SURVIVAL OF THE NIMBLE

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Why Smaller Investment Managers Outperformed Large Managers Despite a Challenging Market Cycle for Fundamentally Based Active Managers

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EXECUTIVE SUMMARY

The three to five years ending December 31, 2010 have challenged many active long only (and long-short) equity managers' ability to produce alpha, particularly if their investment decisions are based on the intrinsic fundamental characteristics of individual stocks. As a manager of Entrepreneurial managers[1], the majority of whom employ this type of investment approach, FIS Group conducted research on the major factors driving the impairment of excess return observed over the last five years. Additionally, we examined whether the performance advantage of Entrepreneurial managers over their Established manager peers (by investment style and market capitalization) observed in our and others' prior research had altered as a result of the changing macroeconomic and market environments. Our conclusions are as follows:

- Heightened macro uncertainty over the study period as well as increased use of index trading products have been the driving determinants for securities price changes; thereby diminishing the effectiveness of active long-only and long-short managers whose investment processes are primarily based on relative fundamental characteristics.
- Increased macro certainty should continue to normalize correlation relations which would in turn be expected to be more hospitable for active management strategies going forward. However, structural changes and the growth of index-based trading instruments have likely raised the level of correlations beyond the normative levels that existed prior to 2006. Therefore, managers may want to consider monitoring changing relationships in correlations and volatility on the efficacy of their investment processes. In addition, in a world in which business strategies, trade flows and monetary policy have become increasingly interconnected, managers would be well advised to more systematically evaluate the potential impact of significant macro policy risks and actions (at least among the G20 block of countries) on the fundamental factors evaluated in their current strategies.
- Even though most Entrepreneurial managers offer active management strategies with relatively high tracking error, Entrepreneurial managers still outperformed their Established manager peers over the five years ending December 31, 2010 without incurring appreciably more risk.
- Entrepreneurial managers exhibited more concentrated, higher conviction portfolios with higher tracking error than their Established manager peers. We believe that this greater degree of concentration and conviction led Entrepreneurial managers to produce more excess return per unit of tracking error for 4 of the 5 major equity categories

FIS Group is a registered investment advisor specializing in entrepreneurial manager investment strategies with approximately $3 billion in assets under management and advisement. Our equity products include: Large Cap Core, All Cap Core, Small Cap Core , Global Select, Global Select Dynamic, Global Equity ex-US and Global Equity ex-US-Dynamic. Based in Philadelphia, FIS Group was founded in 1996. FIS also offers Alternative Investments products, including a hedge fund of funds strategy focusing on opportunities in the environmental, clean tech and energy efficiency sectors as well as a mezzanine fund of funds strategy.

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studied (Large Value, Large Growth, Small Cap and Global Ex-US Equity). Established managers had the edge in only one category: Large Core. However, even for that category, Entrepreneurial managers actually outperformed.

- Another key structural performance advantage appeared to be derived from Entrepreneurial managers' greater flexibility to invest in less liquid and higher returning market segments.

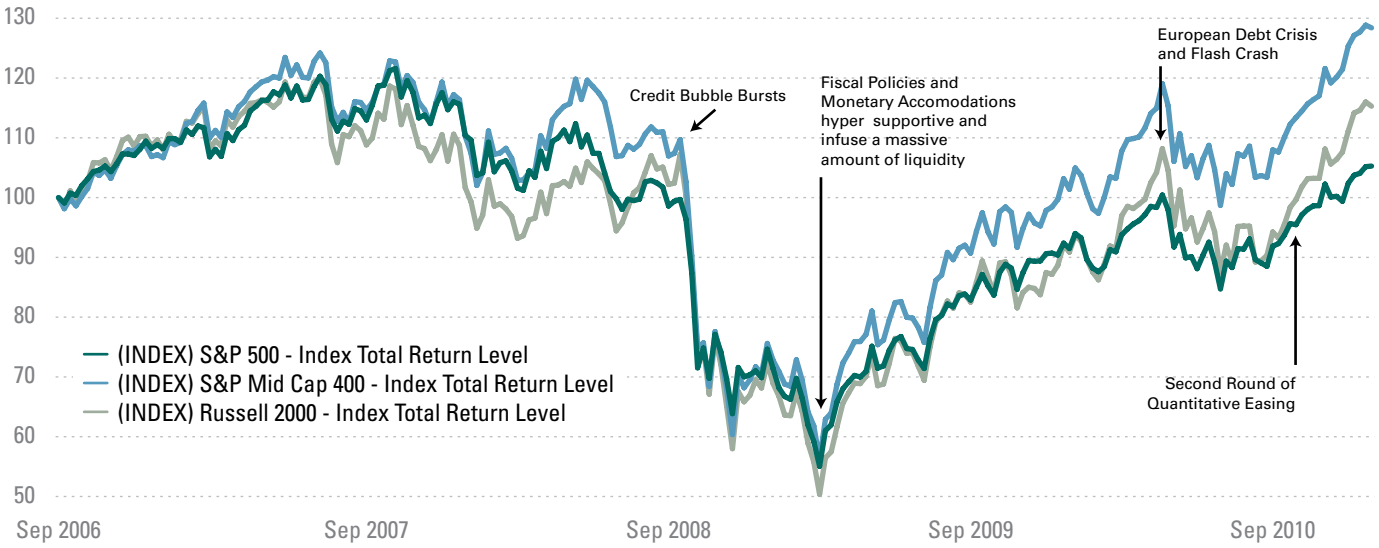
The combination of large asset pools with commonly used guidelines that limit a manager's exposure to a maximum percentage of the outstanding shares of listed companies likely constrained Established managers' ability to take advantage of the higher returns generated by smaller and less liquid stocks. In order to access these less liquid market segments and stay within such position limits, Established managers would have had to increase their number of holdings. This is likely why our analysis over the years shows that Established managers hold substantially more securities than Entrepreneurial managers. However, the downside of this approach is that the Established manager's portfolio would begin to become more index-like; thereby diluting stock specific alpha.

EXAMINING THE FACTORS THAT CHALLENGED FUNDAMENTAL EQUITY MANAGERS

A MARKET DRIVEN BY MACRO EVENTS

Over the last five years (2006-2010), market volatility has been at extreme levels. Based on the standard deviation of the S&P 500 Index's closing price, the volatility of the equity market was 206.12 over the last five years, vs. 125.89 in the five years that preceded it. Fundamentally driven equity managers were particularly challenged by this volatility because it was primarily driven by exogenous macro events or policy actions. FIGURE 1 depicts the four major events that caused significant inflection points in market direction: the bursting of the Credit bubble in late September 2008; the extraordinary fiscal and monetary policies that infused massive amounts of liquidity into the global financial system in early 2009; the flare up of the European debt crisis and Flash Crash in the US in May 2010; and the announcement and subsequent resumption of Quantitative Easing following the September 2010 FOMC meeting.

