses. Specifically, firms were asked about the following:

- SEC/CFTC registration and compliance
- AIFMD registration and compliance
- SEC/CFTC regulatory reporting
- AIMFD regulatory reporting
- Dodd-Frank/EMIR-related OTC derivative clearing rules
- FATCA
- Asian regulatory requirements

Respondents were asked to indicate a "pain threshold" in terms of how much each of these regulatory initiatives was expected to impact key investment support functions. Such functions included legal and compliance, risk, accounting/operations, marketing and technology.

## Smallest Firms Show Most Stress to Their People Infrastructure

Chart 34 presents a heat map showing respondents' expected impact for each of the major regulatory categories by size. For convenience, we have grouped all the registration and compliance requirements into one bucket and all of the regulatory reporting requirements into a separate bucket rather than considering the impact of each set of rules separately, since it is likely that the same people within the hedge fund organization will focus on all these efforts. Firms that expect to be severely impacted register within the heat map as bright red, moderately affected as yellow, and mildly or not affected as green.

As is evident by the shading, the smaller the fund, the more onerous the people impact of regulation. Yet, what was also clear from the findings was that for all firms with $10.0 billion AUM or below, registration and compliance were more burdensome than reporting. Reporting was more burdensome than OTC derivative clearing and FATCA, and very little impact was expected from the Asian regulations. Firms with greater than $10.0 billion AUM were nearly all green, showing that they expected little impact from the regulatory mandates overall.

Flipping this around, it is instructive to understand functionally where the greatest impact was anticipated within the hedge fund organization. This is illustrated in Chart 35.

**Chart 34: Level of Effort Required from Existing Staff to Meet Regulatory Mandates: by Regulatory Initiative**

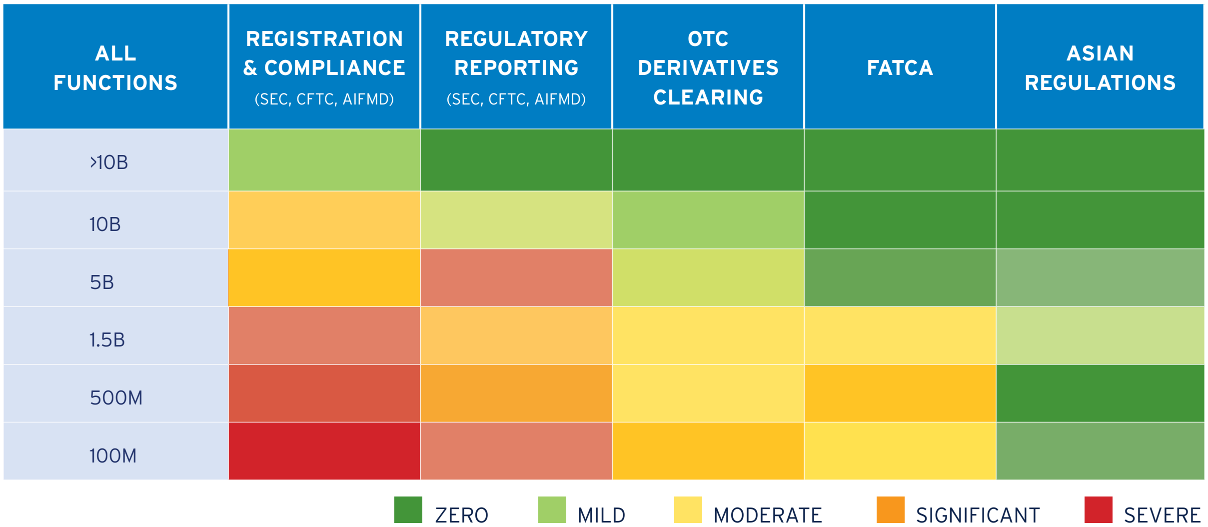
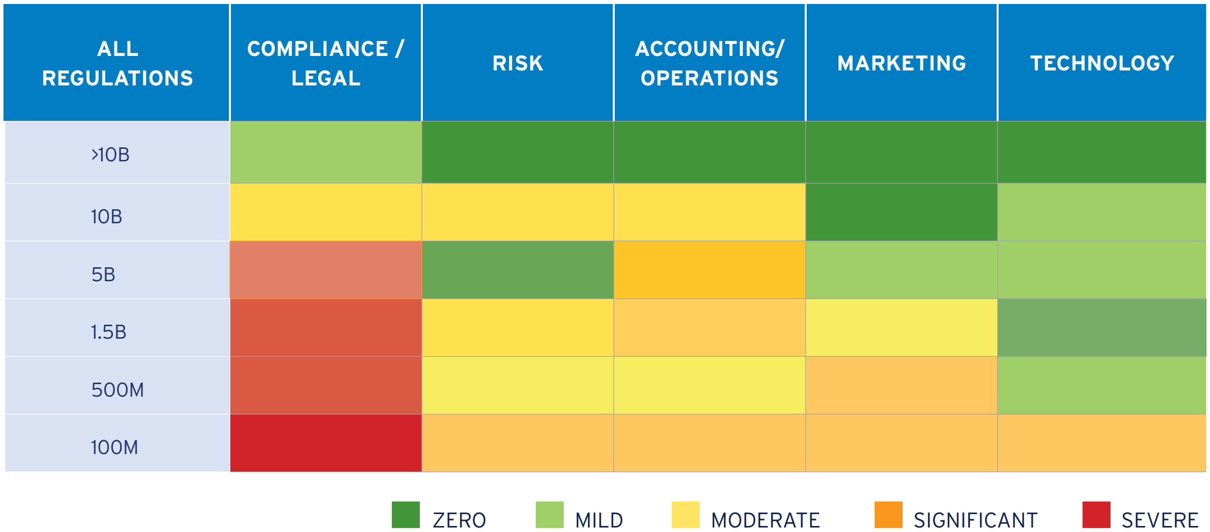


