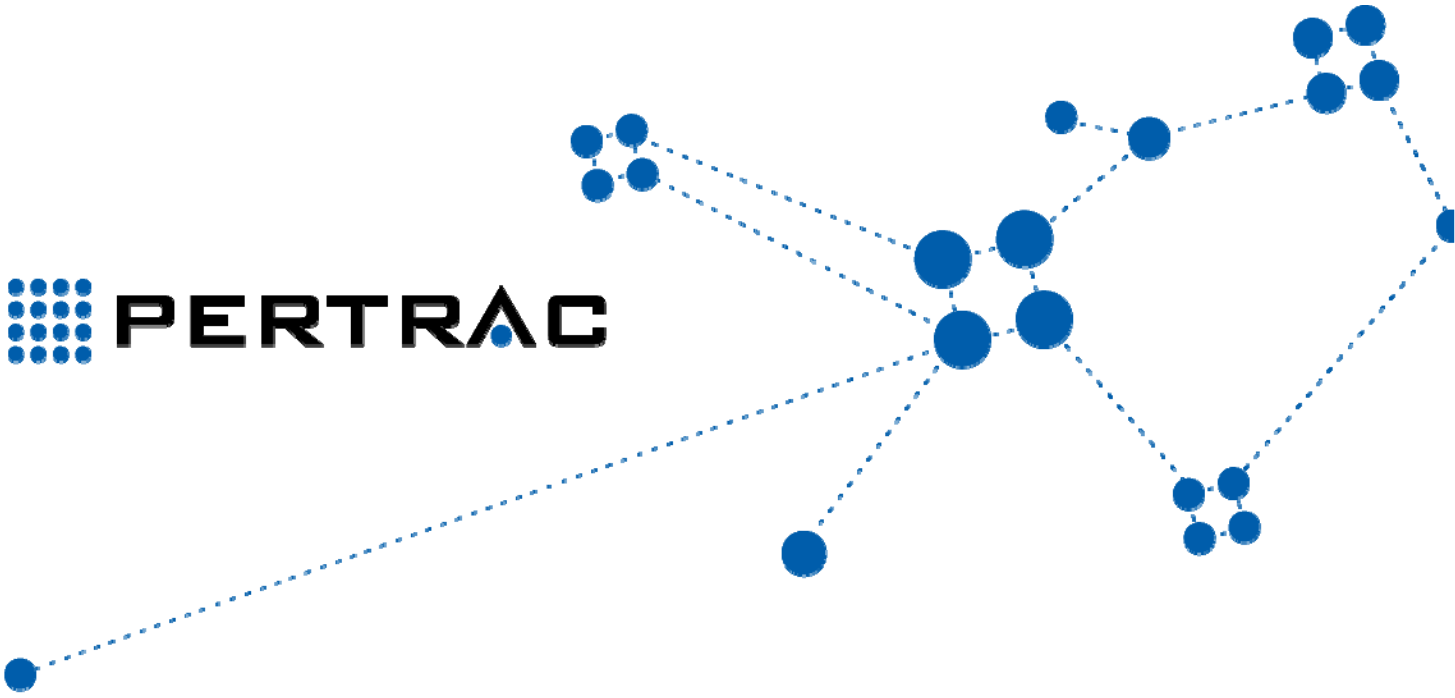

PERTRAC

Impact of Fund Size and Age on Hedge Fund Performance

Fifth Annual Update for 2010 Performance, With a 2011 Review

September 2011

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OVERVIEW

This study examines the performance of hedge funds by Age and Size. Building on earlier PerTrac studies entitled, "An Examination of the Impact of Fund Size and Age on Hedge Fund Performance," published in 2009 and 2010, this PerTrac study provides the most recent full year (2010) data on hedge fund performance. 2010 performance figures are compared to historical figures since 1996 to determine whether performance trends based on size and age have continued. We conclude the study with a first half review of 2011.

For purposes of this study, small funds are funds with Assets Under Management (AUM) of less than $100 million, mid-size funds are between $100 and $500 million, and large funds are over $500 million. Young funds are less than two years old, mid-age funds are two to four years old and tenured funds are older than four years.

HIGHLIGHTS FOR FIRST HALF OF 2011 AND FULL YEAR 2010

By Age

- In 2010, young funds outperformed mid-age funds and tenured funds. Young funds returned 13.25%, mid-age funds 12.65% and tenured funds 11.77%.

- In 2010, tenured funds comprised more than 50% of the hedge fund universe, while mid-age funds and young funds made up 22.44% and 24.43%, respectively.

- The performance of both mid-age and tenured funds through the first six months of 2011 was significantly stronger than the same time period in 2010.

- Though young funds are underperforming in 2011 relative to 2010, they continue to lead the age indices in Year-to-Date 2011 return figures.

By Size

- Small funds outperformed mid-size and large funds in 2010, returning 13.04%, 11.14%, and 10.99%, respectively. Small funds beat mid-size funds in seven out of twelve months, while outperforming large funds in eight out of twelve.

- Small funds, in 2010, comprised 71.39% of the hedge fund universe, mid-size funds 21.17%, and large funds 7.44%.

- The performance of both small and mid-size funds through the first six months of 2011 was better than their performance for the same period in 2010, while the performance of large funds for the same periods was down.

- The average 2010 AUM of small funds was $26,152,437, mid-size funds $225,671,876, and large funds $1,847,867,623. Small funds comprise 1.25% of the total average AUM in 2010, mid-size funds 10.75%, and large funds 88.00%.

COMPARING 2010 WITH 2009

By Age

- Young funds outperformed both mid-age and tenured funds, returning 25.19% in 2009 and 13.25% in 2010. Tenured funds and mid-age funds performed better in 2009 than 2010.

- Negative monthly returns were more prevalent in 2010 than in 2009. In 2009, young funds were negative for one month, mid-age funds for one month, and tenured funds for three months. In 2010, young funds were in the red for three months, mid-age funds for three, and tenured funds for four.

- Tenured funds' percent share in the aged based hedge fund universe increased to 53.13% of the universe in 2010 from 51.65% in 2009. Mid-age funds declined to 22.44% in 2010 from 23.75% in 2009, and young funds experienced the smallest change, declining to 24.43% in 2010 from 24.60% in 2009.

By Size

- Small funds outperformed both mid-size and large funds in 2010 by returning 13.04%, but mid-size funds outperformed small and large funds in 2009 by returning 22.61%. Large funds had the worst performance for both years.

- The number of small funds comprising the hedge fund universe declined in 2010 from 2009. Small funds declined from 74.07% of the universe in 2009 to 71.39% in 2010, while mid-size funds increased from 19.71% in 2009 to 21.17% in 2010, and large funds increased from 6.22% in 2009 to 7.44% in 2010.

- The total average AUM for all three fund sizes increased in 2010 from 2009, with large funds experiencing the greatest increase in AUM. The average AUM for small funds rose 3.48%, mid-size funds 2.96%, and large funds 4.11%.

TRENDS DURING 1996 TO 2010

By Age

- Young funds have outperformed both mid-age and tenured funds in 13 out of the last 15 years. In 1999, young funds finished 0.13% behind the mid-age funds. In 2003, young funds finished 0.56 % behind the tenured funds and 0.18% behind mid-age funds.

- Mid-age funds have outperformed tenured funds in 8 out of 15 years since 1996.

- The best performance year for all three fund ages was 1999, with young returning 34.54%, mid-age 34.67%, and tenured 25.26%.