FIGURE 1 U.S. Equity Volatility Dominated by Macro Events



FIGURES 2 TO 7 depict the trends in excess return generated by various long-only equity styles of management over the last 10 years. These charts depict a marked erosion in the excess return from the major long only equity management categories over the five and particularly three years in most of the style categories ending December 31, 2010. Not coincidentally, the trough in excess return erosion was in 2009, a year which began with synchronized global infusion of liquidity across most of the G3 central banks. For the first 6 months of 2009, little of the market's powerful move had much to do with idiosyncratic stock fundamentals. In 2010 and thus far in 2011, we have begun to observe a gradual normalization of this trend (although the return of fundamentals were somewhat interrupted by QE2 in the fall of 2010).

FIGURE 2 Large Core Manager Excess Return Ratio

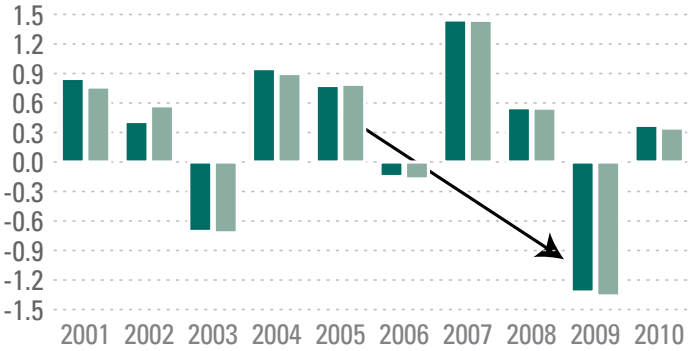


FIGURE 3 Large Growth Manager Excess Return Ratio

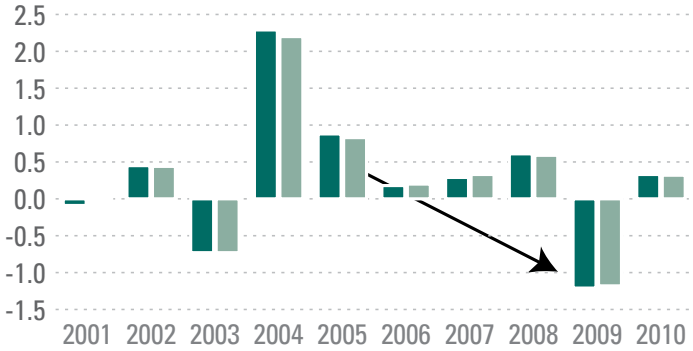


FIGURE 4 Large Value Manager Excess Return Ratio

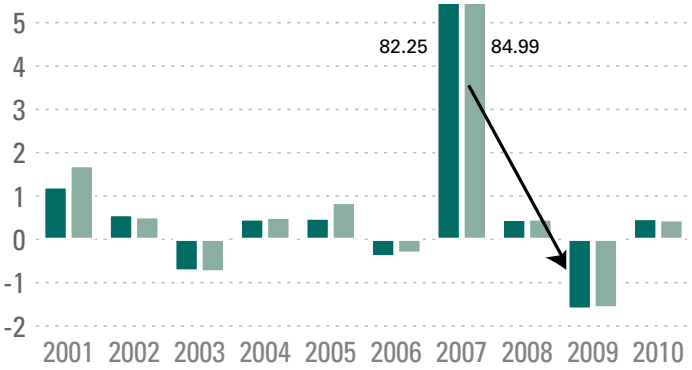


FIGURE 5 Small Growth Manager Excess Return Ratio

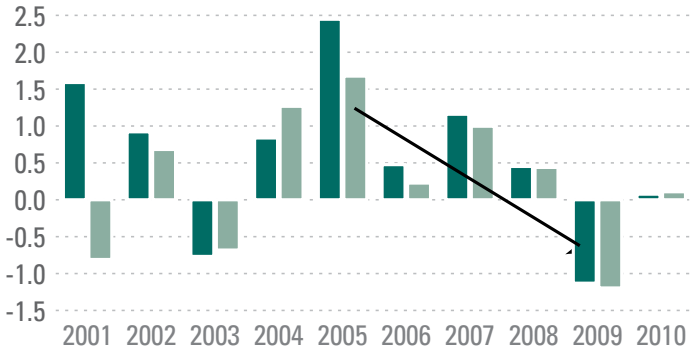


FIGURE 6 Small Value Manager Excess Return Ratio

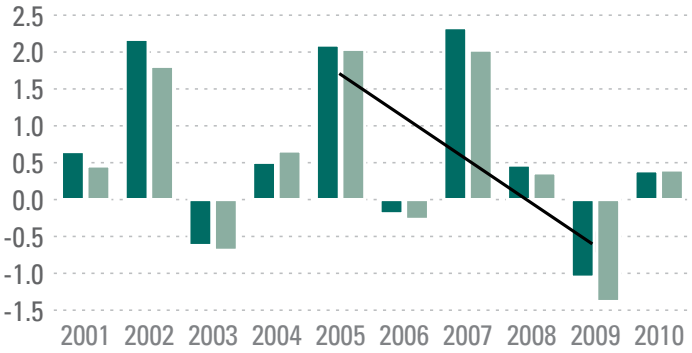
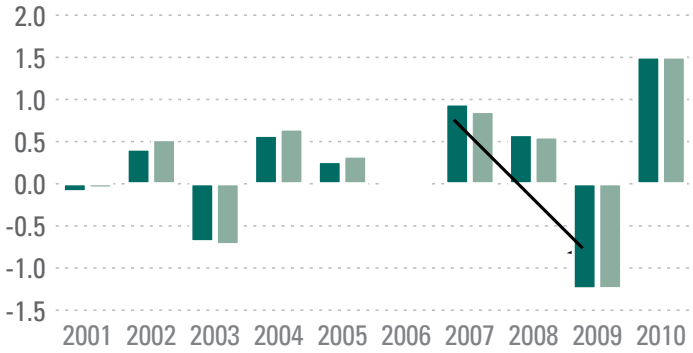