**Chart 35: Level of Effort Required from Existing Staff to Meet Regulatory Mandates: by Function**




Similar to the earlier analysis, when we consider the amount of effort expected from existing staff to support regulation, it is evident that the smaller the fund, the greater the impact on its people. From a departmental perspective, compliance and legal were the most impacted areas, as would be expected. Risk and the accounting/operations teams are also seen bearing a moderate amount of the burden in most of the firms at $10.0 billion AUM or below. Little impact was expected at higher AUM bands for marketing- or technology-related personnel, although smaller firms saw regulatory impacts requiring effort even in these categories.

It is again worthy to note that the largest of hedge funds were not impacted to any significant degree across any of their departments in terms of measuring regulatory effort as a percentage of total effort. This indicates that their robust teams are well equipped to handle the ever-increasing complexity of the industry, regulatory or otherwise.

## Third-Party Expenses Related to Regulation Impact Budgets at Majority of Firms

Survey respondents were asked to provide details on their total third-party expenses related to specific regulatory mandates. The results of that analysis are highlighted in Chart 36. A few details stand out in terms of providing insight about which regulatory requirements are most impacting the firms' budgets at this point in time.

The first observation is that, as was noted earlier, the smallest firms need to spend more as a percentage of their total AUM in order to comply with industry regulations. This implies a higher relative burden on smaller funds, which in turn translates to a higher barrier to entry. Break-even for these managers has already moved up to $300 million AUM and if regulatory costs continue to rise, that figure could move up even further.

The second observation from Chart 35 is that spending on third parties to support SEC/CFTC registration, compliance and reporting requirements is viewed to be slightly more burdensome than expenditures related to AIFMD registration, compliance and reporting. This makes sense given the broad application of the SEC/CFTC registration mandate versus the more limited wave 1 implementation of AIFMD registration and reporting requirements for European Union-domiciled funds only at this point in time.

The other points to be drawn from Chart 36 are that once again, regulations had little impact on the largest firms with >$10.0 billion AUM; interestingly, there has thus far been little to no impact in terms of third-party expenses related to the Dodd-Frank/EMIR OTC derivative clearing rules. Looking at the Asian regulations, only the smallest hedge funds indicated a measurable impact in terms of third-party expense, although this aligns to the survey responses from that region that were also confined to the smaller AUM bands.