- The worst performance year for all three fund ages, and the only one in which any of the funds finished the year in negative territory, was 2008. Young funds fared best during the crisis, declining -11.31%, followed by tenured funds at -17.85% and mid-age funds at -19.46%.

- The cumulative total return for young funds is 848.03%, mid-age 462.47%, and tenured 373.32% over this period.

- Young funds have produced better returns with less volatility since 1996. The annualized compound rate of return for young funds since 1996 is 16.18%, mid-age 12.20%, and tenured 10.92%. The annualized standard deviation for young funds since 1996 is 6.37%, mid-age 7.04%, and tenured 6.77%.

By Size

- Small funds outperformed mid-size and large funds in every year except for 2008 and 2009. Small funds were the worst performers in 2008 and they came in second to mid-size funds in 2009, returning 21.50%, while mid-size funds gained 22.61%, and large funds gained 18.72%.

- Mid-size funds outperformed large funds in 10 out of 15 years since 1996, all but one year since 2002.

- The best performance year for small and mid-size funds was 1999, when small funds returned 32.18% and mid-size 26.54%. The best performance year for large funds was 2009 when they returned 18.72%. The worst performance year for all three fund sizes, and the only one in which any of the funds finished the year in negative territory, was 2008. Large funds fared best, declining -14.10%, followed by mid-size funds at -16.04%, and small funds at -17.03%.

- The cumulative total return for small funds is 576.91%, mid-size 370.12%, and large 317.74% since 1996.

- Small funds have produced better returns, but with more volatility. The annualized compound rate of return for small funds since 1996 is 13.60%, mid-size funds 10.87%, and large funds 10.00%. The annualized standard deviation for small funds since 1996 is 6.95%, mid-size 5.94%, and large 5.96%.

METHODOLOGY

To create the total universe of funds to be analyzed for the current study, we first merged five leading hedge fund databases into a master database: BarclayHedge, BarclayCTA, Hedgefund.net, Hedge Fund Research and Morningstar Hedge (formerly Altvest) for a total of 26,881 fund entries. Pooling these databases provides a comprehensive universe of alternative Indices, Fund of Funds, Hedge Funds, and Commodity Trading Advisors (CTA). To have an accurate cross-comparison for this study we selected only funds investing directly. Therefore, Indices and Funds of Funds are excluded in the final universe.

From an initial 26,881 funds, 11,402 were automatically de-duplicated using the PerTrac ID de-duplication process. This reduced the total number of funds within the master database to 15,479 records. Of these, 28.10% (4,349) were removed because they were either Indices or Funds of Funds; the remaining 71.90% (11,130) of funds passed as Hedge Funds or CTAs. Finally, to eliminate any erroneous cross-comparisons during the Fund Size and Performance section of the study, funds denominating their assets in currencies other than U.S. Dollars were excluded. From the universe of 11,130 Hedge Funds and CTAs, 64.30% (7,157) report in US Dollars. These 7,157 funds are the baseline for the 2010 study as well as the 2011 review.

I. Size and Performance

For the Size and Performance portion of the study the key statistic to examine is AUM for each of the baseline funds. Our automatic de-duplication tool is the proper starting point for removing performance biases associated with double-counts. However, manual exception reporting of the AUM data is required given that a number of funds simply report by repeating the same total AUM of the fund regardless of the fund record and irrespective of the various fund classes (A, B, C, etc.), series (I, II, III, etc.), structures (offshore, onshore, USD feeder, etc.), or companies (LP, Ltd, LLC, etc.). A substantial number of funds do not distinguish their AUM at the share level from the AUM at the overall fund level. Therefore, these double counts were removed prior to aggregation. Why some funds refrain from reporting AUMs at share levels is open to speculation, but one can imagine that it is much easier to copy the same AUM several times instead of inputting several unique figures during information submission to third party information providers. As a result of this AUM double-count dilemma, we make the following assumption for the size and return portion of the study:

> *Assumption: Equal AUM across an individual fund both at its fund shares and at the fund level are counted only once.*

December was chosen as the benchmark AUM monthly figure because it is the last month of the year. Of the 7,157 baseline funds in the study, 311 had nothing reported for the December 2010 AUM and 1,309 had a $0 value. Therefore, we excluded these funds as well, which amounted to a 22.64% reduction in the size of the baseline universe from 7,157 to 5,537 funds. We then applied a manual review and compared identical fund names, returns, and AUMs in an effort to indentify further duplications.

After manually inspecting the data, 670 funds (12.10%) were identified as duplicates and removed. 4,867 funds in total are used at the core of the Size and Performance portion of the study. Each core fund was then an index constituent based on the size of its AUM:

Small: *Less than $100 million AUM*

Mid-Size: *$100 million AUM to $500 million AUM*

Large: *More than $500 million AUM*

The funds were reclassified on a monthly basis and placed into a corresponding size index based on their then-current AUM. The performance averages within each index were calculated every month and compiled into a final Year-to-Date (YTD) average return figure. The YTD average return figure counts the monthly return when it first occurs.

II. Age and Performance

For the Age and Performance portion we started with the universe of 7,157 baseline funds. The key statistics examined were the monthly returns and start dates. We manually reviewed exception reports to further remove any duplicates of funds.

In the Age and Performance portion of the study the month of December was chosen to be consistent with the Size and Performance section of the study.

We checked the funds that reported to multiple third party data providers but reported to those providers on different dates. By taking into account these errors, 547 funds (7.99%) were further identified and removed.

The data for the Age and Performance portion was then sorted by December 2010 returns. Funds that had no reported returns for December 2010 were also removed (311 in total), leaving 6,299 funds at the core of the Age and Performance portion of the study. Each core fund was then assigned to an index based on its age of existence:

Young: *Less than two years*

Mid-Age: *Between two and four years*

Tenured: *More than four years*

The funds were reclassified on a monthly basis and placed into a corresponding age index every month based on their then-current AUM. The performance averages within each index were calculated according to the same method as in the Size and Performance section of the study.

III. A Final Check on The Dead

Once all of the duplicate funds were eliminated, we wished to validate that we had accounted for any funds that failed during 2010. Accounting for failed or discontinued funds is reported and captured by third party data providers in "graveyard databases."

The funds for the two portions of the study were cross-checked with the funds in the BarclayHedge, BarclayCTA, and Hedge Fund Research graveyard databases, which hold a combined 20,749 fund records.

After eliminating Indices, Funds of Funds, non-USD funds, and funds that ceased in years other than 2010, the universe of dead funds for 2010 was narrowed to only 1,428.

For the Size and Performance portion of the study only 27 additional dead funds (0.55%) were further identified, and subsequently removed which resulted in a total universe for this portion of the study of 4,841 funds.

For the Age and Performance section the number of additional dead funds identified through this process was only 28 (0.44%), which were also removed which resulted in a universe indexed for this part of the study at 6,271 funds.

The methodology used within the study applies a conservative approach to the initial universe construction by eliminating any funds not reporting returns or AUMs in December 2010. In addition, during the initial manual exception review of the de-duplication process, a substantial portion of dead funds were removed.