FIGURE 7 Total Non-U.S. Manager Excess Return Ratio



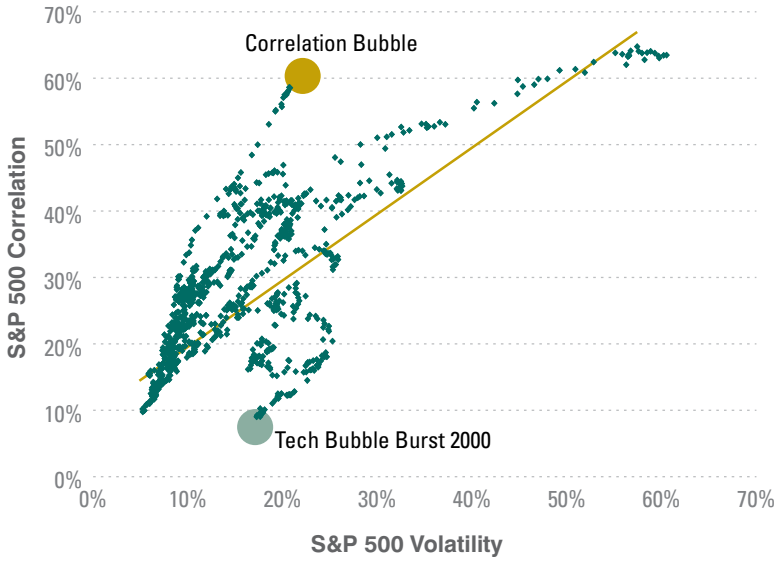
Entrepreneurial Manager Median Established Manager Median

We believe that this diminution in excess return was exacerbated by heightened levels of correlation among US stocks, particularly among large capitalization stocks. To the extent that the average stock is highly correlated to the market as a whole, active equity managers who evaluate intrinsic fundamental characteristics to make investment decisions will be much less effective because stock price volatility is more related to the market than to the company's fundamentals.

MARKET CORRELATION AND ITS PRIMARY DRIVERS

Historically, market correlation has had a strong positive relationship with volatility. FIGURE 8 from a recent study conducted by J.P. Morgan plots the correlation of constituent stocks in the S&P 500 Index against market volatility. The chart demonstrates that the correlation level over the most recent five years has been so elevated that it represents an outlier event which the authors describe as a "correlation bubble." The other outlier in this chart is the Tech bubble, when correlations were relatively low. This is because, unlike the financial crisis, that event's volatility was primarily intra market led by the extreme overvaluation and then the sharp decline of Technology stocks. Although Financial Stocks bore the brunt of the initial market decline in the most recent crisis, volatility, as discussed previously, has primarily been driven by exogenous macro events and policy actions. Currently, the overall market correlation (using the CBO S&P 500 implied correlation index) is at .47, well below the elevated levels of .80 during the depths of the financial crisis and in May 2010, but well above its average of approximately .27 between 2000 and 2006.

FIGURE 8 S&P 500 Correlation & Volatility



Source: JP Morgan Equity Derivatives Strategy.

TABLE 1, also from the JP Morgan study[2], shows the correlation between individual stocks grouped by sectors and then by capitalization. The table compares the correlations over the last five years relative to the correlations for each category for the previous five years. The table demonstrates that correlations at least doubled between the two periods. For example, in the Large Cap Industrial sector, the correlation between individual stocks with the market index rose from .33 to .70. The correlation of large Financial stocks, which were at the epicenter of the market dislocation in the fall of 2008 and the clearest beneficiaries of accommodative fiscal and monetary policies in early 2009, rose from .34 to .67.

The J.P. Morgan study focused on two factors behind the elevated correlations observed over the last five years: cyclical and structural.

TABLE 1 Percentage of Stock Returns That Can Be Attributed to Market Returns

	Today			5 Years Ago		
	Large	Mid	Small	Large	Mid	Small
Industrials	70	57	50	33	27	23
Financials	67	62	52	34	28	30
Energy	61	53	52	16	15	19
Materials	58	60	50	34	31	26
C. Discretionary	56	44	41	25	20	19
Utilities	55	59	57	28	30	30
Technology	53	49	42	19	18	15
C. Staples	42	29	32	21	19	16
Health Care	41	36	33	16	11	15
Telecomms	40	54	34	25	11	12
Top 100	58	54	51	30	20	22
Top 200	58	58	50	30	19	23
Top 300	58	53	49	30	21	24

Source: JP Morgan Equity Derivatives Strategy.

CYCLICAL FACTORS

During periods of high macro uncertainty, stock prices are largely driven by macro forces and as macro regimes change, stock prices move in unison. During such periods, the trading strategies described below serve as self-reinforcing mechanisms to further heighten correlations.

STRUCTURAL FACTORS

Over the last 10 plus years, there has been an explosive growth in instruments that allow investors to trade the market as a whole. For example, the volume of index futures contracts traded in the U.S. grew by 52% for the five years ending December 31, 2010. The volume of ETFs traded, which can also facilitate index trading, grew by approximately 6000% over the equivalent period. When investors trade an S&P 500 futures contract, they effectively place an order on all 500 constituent stocks. Broad index products such as ETFs can have a similar effect. By the fourth quarter of 2010, index futures were about 140% of cash equity volume with growth in this instrument primarily fueled by the increased use of index trading strategies and high frequency trading. ETFs were less important drivers of heightened correlations because they accounted for 60% of cash equity volume. Additionally, about 30% of those ETFs were more specialized, such as sector ETFs, which would have the effect of driving down individual stock correlations while heightening inter-sector correlations. Systematic trading methods, such as high frequency trading, were also a factor in driving up correlations. For example, HFT arbitrage strategies that seek to profit from divergences in the prices of individual stocks or groups and the actual index would tend to increase correlations.

CORRELATION OUTLOOK AND THE LONG TERM IMPLICATIONS FOR ACTIVE MANAGEMENT STRATEGIES

While structural changes and the growth of index-based trading instruments have likely raised the level of correlations beyond normative levels prior to 2006, with increased macro certainty, volatility is likely to subside. Lower volatility has historically led to lower correlations. Additionally, the previously discussed market strategies that were self reinforcing in heightening correlations over the last five years as a result of the degree of macro uncertainty would also work in the opposite direction within a market backdrop that was less volatile as a result of greater macro certainty. Therefore, we do not believe that the alpha impairment observed among active fundamentally-based investment management processes over the last five years is normative going forward. In fact, as previously mentioned, during the second half of 2010 (despite the resumption of quantitative easing in the fall of 2010) and thus far in 2011, there already appears to be a positive turnaround in the excess returns produced by such managers. However, we believe that in recognition of the structural changes observed above, managers may want to consider monitoring changing relationships in correlations and volatility on the efficacy of their investment processes. In addition, with business strategies, trade flows and monetary policies becoming increasingly interconnected, managers would be well advised to systematically evaluate the potential impact of significant macro policy risks and actions (at least among the G20 block of countries) on the fundamental factors evaluated in their current strategies.

HOW HAVE ENTREPRENEURIAL MANAGERS FARED?

Entrepreneurial or "emerging" managers are most widely defined by assets under management criteria. Typical asset thresholds that distinguish Entrepreneurial managers are described below:

Asset Class	Assets no more than
Large Cap Equity	$2 billion
Mid/Small Cap Equity	$300 million
Global Ex-US Equity	$2 billion

Using these asset thresholds, we evaluated the performance and risk data for Entrepreneurial managers vs. their Established manager peers across the major equity groups.