## Compensation for Compliance Personnel Outstrips All Other Costs

Within the compliance function, we further asked participants to break down their expenditures, highlighting how much of their cost came from compensation to their internal team, how much was attributed to software or other third-party charges being assessed to the management company and finally, how much third-party expense was being charged back to the fund level. The results of this analysis are highlighted in Chart 37.

For small hedge funds with only $100 million AUM, compensation accounted for 8.7 basis points ($87,000) out of total expenses of 17.7 basis points ($177,000)—49% of total compliance expense. The other half of the budget for these firms is being spent on third-party assistance. This indicates the necessity for small funds to outsource much of their regulatory and compliance burden. One benefit of this approach is that because these are external charges related to the operations of the fund, these firms are able to charge back a higher share of their expenses to the fund level (21%). The cost of building in house capabilities is still prohibitive at these bands. This changes as firms grow their AUM.

At other size bands, the percentage of compliance spend related to compensation was actually significantly higher, near 70% or more. This reflects the move to internalize more of their own controls, a feature of the institutional phase of development.

Overall dollar-based costs of compliance rise only modestly, from $177,000 to $210,000 as hedge funds move from $100 million to $500 million AUM, but the composition of those costs is quite different. Expenditures on software and other third-party services shrinks from 51% to only 23% of compliance spend. This share continues to decline at every progressive AUM level within the institutional category, falling to only 6% for firms with $10.0 billion AUM.

Total spending on compliance stabilizes at $500 million and remains at 3 to 4 basis points as firms move through their entire institutional phase of development, culminating when AUM reaches $10 billion. The amount of expense being charged back at the fund level settles around 0.1 basis points. By $10.0 billion AUM, even this minimal charge evaporates, and all of the software and third-party costs related to compliance are being borne by the management company.

A similar pattern holds true as firms surpass $10.0 billion AUM and reach the franchise stage, but the shifting product range of these franchise firms results in a somewhat different mix of third-party expenses being borne at the management company level. Whereas compensation continues to account for the majority of compliance expenditures (80%), there is a sharp jump in spending related to compliance software. This reflects the ready availability of compliance monitoring systems for regulated and long-only products compared to the more complex private fund industry. Software accounts for 15% of the expenses for the largest franchise-sized firms.

Chart 36: Amount of Total Third Party Spend Focused on Regulation: By Regulatory Mandate