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HEDGE FUND PERFORMANCE BY SIZE OF FUND IN 2010

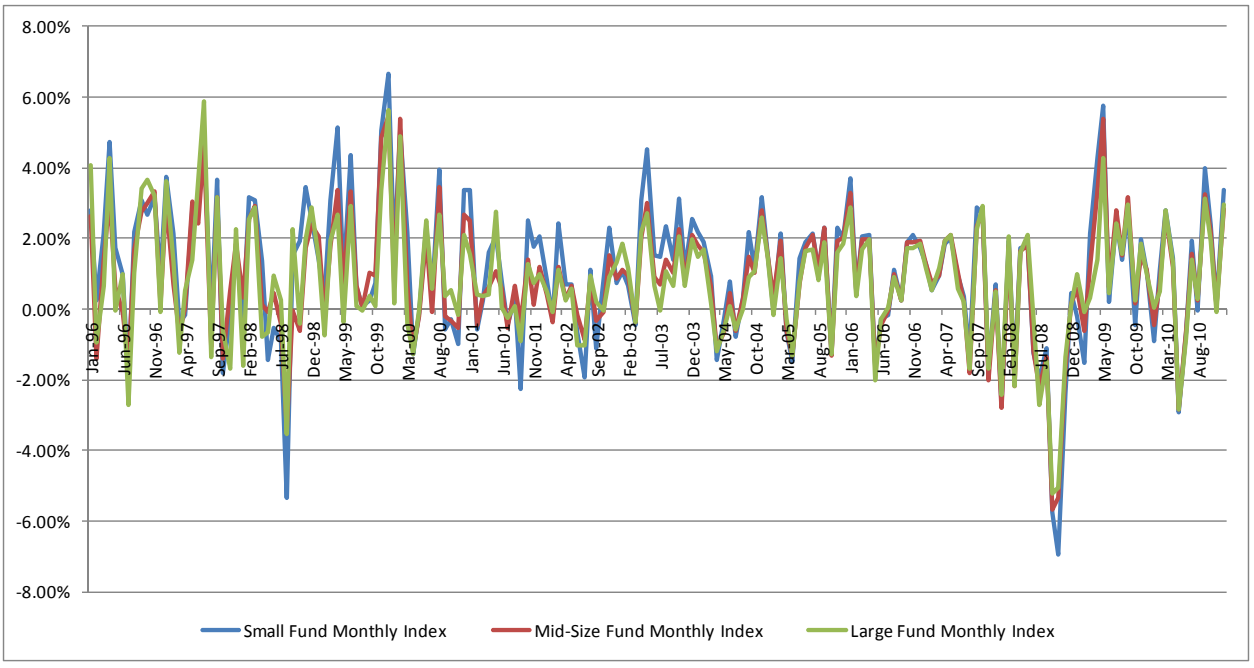
The number of funds in each size index is an average of their monthly totals as seen in Table 1. Each month the number of funds in the size index was reset based on funds' then-current AUM size. As anticipated in 2010 from previous PerTrac findings, the small fund index is comprised of the greatest number of funds per month, at 3,262 funds; the mid-size index follows with 967 funds and the large index remains the smallest at 340 funds. The data shows that growth beyond $500 million AUM is difficult to achieve, with only 7.44% of funds meeting or exceeding that mark. This is indicative of two trends (beyond the obvious of those funds which never did or no longer do feel a need to report to third party databases): 1) managers prefer to stay in the AUM mid zone to maneuver their portfolio; and 2) raising additional capital beyond the $500 million mark proves to be challenging.

Table 1: Number of Hedge Funds within Size Indices in 2010

	Number of Funds												
	January	February	March	April	May	June	July	August	September	October	November	December	Average
Small	3077	3109	3121	3166	3221	3271	3304	3341	3350	3352	3404	3430	3262.17
Medium	924	932	946	957	953	963	952	963	988	996	1004	1028	967.17
Large	314	319	337	334	333	327	331	330	350	354	367	383	339.92
TOTAL	4315	4360	4404	4457	4507	4561	4587	4634	4688	4702	4775	4841	4569.25

Regardless of fund size, the monthly performance figures since 1996 seem to suggest relative synchronicity. Figure 1 below shows that, irrespective of size, funds generally appear to be moving in the same direction.

Figure 1: Monthly Fund Performance by Fund Size Indices (January 1996 to December 2010)

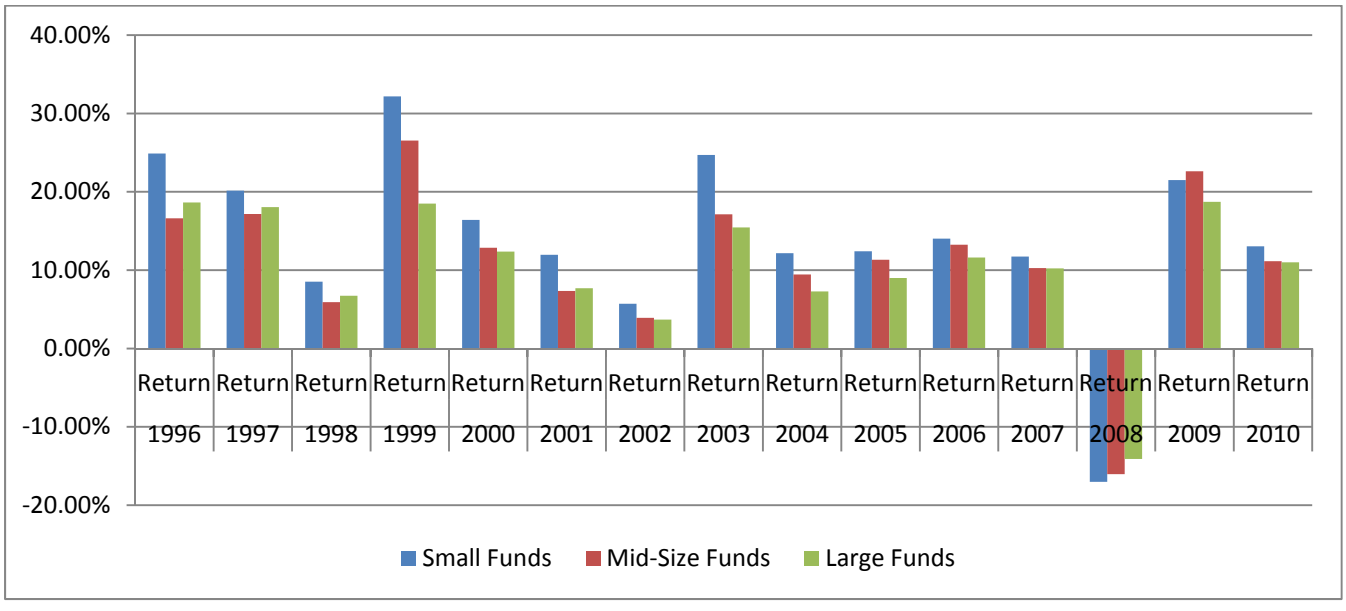


In 2010, for example, the strongest performance month for all three fund indices was September (small funds returned 4.00%, mid-size funds 3.25%, and large funds 3.12%) and the weakest performance month for all three fund size indices was May (small funds declined -2.91%, mid-size funds -2.83%, and large funds -2.83%). Even in 2009 this same directional movement occurred, with May proving to be the strongest performance month for all three fund indices (small funds returned 5.77%, mid-size funds 5.38%, and large funds 4.27%) and February being the worst month for all three fund size indices (small funds declined -1.54%, mid-size funds -0.62%, and large funds -0.07%).

Nevertheless, there are instances of significant outliers between the three fund size indices and each has experienced months in which it has outperformed the other two significantly. For example, small funds outperformed mid-size funds in October 1998 by 2.55%; small funds outperformed large funds in April 2009 by 2.87%; mid-size funds outperformed large funds in November 1997 by 2.18%; and large funds outperformed mid-size funds in September 1998 by 2.32%. This makes it challenging to judge performance trends solely on monthly statistics. However, these trends become clearer when aggregated from monthly to annual figures.