FIGURES 9 AND 10 respectively compare the annualized performance and standard deviation of Entrepreneurial vs. Established managers for the five year period ending December 31, 2010.

FIGURE 9 Annualized Return
5 Years Ending December 31, 2010

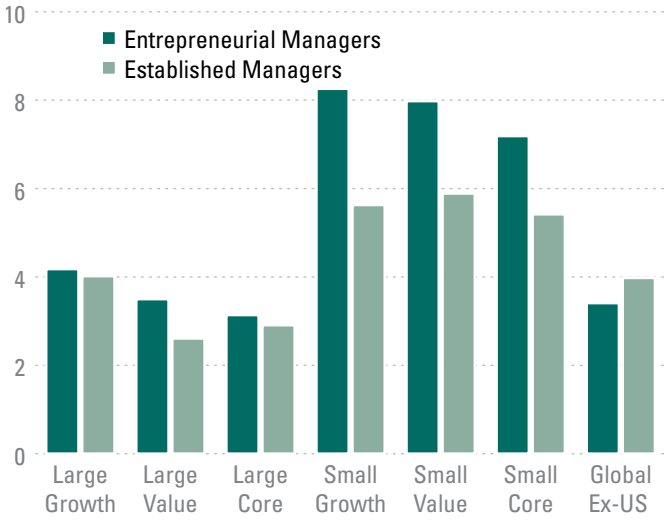
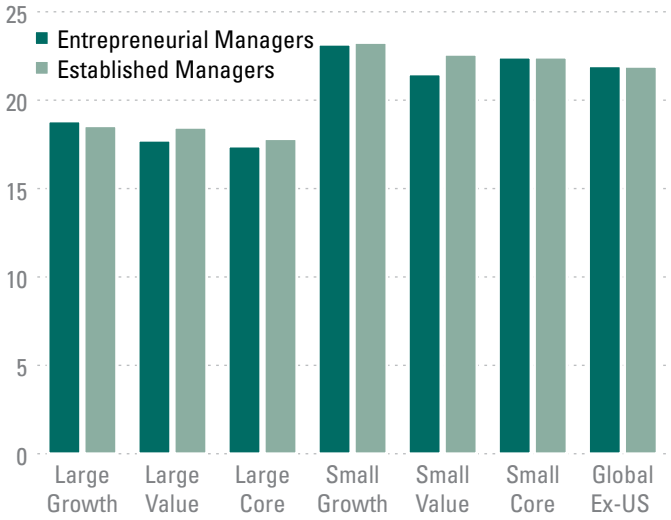


FIGURE 10 Standard Deviation
5 Years Ending December 31, 2010



Over the last five years, Entrepreneurial managers have outperformed Established managers in all but the Global ex-US category without incurring appreciably more risk.

Most of the performance advantage accrued during down markets. As shown in FIGURE 11, the downside capture ratios of Entrepreneurial managers were lower, meaning that they captured less of market downdrafts than Established managers. While Entrepreneurial managers exhibited less upside market capture than Established managers, their relative disadvantage in these markets was lower than their advantage in down markets. As we will discuss later, we believe that these performance characteristics reflect the greater holdings diversification and variances (relative to the market index) that typically characterize portfolios managed by Entrepreneurial managers. (See also FIGURE 12)

FIGURE 11 Downside Capture
5 Years Ending December 31, 2010

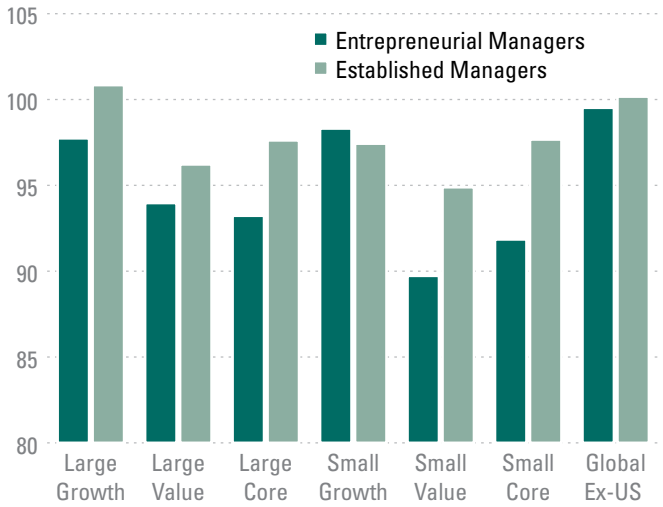
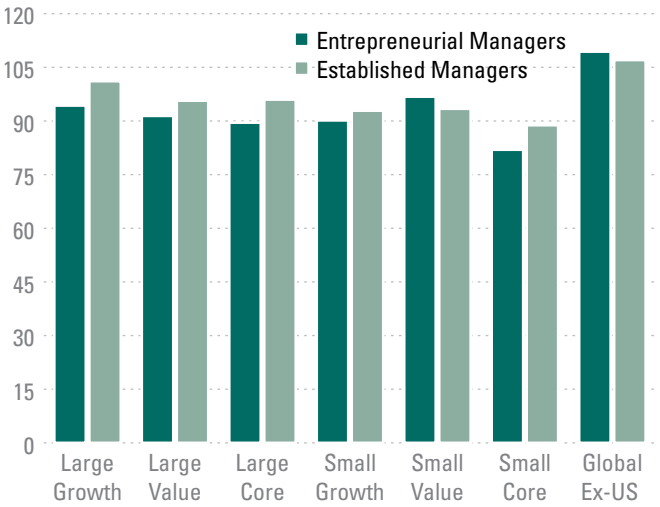


FIGURE 12 Upside Capture
5 Years Ending December 31, 2010



We believe that these results can be attributed to two primary distinguishing factors between Entrepreneurial and Established managers: Portfolio Structure and Organizational Dynamics.

ORGANIZATIONAL DYNAMICS

Over our 20 plus years of researching different managers, we have found that transparent and clear accountability as well as a high degree of focus on investing by the primary portfolio manager provide an optimal structure for successful performance. For example, in a July 30, 2007 study conducted by FIS Group on the Performance Drivers for Emerging managers, we found that while hiring additional research analysts had a positive statistical relationship with various measures of risk-adjusted return, increased numbers of portfolio managers (which is a far more common feature of larger firms and would tend to diffuse accountability) had a significantly negative relationship with risk adjusted return.[3]

Clear lines of accountability, along with the direct connection between performance and the portfolio manager's wealth creation, fosters a greater degree of focus on the core task of managing assets among Entrepreneurial manager firms. At Established firms, the larger asset base and more complex operational structure result in a more indirect relationship between performance and the manager's personal wealth creation. This observation is based on many anecdotal accounts from entrepreneurial portfolio managers that previously managed strategies at large firms. These managers indicated that as their management and supervisory responsibility grew they were less able to singularly focus on portfolio management.