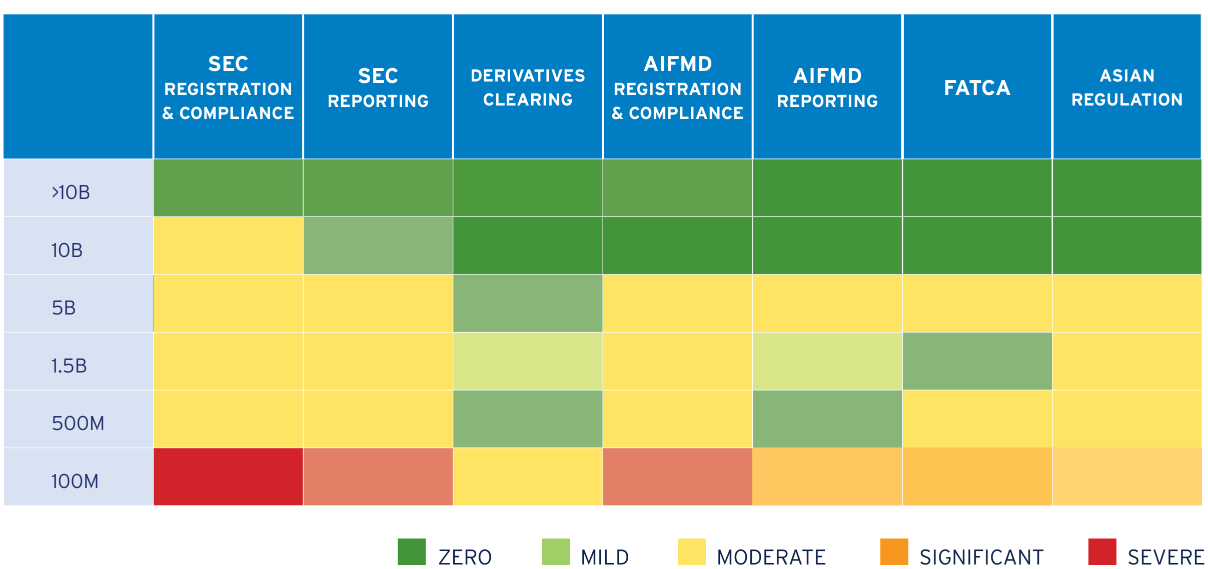
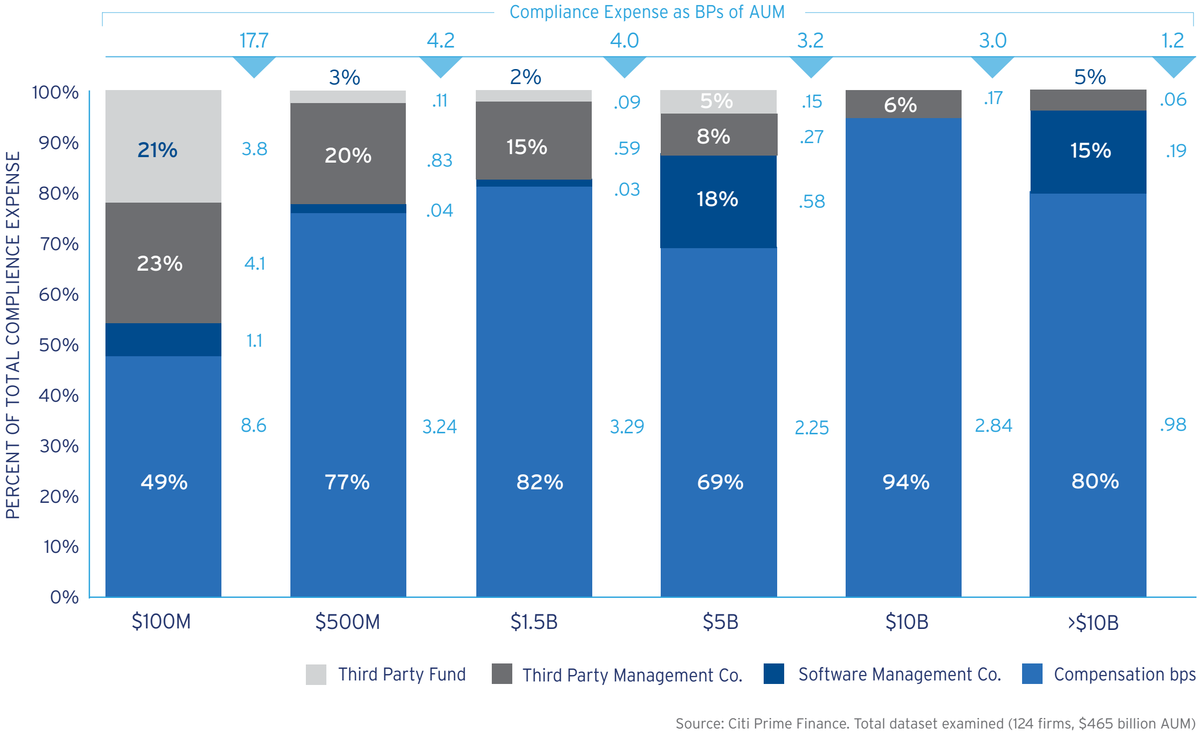


Chart 37: Compliance Spend by Category




Source: Citi Prime Finance. Total dataset examined (124 firms, $465 billion AUM)

## Compliance Related Hiring Ramps Up in EMEA & APAC

Regional views on the importance of various regulatory initiatives vary, as shown in Chart 38.