Figure 2 below shows the average monthly fund performances of the fund size indices rolled up into their respective Year-to-Date (YTD) cumulative returns. From this annual perspective a strong trend emerges, with small funds generally outperforming mid-size and large funds. In 2008, however, small funds were the worst performers and in 2009, small funds finished second to mid-size funds. But in 2010, small funds returned 13.04%, outperforming mid-size funds (11.14%) and large funds (10.99%) and reclaimed the top position they had held onto from 1996 to 2007.

Figure 2: Annual Fund Performance by Fund Size (January 1996 to December 2010)



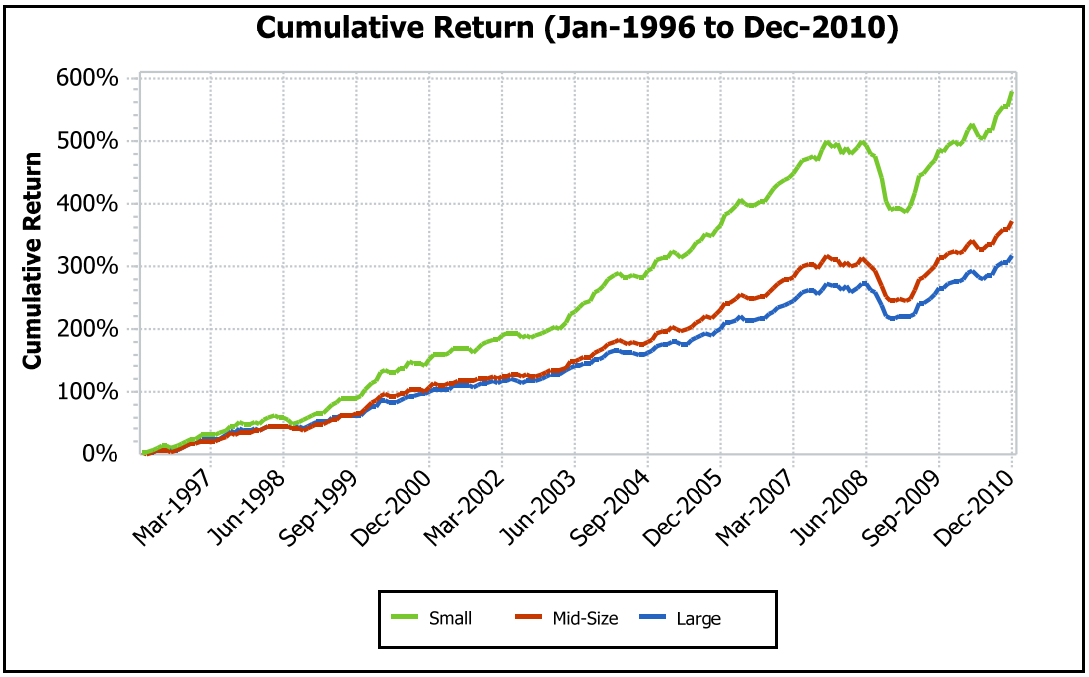
In terms of what performance trend exists between mid-size and large funds, it is more difficult to gauge since the rankings among these two indices have changed with greater frequency. By looking at the yearly returns for each fund size index in Table 2 below, a general tendency emerges in favor of mid-size funds outperforming large funds since 2002, excluding the crisis year of 2008. While the number of years in which small funds have outperformed both mid-size and large funds is large (13 of 15 years since 1996), the number of years in which mid-size funds have outperformed large funds is also noteworthy (10 of 15 years since 1996).

Table 2: Yearly Returns for Fund Size Indices (January 1996 – December 2010)

	1996 Return	1997 Return	1998 Return	1999 Return	2000 Return	2001 Return	2002 Return	2003 Return	2004 Return	2005 Return	2006 Return	2007 Return	2008 Return	2009 Return	2010 Return
Small Funds	24.89%	20.15%	8.53%	32.18%	16.40%	11.96%	5.70%	24.70%	12.17%	12.41%	14.01%	11.74%	-17.03%	21.50%	13.04%
Mid-Size Funds	16.62%	17.17%	5.92%	26.54%	12.85%	7.34%	3.92%	17.13%	9.44%	11.32%	13.24%	10.27%	-16.04%	22.61%	11.14%
Large Funds	18.63%	18.05%	6.72%	18.50%	12.37%	7.69%	3.68%	15.46%	7.28%	9.00%	11.61%	10.22%	-14.10%	18.72%	10.99%

A quick way to make an assessment of which fund size indices have generally outperformed the others is by viewing the cumulative return for the entire historical period. Figure 3 shows the cumulative historical return for each of the fund size indices since inception.

Figure 3: Cumulative Return Performance by Fund Size



Historically funds with less than $100 million AUM have had the largest cumulative return. The cumulative return generated by small funds over the 15 year period is 576.91%, mid-size funds 370.12%, and large funds 317.74%. However, most investors prefer using the Value Added Monthly Index (VAMI) as a fund evaluation method. VAMI is a statistic used to track the monthly performance of a hypothetical $1,000 with compounding. According to the VAMI in Table 3, at the end of 2010, if an individual or institution had invested $1,000 in each fund size index during the first month of their inceptions, the $1,000 in the small fund index would have grown to $6,769, the mid-size fund index $4,701, and in the large fund index $4,177.

Table 3: Cumulative Return and Ending VAMI by Fund Size Index
(January 1996 to December 2010)

	Small Fund Index	Mid-Size Fund Index	Large Fund Index
Cumulative ROR	576.91%	370.12%	317.74%
Ending VAMI	$6,769.10	$4,701.24	$4,177.35

An analysis of returns would be incomplete without an examination of their performance measures. Table 4 provides the annualized performance measures for all three fund size indices over the study period:

Table 4: Annualized Performance Measures by Fund Size Index
(January 1996 – December 2010)

	Small Fund Index	Mid-Size Fund Index	Large Fund Index
Compound ROR	13.60%	10.87%	10.00%
Standard Deviation	6.95%	5.94%	5.96%
Semi Deviation	7.57%	6.10%	6.01%
Gain Deviation	4.51%	4.10%	4.20%
Loss Deviation	4.90%	4.18%	4.08%
Down Dev.(10.00%)	4.67%	4.17%	4.25%
Down Dev.(5.00%)	4.07%	3.54%	3.58%
Down Dev.(0%)	3.52%	2.98%	3.01%
Sharpe(5.00%)	1.17	0.95	0.82
Sortino(10.00%)	0.70	0.19	0.00
Sortino(5.00%)	1.95	1.55	1.31
Sortino(0%)	3.64	3.48	3.18

The Compound ROR is the monthly average return required for each period so that when accumulated it will match the figure for the final compounded performance return at the end of all periods. It is used to calculate the VAMI and in this study Compound ROR is annualized along with all other statistics. The study uses a 5% risk free rate of return in keeping with previous studies.