For Entrepreneurial firms, there are clearly other potential organizational and operational pitfalls. These pitfalls primarily arise from the challenges and potential distractions of entrepreneurship, the challenges from growing compliance and regulatory oversight. This is why any effort to invest in this sector should incorporate extensive due diligence in these areas.

PORTFOLIO STRUCTURE DYNAMICS

Our research has shown that the portfolio structure advantage is derived from Entrepreneurial managers' more concentrated, higher conviction portfolios as well their ability to more efficiently invest in less liquid and higher returning segments of the market opportunity set.

As shown in FIGURE 13, with the exception of Global ex-US strategies, Entrepreneurial managers held more concentrated portfolios than their established manager peers.

According to the previously referenced 2007 study, greater portfolio concentration was positively correlated to risk-adjusted returns for Large Core, Large Growth, Large Value and Small Value equity strategies. Greater portfolio concentration naturally leads to portfolios that demonstrate higher tracking error. However, tracking error or variance from the benchmark has no intrinsic benefit unless it leads to higher excess return. FIGURES 14 TO 17 on the following pages compare the relationship, or slope of the regression line, between tracking error and returns incurred by Entrepreneurial managers vs. their Established manager peers.

FIGURE 13 Portfolio Concentration - Number of Holdings
5 Years Ending December 31, 2010

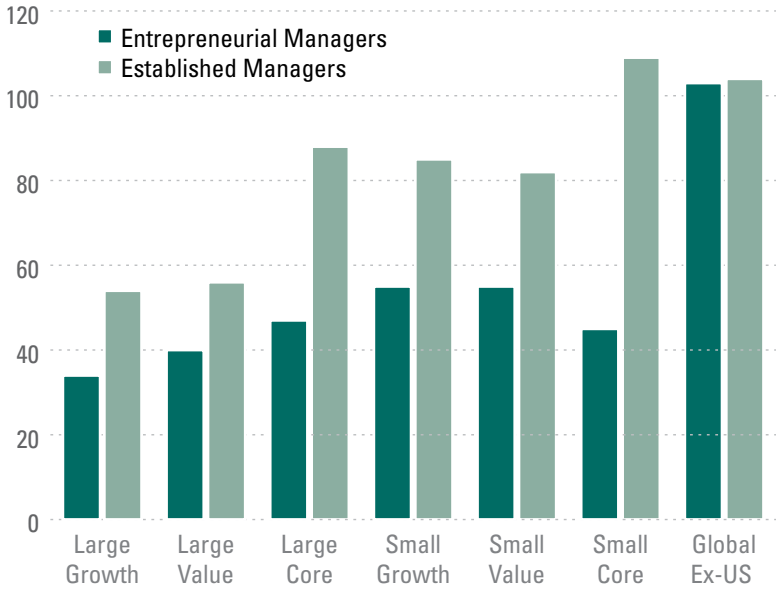
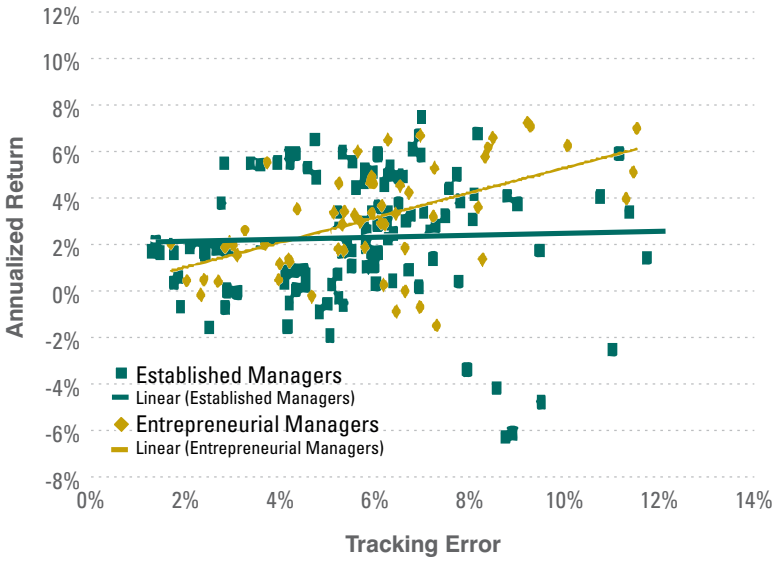


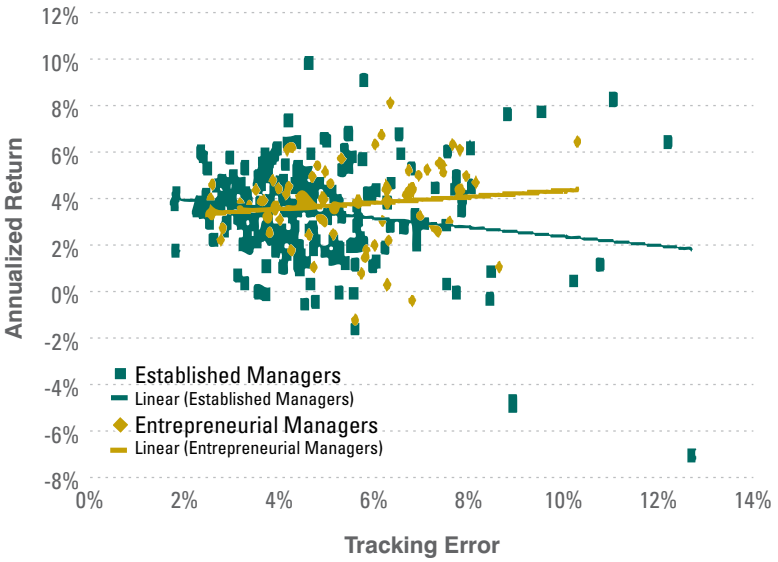
FIGURE 14 Large Value
5 Years Ending December 31, 2010



	Tracking Error (5 Years)	
	Entrepreneurial Managers	Established Managers
Median	6.08	4.52
Mean	6.06	4.99

	Annualized Return (5 Years)	
	Entrepreneurial Managers	Established Managers
Median	3.50	2.61
Mean	3.36	2.59