The greatest focus of effort and spend across all functions for hedge funds based in the U.S. is on SEC/CFTC registration, compliance and reporting. U.S.-based managers were three times more likely to be focused on these rules than on AIFMD, which definitely represented a secondary set of concerns. Many of these managers have clients based in Europe and/or trade European markets as a part of their portfolio. The impact of marketing and remuneration requirements associated with AIFMD on U.S. managers is being hotly debated at present, but not much work is being contemplated at the present time. Some lingering alignment to the Dodd-Frank derivative clearing rules and assessments for how EMIR, the European version of those regulations, may affect existing solutions is showing up in our dataset as a minor focus. Neither FATCA nor emerging Asian regulations are showing up as a significant concern.

In EMEA, this situation is strikingly different. There is an extremely high level of concern and a large expected focus on registration, compliance and reporting across both the SEC/CFTC and the AIFMD set of regulations. Derivative clearing requirements are also registering as a secondary, but still significant,

Chart 38: Projected Regulatory Impact by Region

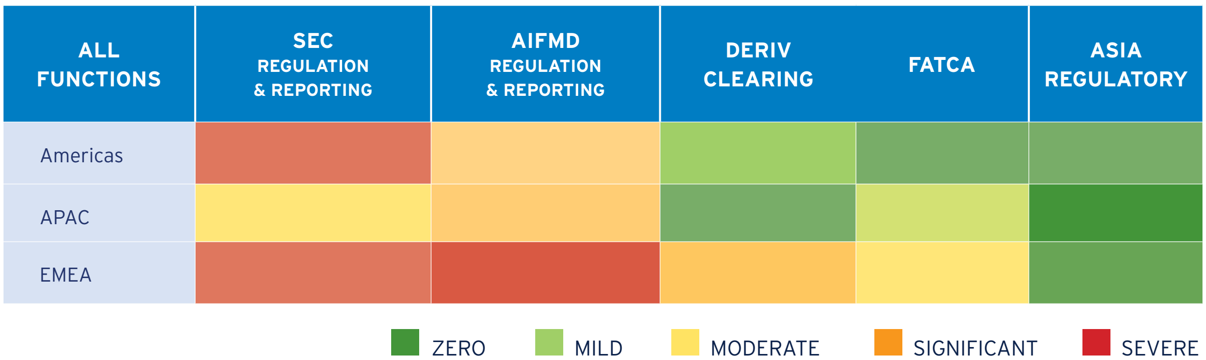
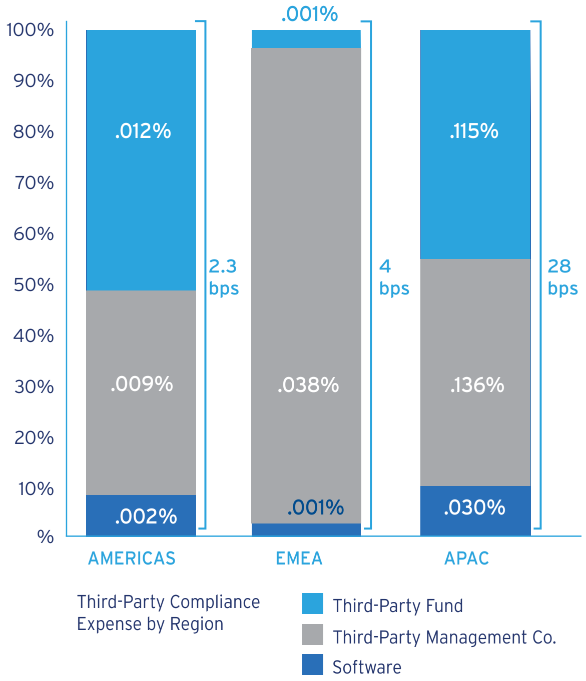


**Chart 39: Third Party Spend on Compliance by Region**




Source: Citi Prime Finance. Total data set examined (124 firms, $465 billion AUM)

area of concern and FATCA also is fairly high on the radar for these funds given the focus of those rules on offshore investors. The only regulatory topic not registering as a moderate to severe concern for EMEA hedge fund managers is the emerging set of Asian regulations.