Statistically:

- Standard Deviation measures the volatility of returns from its mean;
- Semi Deviation measures the volatility of returns below the mean;
- Gain Deviation measures the volatility of returns from its mean only during periods of a gain, and Loss Deviation is the inverse;
- Downside Deviation measures the potential loss that may arise from risk as measured against a Minimum Acceptable Return (MAR), which this table offers at 10%, 5%, and 0%;
- The Sharpe Ratio measures the risk adjusted return in order to determine reward per unit of risk. The higher the Sharpe Ratio the better is the historical risk adjusted performance;
- The Sortino Ratio is an adjustment on the Sharpe Ratio that measures downside volatility as expressed by subtracting the risk free return or MAR from the mean annual return of the portfolio and then dividing by the downside deviation.

From the figures in Table 4, the small fund index provides the greatest Compound ROR (13.60%) but at the cost of having the highest standard deviation (6.95%). With a Sharpe (5%) ratio of 1.17 and a Sortino (5%) ratio of 1.95, the small funds also generate the most excess

returns, but they have the highest volatility figures in all deviation categories. Mid-size and large funds, however, have very similar deviation statistics. Mid-size funds have a lower standard deviation (5.94% mid-size, 5.96% large) and gain deviation (4.10% mid-size, 4.20% large), while large funds have a lower semi deviation (6.10% mid-size, 6.01% large) and loss deviation (4.18% mid-size, 4.08% large). What this implies is that it will come down to a subjective judgment to determine which fund size index has more volatility. Nevertheless, it is indicative that the mid-size funds generally have outperformed large funds since their Compound ROR is 0.87% greater and their excess returns based on a comparison between their Sharpe and Sortino ratios are larger.

During the last 15 years, small funds have generally outperformed mid-size and large funds in terms of cumulative return and annualized returns. Part of this is due to scaling as a fund with a smaller capital pool is more likely to return more over an annual period. This has been addressed in other studies that use data to prove the widely held belief that better returns come from smaller funds.[1]

[1] Silicon Valley Bank, "Dialing Down", 5/13/2010 and "The Small Fund Advantage", Larry Cheng posted in Growth Equity, Venture Capital 5/13/2010

A Pro Forma View of the Size-Based Indices

Pro Forma Analysis was performed using Monte Carlo tools to simulate each fund size index. The criteria included:

- Historical Monthly Data for each fund size index (January 1996 to December 2010)
- Five year forward time range
- S&P 500 TR (Total Return) as the market benchmark
- Risk-free rate of return of 5%
- Minimum Acceptable Return (MAR)of 5%
- Bootstrap Method
- 10,000 simulations with quarterly rebalancing

The rationale for including these criteria are: 1) The S&P 500 index is a proxy for the broader U.S. market performance; 2) the bootstrap method, by forecasting beyond one period by relying on the forecasting data for that period itself, is a straightforward technique of assigning measures of accuracy to sample estimates; and 3) A 5% Rf rate was used with a 5% MAR so that results can be compared to previous studies. The Monte Carlo results for the small, mid-size, and large fund size indices are in Tables 5, 6, and 7, respectively:

Table 5: Small Fund Index Monte Carlo Simulation

Small Fund Index	Annualized Return	Maximum Drawdown
Number Simulations	10,000	10,000
Mean	13.64%	-6.37%
Median	13.62%	-6.21%
Standard Deviation	3.53%	-2.77%
Maximum	27.94%	-22.07%
Minimum	0.96%	-0.54%

Table 6: Mid-Size Fund Index Monte Carlo Simulation

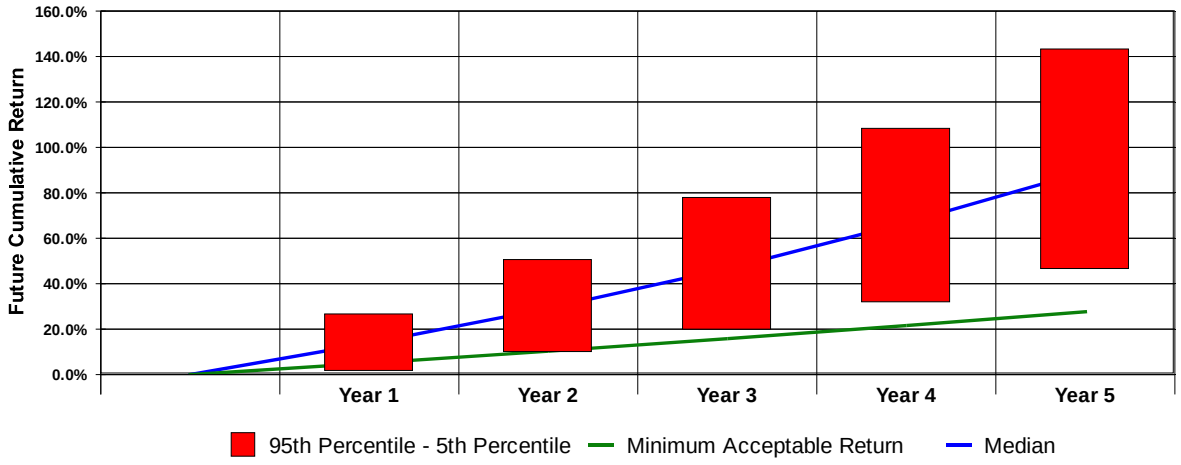
Mid-Size Fund Index	Annualized Return	Maximum Drawdown
Number Simulations	10,000	10,000
Mean	10.89%	-5.45%
Median	10.89%	-5.41%
Standard Deviation	2.95%	-2.36%
Maximum	22.66%	-19.90%
Minimum	-0.10%	-0.61%

Table 7: Large Fund Index Monte Carlo Simulation

Large Fund Index	Annualized Return	Maximum Drawdown
Number Simulations	10,000	10,000
Mean	10.01%	-5.55%
Median	10.00%	-5.23%
Standard Deviation	2.94%	-2.30%
Maximum	23.60%	-19.05%
Minimum	-0.38%	-0.78%

By comparing Tables 5, 6, and 7, the small fund index shows the potential for the greatest volatility with a simulated annualized standard deviation of 3.53%, while the simulated annualized standard deviation for mid-size funds is 2.95% and large funds almost equal at 2.94%. Furthermore, the small fund index also has the potential for the greatest decline; the simulated maximum drawdown for the small funds is -22.07%, mid-size funds is -19.90% and large funds is -19.05%. Yet the small fund index has a better potential to outperform the mid-size and large during the next five years. The mean simulated annualized return for the small fund index is 13.64%, for mid-size 10.89%, and for large 10.01%. Figure 4 below shows the five year cumulative return potential range for the small fund index between the 95th percentile (19.46% annualized return potential) and 5th percentile (7.85% annualized return potential), along with its median and MAR:

Figure 4: Five Year Cumulative Return Potential for Small Fund Index



Final Conclusions on Performance and Size of Funds

In 2010, the small fund index regained the title as the best performer. Prior to 2008, small funds beat mid-size and large funds on a consistent basis. But in 2008—the only negative year for any fund index—small funds were the worst performers, declining -17.03%. In 2009, small funds came in second behind mid-size funds in performance. While small funds have generally outperformed both mid-size and large funds, their risk profile remains the highest. The statistics from the Monte Carlo simulation show this trend likely continuing in the short and intermediate terms.