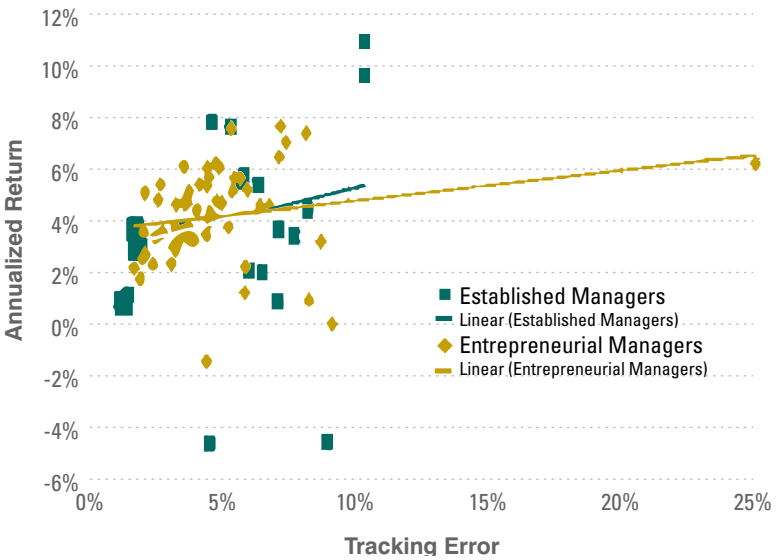
FIGURE 15 Large Growth
5 Years Ending December 31, 2010



	Tracking Error (5 Years)	
	Entrepreneurial Managers	Established Managers
Median	5.49	4.44
Mean	5.54	4.81

	Annualized Return (5 Years)	
	Entrepreneurial Managers	Established Managers
Median	4.18	4.02
Mean	4.08	4.17

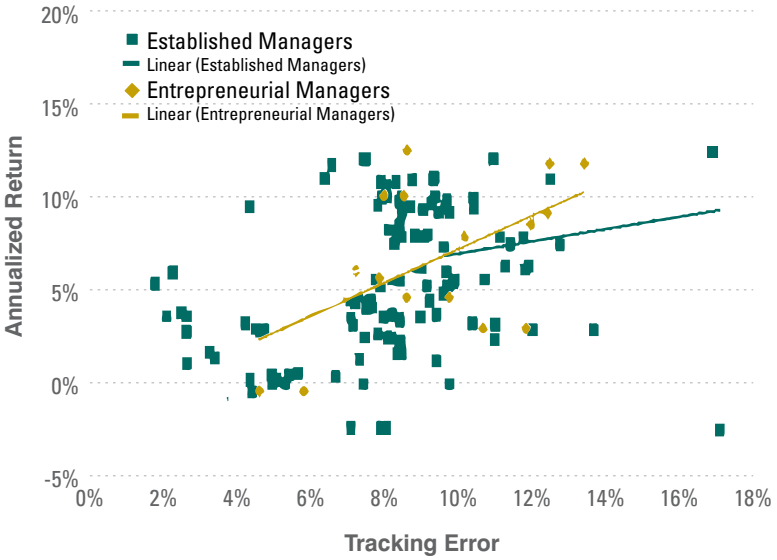
FIGURE 16 Large Core
5 Years Ending December 31, 2010



	Tracking Error (5 Years)	
	Entrepreneurial Managers	Established Managers
Median	4.50	3.66
Mean	5.18	3.92

	Annualized Return (5 Years)	
	Entrepreneurial Managers	Established Managers
Median	3.50	2.61
Mean	3.36	2.59

FIGURE 17 Small Cap
5 Years Ending December 31, 2010



	Tracking Error (5 Years)	
	Entrepreneurial Managers	Established Managers
Median	8.60	6.20
Mean	9.19	6.44

	Annualized Return (5 Years)	
	Entrepreneurial Managers	Established Managers
Median	4.14	1.32
Mean	2.41	1.13

TABLE 2 summarizes the data depicted in Figures 14-17. The table depicts the results for various styles. Where Entrepreneurial managers displayed a performance advantage, they are highlighted in blue. Green indicates Established manager advantage. Entrepreneurial managers produced more excess return per unit of tracking error for 4 of the 5 categories. Established managers had the edge in only one category: Large Core but for that category, Entrepreneurial managers actually outperformed (See FIGURE 16). These relationships suggest that the more concentrated, higher conviction portfolio of Entrepreneurial managers lead to higher excess return per unit of tracking error.

TABLE 2

Tracking Error vs. Annualized Returns		Slope
LCG	Entrepreneurial	0.1372
	Established	-0.196
LCV	Entrepreneurial	0.5762
	Established	0.0469
LCC	Entrepreneurial	0.1195
	Established	0.2646
Small Cap	Entrepreneurial	0.9568
	Established	0.3513
Global	Entrepreneurial	1.2025
	Established	0.4486

TABLE 3

Turnover vs. Annualized Returns		Slope
LCG	Entrepreneurial	-0.0019
	Established	0.0033
LCV	Entrepreneurial	-0.0165
	Established	-0.0038
LCC	Entrepreneurial	0.0003
	Established	-0.0021
Small Cap	Entrepreneurial	-0.0069
	Established	-0.0146
Global	Entrepreneurial	-0.0229
	Established	-0.0073

We also compared the turnover incurred by Entrepreneurial managers relative to their Established manager peers. Here the relationship and the relative advantage were more mixed. For example, as shown in TABLE 3, although Large Growth Entrepreneurial managers incurred more turnover, Large Value Entrepreneurial managers incurred less turnover than their Established manager peers. Of the five style group categories, Entrepreneurial managers translated their portfolio turnover into greater excess return in three of the style categories.

The prior analyses, and other research that we have done, demonstrate a compelling link between portfolio structure and performance advantage for Entrepreneurial managers. We believe that a major driver behind this advantage was Entrepreneurial managers' greater flexibility to invest in less liquid segments of the market opportunity set, which substantially outperformed the more liquid segments.

To illustrate, TABLE 4 provides an example of four firms, each with different AUM levels, offering Large Capitalization Value products. Each portfolio is comprised of 50 stocks and is restricted by a maximum underlying security position limit of 2.5% of the float.

TABLE 4[4]

	Firm A	Firm B	Firm C	Firm D
Assets Under Management	$ 0 B	$ 5 B	$20 B	$50 B
Invested Positions	50	50	50	50
Average Percent of Float	2.5%	2.5%	2.5%	2.5%
Annual Portfolio Turnover	50%	50%	50%	50%
Investable Universe	R1000V	R1000V	R1000V	R1000V
% of Index Holdings Accessible for Investment	100%	100%	60%	30%
Opportunity Cost	Zero	Zero	Significant	Very Significant

As shown in the bottom row, when the portfolio AUM exceeds $5 billion, the opportunity cost that accrues from difficulty in accessing less liquid segments of the market grows significant. The opportunity cost trade-off is illustrated in FIGURES 18 AND 19 on the next page, for Large Value and Small Value managers, respectively. For both charts, the scale of the X axis reflects AUM and the legend represents the float accessible to the manager at each level of AUM.