Managers in APAC seem to have the least level of regulatory concern, even about the rules coming into play in their own region. These managers express the most concern about AIFMD, but only see that as having a moderate to significant, not severe, impact on their organizations. SEC/CFTC registration, compliance and reporting are seen as even less concerning with even FATCA coming up as only a mild area of focus.

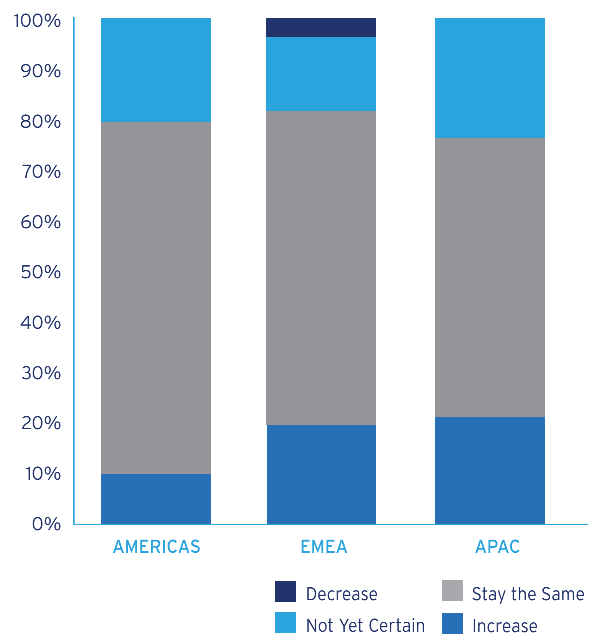
How each region addresses its expected regulatory compliance also varies, as shown in Chart 39. In EMEA, there is currently very little in terms of third-party software or outsourcing options available to help them with their compliance efforts regarding AIFMD. This situation is likely to change once country-by country rules around new AIF filings are determined and software solutions and new intermediaries begin to emerge. For now, however, software spending related to compliance only amounts to 2.5% of total third party spend of 4 basis points in this region. Similarly, only 2.5% of all third party expenditures related to compliance are being charged back to the fund level. The equal-weighted average AUM of the European funds highlighted in this analysis was $4.8 billion.

This contrasts with the situation in the U.S. and APAC. In those regions, expenditures on software account for about 10% of their total third-party spend on compliance. This reflects uptake of Form PF and Form CPO-PQR reporting packages and other data management offerings geared to support SEC and CFTC regulatory filings. These new reporting requirements apply to all U.S.-based managers with >$150 million AUM and to the majority of APAC firms that invest heavily in marketing to U.S. clientele.

The deadline for aligning to these filings is now nearly 1 year in the past. All firms that have registered with the SEC or the CFTC have been through at least one regulatory reporting period, and have another approaching soon. Larger firms have been through 5 and are approaching their 6th reporting period since the filing deadlines kicked in during mid-2012.

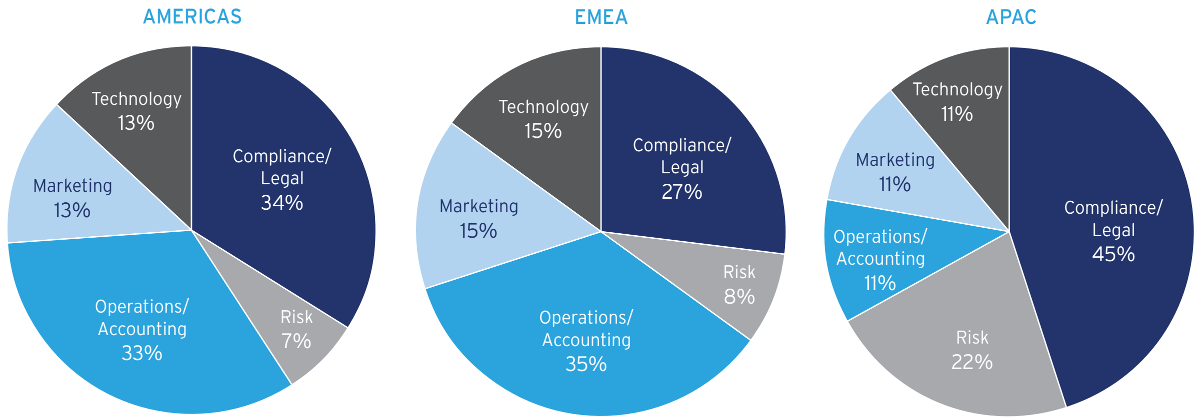
There are also more firms offering outsourced solutions for this market, a portion of which can be more readily charged back to the fund level as opposed to being primarily borne by the management company. In the U.S., 52% of the total 2.3 basis points of compliance expenses are being charged back at the fund level and in APAC, 41% of the 0.28 basis point expense is being charged back.