HEDGE FUND PERFORMANCE BY AGE OF FUND IN 2010

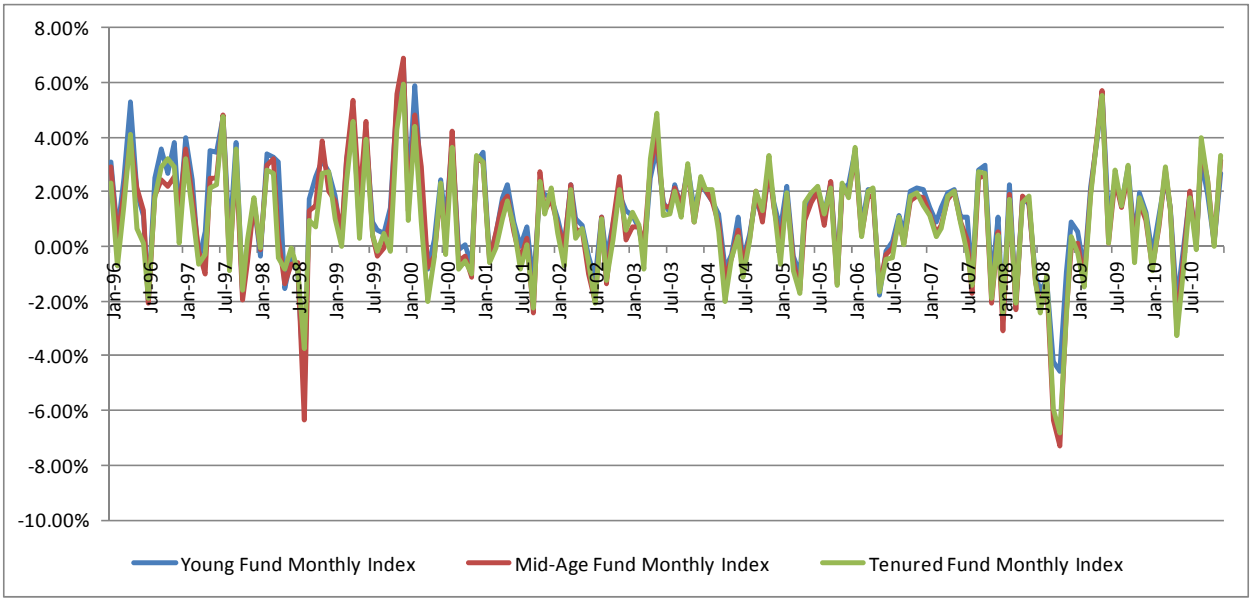
The number of funds in each Age index is an average of their monthly totals. Each month they were reset based on their then-current age. In 2010, reporting funds tend to be older with 53.13% of the universe comprised of tenured funds, while young funds (24.43%) and mid-age (22.44%) represent a combined 46.87%.

Table 8: Number of Funds within Age Indices in 2010

	Number of Funds												
	January	February	March	April	May	June	July	August	September	October	November	December	Average
Young	1449	1503	1468	1487	1494	1488	1464	1450	1463	1440	1444	1436	1465.50
Mid-Age	1358	1282	1336	1339	1327	1336	1356	1341	1343	1378	1385	1376	1346.42
Tenured	2897	2973	3009	3049	3107	3159	3211	3288	3320	3360	3411	3459	3186.92
TOTAL	5704	5758	5813	5875	5928	5983	6031	6079	6126	6178	6240	6271	5998.83

Age, however, is no indicator of performance. Young funds and mid-age funds outperformed tenured funds in 2010, returning 13.25%, 12.65%, and 11.77%, respectively. As is the case in the Size and Performance section of this study, historically, each index has had months where it has outperformed the other two. For example, in April 1998 young funds outperformed tenured funds by 3.49% and in August 1998, tenured funds outperformed mid-age funds by 2.61%.

Figure 5: Monthly Fund Performance by Fund Age Index (January 1996 to December 2010)



Since 1996, however, and on an aggregate yearly basis, young funds have outperformed both mid-age and tenured funds in 13 out of 15 years. Figure 6 and Table 9 shows the annual fund performance by age. Young funds finished 0.13% short of the top-performing mid-age funds in

1999 and finished last in 2003. Interestingly, young funds fared best during the 2008 crisis, limiting their decline to -11.31%, while mid-age funds fell -19.46%, and tenured funds fell -17.85%

Figure 6: Annual Fund Performance by Fund Age (January 1996 to December 2010)

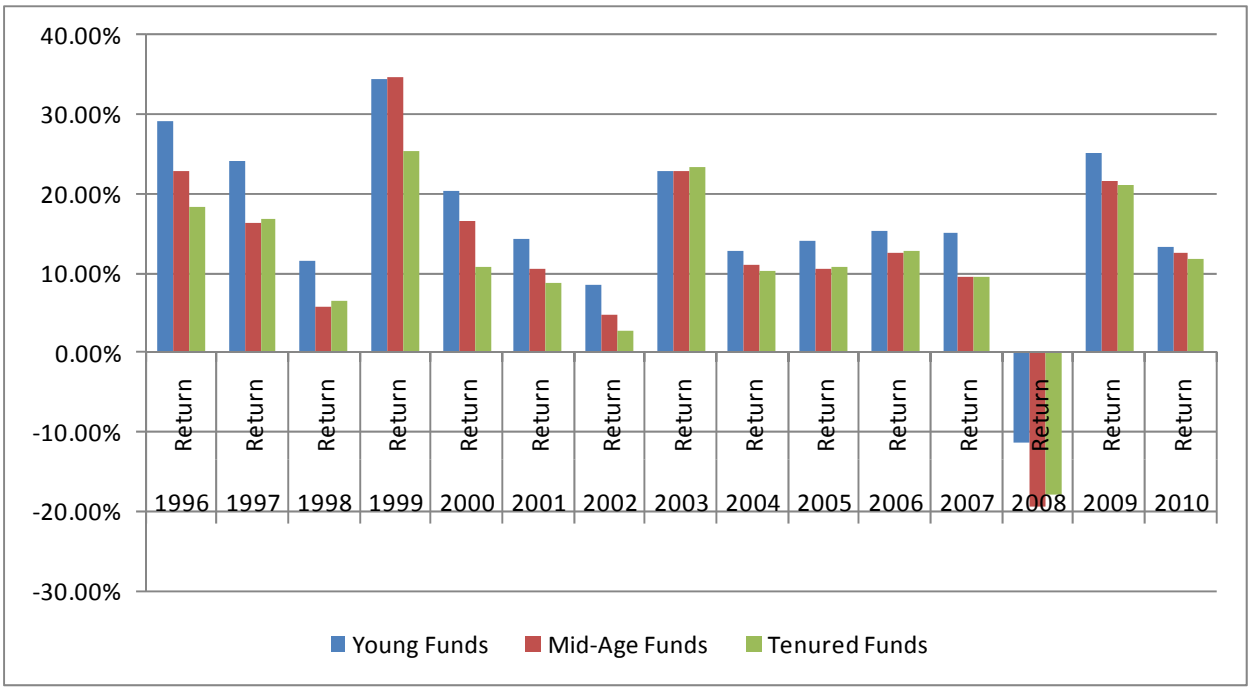


Table 9: Yearly Returns for Fund Age Indices (January 1996 – December 2010)

	1996 Return	1997 Return	1998 Return	1999 Return	2000 Return	2001 Return	2002 Return	2003 Return	2004 Return	2005 Return	2006 Return	2007 Return	2008 Return	2009 Return	2010 Return
Young Funds	29.14%	24.17%	11.61%	34.54%	20.44%	14.27%	8.63%	22.77%	12.76%	14.10%	15.29%	15.02%	-11.31%	25.19%	13.25%
Mid-Age Funds	22.74%	16.41%	5.83%	34.67%	16.45%	10.64%	4.61%	22.95%	10.94%	10.62%	12.56%	9.45%	-19.46%	21.51%	12.65%
Tenured Funds	18.28%	16.92%	6.60%	25.26%	10.80%	8.72%	2.80%	23.33%	10.35%	10.87%	12.71%	9.53%	-17.85%	21.01%	11.77%