FIGURE 18 R1000V
Percent of Company Owned

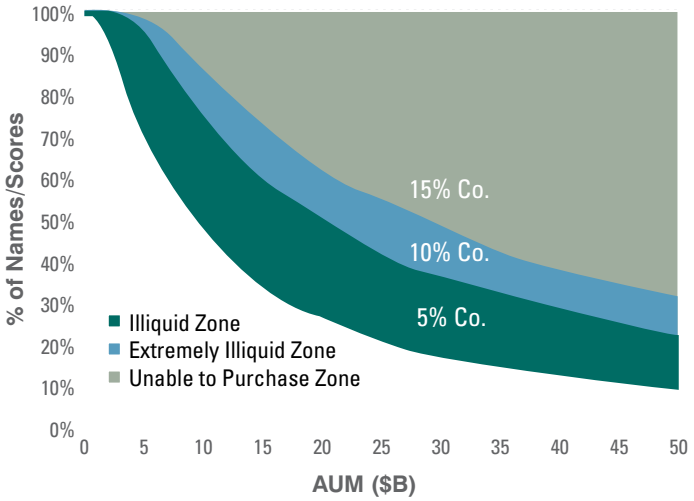


FIGURE 19 R2000V
Percent of Company Owned

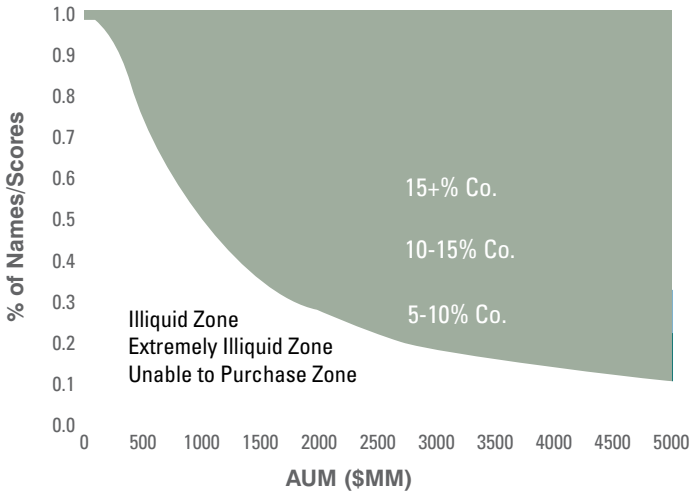


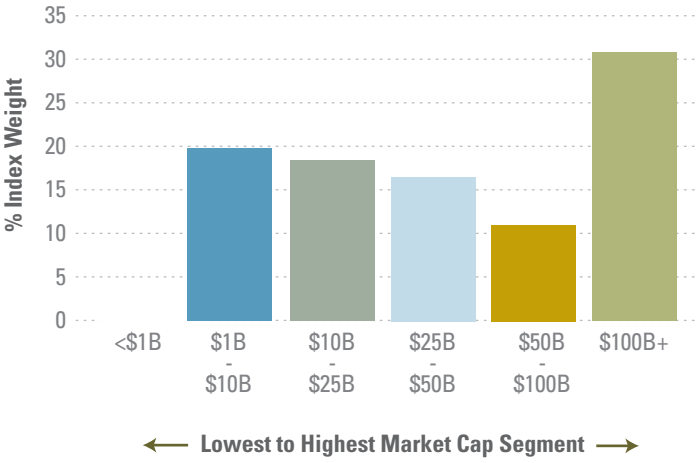
FIGURE 18 shows that for a $0 to $5 billion AUM Large Value firm, most or all of the opportunity set is available without breaching the 2.5% position limit. For a $50 billion manager, only 30% of the index population is accessible to the manager if they maintain a portfolio of 50 stocks and stay within the 2.5% position limit. What larger managers consequently find themselves forced to do is to increase their portfolio holdings; thereby becoming more index-like and reducing their stock specific alpha.

FIGURE 19 demonstrates the opportunity cost trade-off for the Russell 2000 Small Cap Value index. The point of maximum opportunity to access all of that index's liquidity segments is $500 million. This threshold is consistent with the previously referenced July 2007 study which found that for both Small Value and Small Growth products, the positive relationship between asset growth and risk-adjusted returns was strongest up to AUM levels of $500 million (perhaps indicating enhanced resources, such as the addition of Research Analysts, which was positively related to risk-adjusted returns); leveled off up to AUM levels of $1 billion and turned negative to neutral thereafter. Thus, the data appears to demonstrate marginal dilution in risk-adjusted returns between the $500 million and $1 billion levels and absolute diminution after the $1 billion level.[5]

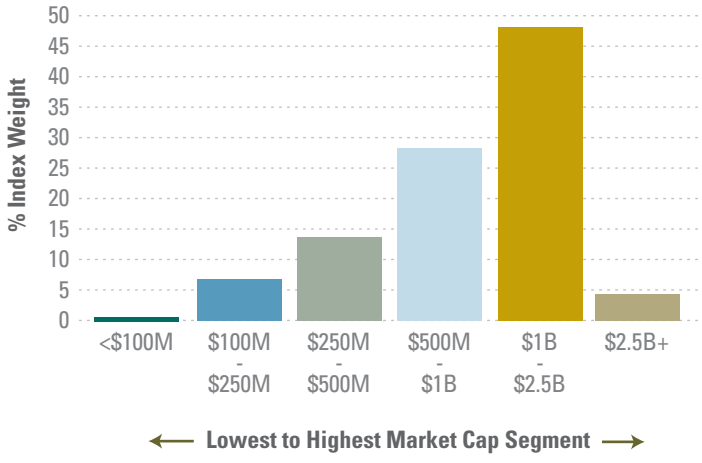
The relative magnitude of this opportunity cost trade-off can be evaluated by comparing the performance of various liquidity segments (as represented by market capitalization) over the last five years. As shown in FIGURES 20 TO 22 on the following pages, the return advantage of being able to position portfolios in the lower liquidity segments of the benchmark holdings universe was substantial.