**Chart 40: Headcount Intentions Linked to Regulation**




Source: Citi Prime Finance. Total dataset examined (124 firms, $465 billion AUM)

## Chart 41: Regulation-Linked Headcount Increases by Function




Source: Citi Prime Finance. Total dataset examined (124 firms, $465 billion AUM)

Though APAC hedge funds have just over 10x more compliance-related third-party charges than U.S. hedge funds, this is a factor related to the average AUM of the managers. Across our entire U.S. dataset, the equal-weighted average AUM is $4.2 billion, whereas that figure is only $413 million for APAC managers.

Headcount intentions confirm that the regulatory wave has crested earlier in the U.S., and that European and APAC managers are still in a period of ramping up their regulatory focus to align to global demands. Chart 40 shows that 20%, or 1 in 5, EMEA- and APAC-based hedge funds are looking to increase their headcount in response to regulatory demands in the coming year versus only 1 in 10 U.S.-based managers.

Adding legal and compliance personnel is expected to account for the largest increase in headcount across all three regions, with EMEA-based managers attributing 27% of their increase to this function, U.S. managers 34% and APAC hedge funds 45%. Beyond this one area, there is more variance across regions in terms of what functions managers are looking to expand.

U.S. and European managers see growth in their operations and technology headcount accounting for 45% to 50% of their increase, whereas APAC hedge fund managers only expect these functions to account for 22% of their increased headcount. By contrast, APAC managers are looking for growth in their risk teams to account for 22% of headcount growth, whereas that figure is only 7% to 8% across the U.S. and EMEA.

Finally, EMEA managers plan on allocating 15% of their increased headcount to marketing to handle new regulatory mandates—a figure not much different than the 13% expected by U.S. hedge funds and the 11% gain expected across APAC firms. These figures are highlighted in Chart 41.

# Conclusion

Throughout this report, we have explored the economics and overall business expense of running a hedge fund organization. There were several key themes that came through in the analysis.

The hedge fund industry moves through distinct phases in terms of its cost basis. Emerging hedge funds below $1.0 billion AUM have extremely high costs and realize limited amounts of operating margin, even after they surpass the $300 million break-even point. Institutional hedge funds with $1.0 billion to $10.0 billion AUM have a lower business expense load, but show no real economies of scale as their assets increase. These firms average ~60 basis points of expense and clear ~1.0% operating margins, even as their AUM increases. Franchise-sized firms with >$10.0 billion AUM have a significantly broader product mix, with more regulated alternative and long-only money. Their cost basis is lower, nearly half of that for firms in the institutional category. Thus, even with lower average management fee collections, they nonetheless show nearly a 20% expansion in their operating margins.

As the hedge fund industry matures, the $10.0 billion AUM threshold is becoming an increasingly important transition point. There is a steady increase in the average amount of AUM per investment management head as firms grow from $100 million AUM and surpass the institutional threshold, but the pace at which that AUM/head expands slows appreciably as firms move from $5.0 billion to $10.0 billion AUM. To resume growth, firms at the $10.0 billion AUM level show a spike in the ratio of investment support to investment management personnel. This spike reflects an expansion in the capabilities of the fund that allows for the change in product mix that occurs as firms surpass the $10.0 billion AUM mark. By the time funds reach our average >$10.0 billion AUM of $36.4 billion, the previous pattern of about a $40 million to $50 million increase in AUM per investment management head resumes.

## Notes

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