This limit of losses by young funds relative to mid-age and tenured funds during the 2008 crisis along with their outperformance of mid-age and tenured funds in 2010 has helped them in achieving the best historical performance statistics. Table 10 below shows the annualized performance measurements for the three age indices:

Table 10: Annualized Performance by Fund Age (January 1996 – December 2010)

	Young Fund Index	Mid-Age Fund Index	Tenured Fund Index
Compound ROR	16.18%	12.20%	10.92%
Standard Deviation	6.37%	7.04%	6.77%
Semi Deviation	6.64%	7.59%	7.17%
Gain Deviation	4.44%	4.56%	4.44%
Loss Deviation	4.11%	5.44%	4.44%
Down Dev.(10.00%)	3.85%	4.96%	4.79%
Down Dev.(5.00%)	3.28%	4.36%	4.12%
Down Dev.(0%)	2.76%	3.82%	3.51%
Sharpe(5.00%)	1.63	0.98	0.85
Sortino(10.00%)	1.44	0.40	0.18
Sortino(5.00%)	3.11	1.53	1.34
Sortino(0%)	5.47	3.03	2.96

As in PerTrac's 2009 study, the young fund index continues to have the highest annualized compound ROR in 2010 at 16.18% (12.20% for mid-age and 10.92% for tenured) and it continues to have the lowest annualized standard deviation in 2010 at 6.37% (7.04% for mid-age and 6.77% for tenured). Furthermore, the young fund index exhibits the best risk, relative to return, measures out of all three age indices. It presents lower figures for every volatility category except for the gain deviation, which was a tie with the tenured fund index. The Sharpe and Sortino ratios for the young fund index are also stronger than those of the mid-age and tenured indices.

These findings suggest that young funds may be able to achieve higher returns with less risk. On average 87% of funds are small funds as well as young funds and therefore subject to the scaling issues as discussed in the size section of this study. Young funds may benefit from other advantages which include their ability to conduct portfolio changes quicker and under the radar; their less mature administrative and operational needs resulting in lower fixed costs; and finally, their quick adoption of new technologies that allow them to perform their activities more efficiently in more scalable environments.

A Pro Forma View of the Age-Based Indices

Using the same parameters that were laid out in the Monte Carlo section of the Size and Performance portion of the study, simulations were performed on each of the three age-based indices. According to a comparison between Tables 11, 12, and 13, young funds are likely to continue providing the highest returns with the lowest volatility during the next five years.

Table 11: Young Fund Index Monte Carlo Simulation

Young Fund Index	Annualized Return	Maximum Drawdown
Number Simulations	10,000	10,000
Mean	16.21%	-4.78%
Median	16.17%	-4.57%
Standard Deviation	3.30%	-2.00%
Maximum	29.80%	-18.36%
Minimum	4.59%	-0.36%

Table 12: Mid-Age Fund Index Monte Carlo Simulation

Mid-Age Fund Index	Annualized Return	Maximum Drawdown
Number Simulations	10,000	10,000
Mean	12.24%	-7.03%
Median	12.20%	-7.02%
Standard Deviation	3.54%	-3.11%
Maximum	26.54%	-25.03%
Minimum	-0.56%	-0.70%

Table 13: Tenured Fund Index Monte Carlo Simulation

Tenured Fund Index	Annualized Return	Maximum Drawdown
Number Simulations	10,000	10,000
Mean	10.96%	-6.62%
Median	10.94%	-6.46%
Standard Deviation	3.37%	-2.84%
Maximum	24.58%	-22.62%
Minimum	-1.29%	-0.80%

The possible annualized mean return for the young fund index is 16.21%, for mid-age fund index is 12.24%, and for tenured fund index is 10.96%; the simulated annualized maximum,

minimum, and median returns are also greatest for the young fund index. For the simulated annualized standard deviation statistic, young funds carry the lowest volatility of the three age indices, at 3.30% compared to 3.54% for mid-age funds and 3.37% for tenured funds. And young funds also have the smallest simulated maximum drawdown at -18.36% compared to -25.03% for mid-age funds and -22.62% for tenured funds. In continuity with the last two PerTrac studies, the mid-age fund index still displays the highest simulated maximum drawdown.

Final Conclusions on Performance and Age

In 2010, the young fund index outperformed both the mid-age and tenured indices. This makes the young fund index the top performer seven years running since its 2003 slide into last place. Yet perhaps the most striking finding within this study is that young funds have generally outperformed their mid-age and tenured peers while keeping a lower volatility profile. The statistics from the Monte Carlo simulation anticipate this trend continuing in the short and intermediate terms.

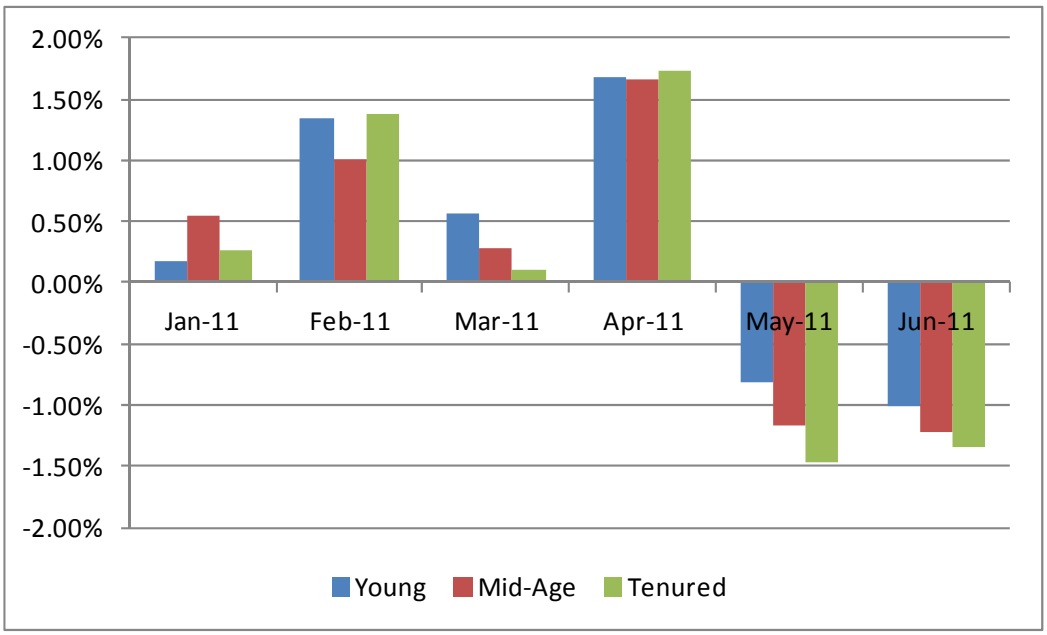
2011 FIRST HALF REVIEW

Young funds are leading the age indices in Year-to-Date 2011 return figures. Table 14 shows the six month performance figures for the age indices and Figure 7 provides a graphical representation of their 2011 performance YTD:

Table 14: Monthly and YTD Figures for Age Indices

	Six Month Performance for Age Indices (2010 and 2011)						
2010	January	February	March	April	May	June	YTD
Young	-0.29%	1.15%	2.49%	1.41%	-2.09%	-0.10%	2.53%
Mid-Age	-0.77%	0.73%	2.79%	1.38%	-2.93%	-0.44%	0.66%
Tenured	-0.87%	0.85%	2.92%	1.37%	-3.26%	-0.92%	-0.03%
2011	January	February	March	April	May	June	YTD
Young	0.18%	1.34%	0.57%	1.67%	-0.81%	-1.00%	1.94%
Mid-Age	0.54%	1.00%	0.28%	1.66%	-1.16%	-1.22%	1.07%
Tenured	0.27%	1.37%	0.11%	1.73%	-1.46%	-1.34%	0.64%

Figure 7: Monthly Performance of Age Indices (January 2011 to June 2011)

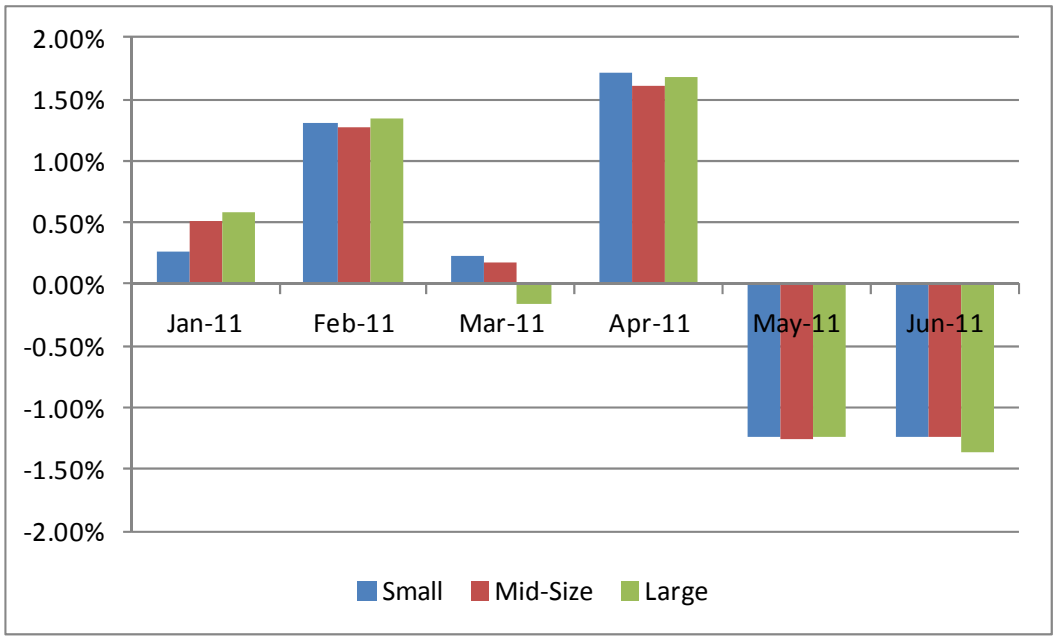


Size indices show that the performance of small and mid-size funds in the first six months of 2011 is better than large funds. Table 15 shows performance figures for the size indices and Figure 8 provides a visual reference with regards to their 2011 performance Year-to-Date:

Table 15: Monthly and YTD Figures for Size Indices

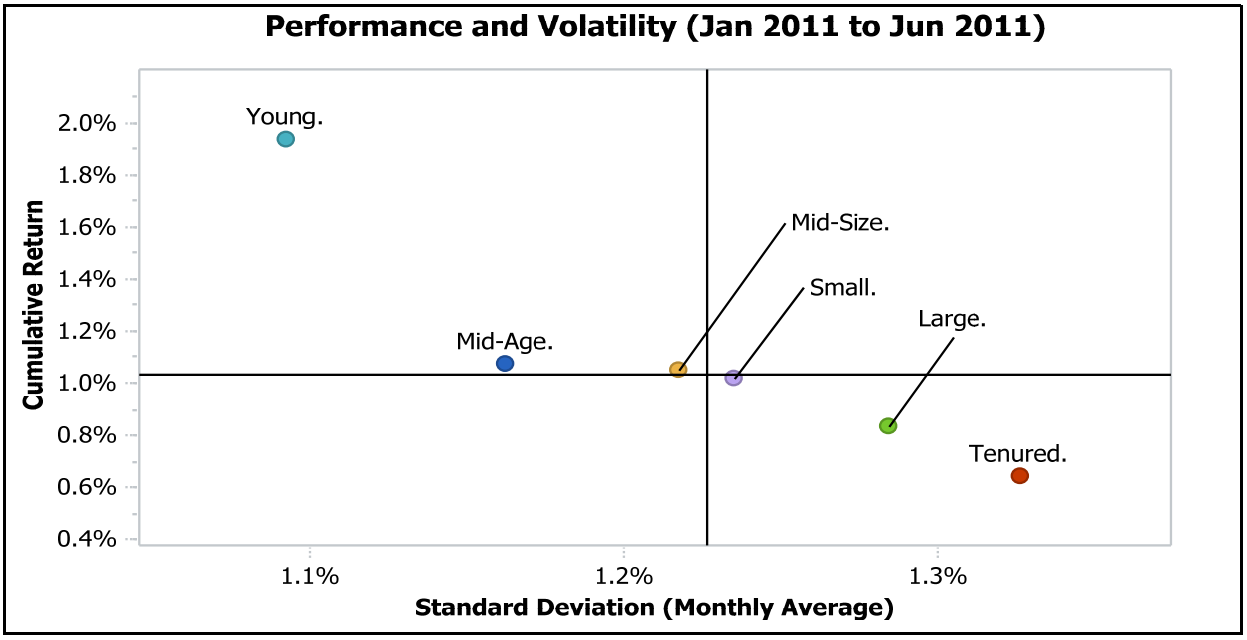
	Six Month Performance for Size Indices (2010 and 2011)						
2010	January	February	March	April	May	June	YTD
Small	-0.89%	1.11%	2.79%	1.45%	-2.91%	-0.67%	0.78%
Mid-Size	-0.47%	0.72%	2.68%	1.21%	-2.83%	-0.62%	0.60%
Large	0.05%	0.48%	2.81%	1.33%	-2.83%	-0.81%	0.94%
2011	January	February	March	April	May	June	YTD
Small	0.27%	1.31%	0.23%	1.71%	-1.24%	-1.23%	1.02%
Mid-Size	0.52%	1.27%	0.17%	1.61%	-1.25%	-1.24%	1.05%
Large	0.59%	1.35%	-0.16%	1.68%	-1.23%	-1.36%	0.83%

Figure 8: Monthly Performance of Size Indices (January 2011 to June 2011)



As of June 2011, young funds have continued their historic trend of outperformance with lower volatility. Young funds carry the lowest monthly average standard deviation, at 1.09%, while the monthly average standard deviation for mid-age funds was 1.16% and for tenured funds was 1.33%. The cumulative return for young funds was 1.94%, mid-age funds 1.07%, and tenured funds 0.64%. Figure 9 below shows an annualized performance and volatility scatter plot:

Figure 9: Scatter Plot between Performance and Volatility



CONCLUSIONS

The 2010 findings continue to suggest that investors seeking to maximize their returns should examine funds with less than $100 million in AUM and funds with less than two years of existence. Investors need to match their liquidity needs and other allocation requirements in their search for small and young funds. In keeping with historical expectations, small and young funds had greater returns than their competition in 2010. Both have generally outperformed within their respective categories; but while small funds carry the highest volatility relative to their competitors, young funds have the lowest in their category.

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