FIGURE 20

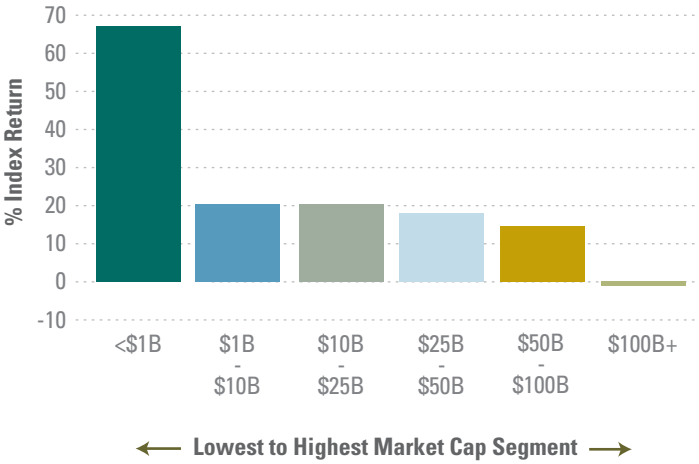
Market Cap Distribution of Russell 1000



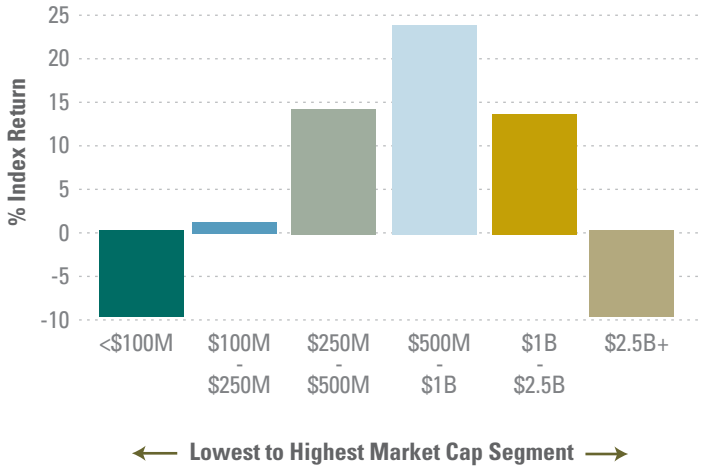
Market Cap Distribution of Russell 2000



Market Cap Return Distribution of Russell 1000



Market Cap Return Distribution of Russell 2000

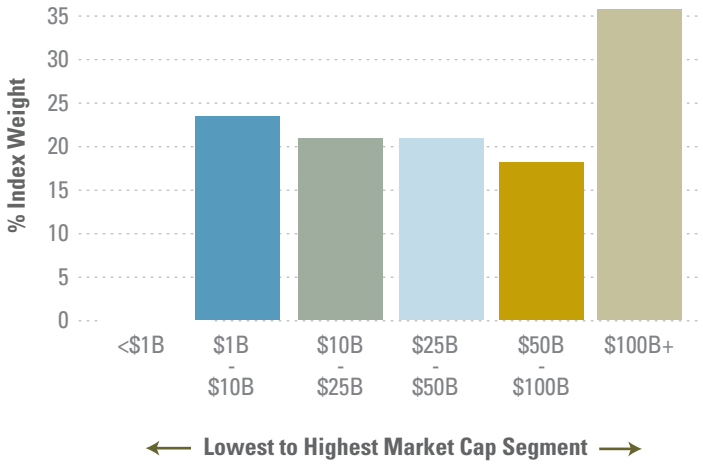


For the Large Core universe (represented by the Russell 1000 index), 43.18% of its holdings represent companies whose market capitalization exceeds $50 billion; almost 2/3 (or 61%) represent companies whose market capitalization exceeds $25 billion. However, an evaluation of the performance of each capitalization segment depicted in the bar chart below shows that the most liquid and highest cap segment (companies whose capitalization exceeded $100 billion and represented almost one-third of the benchmark holdings) was the worst performer at negative 37 basis points. The highest performer was the least liquid and lowest market cap segment represented by companies below $1 billion which returned 67.5%. The next highest segment comprised medium cap stocks (between $1 billion and $10 billion), which returned 20.1%.

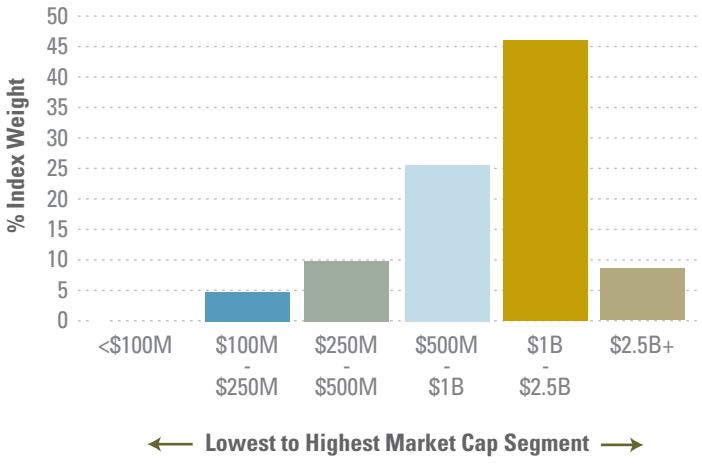
For small cap stocks, the results are more nuanced. As with large cap stocks, the highest market cap segment ($2.5B+) underperformed. However, so did micro cap stocks, which represent less than 1% of the R2000 universe. The best performers were in the $500 million to $1 billion range.

FIGURE 21

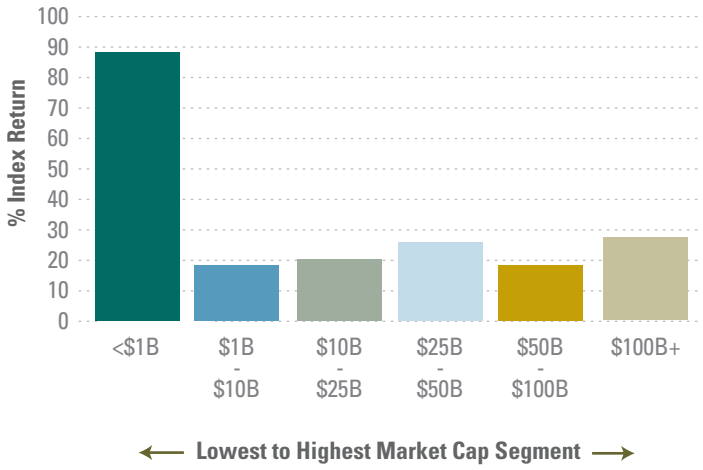
Market Cap Distribution of Russell 1000 Growth



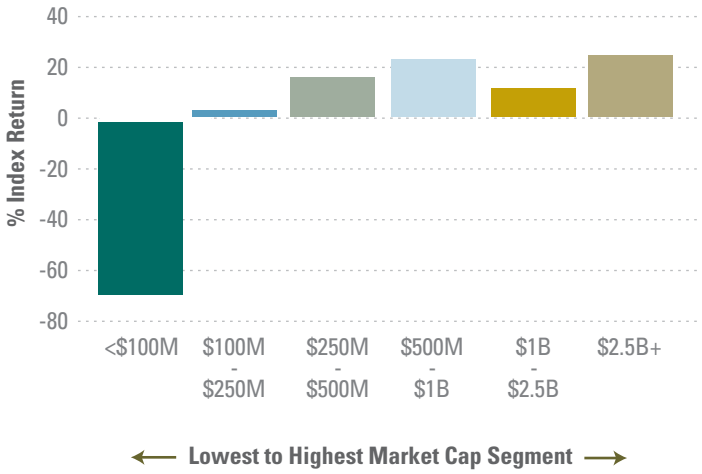
Market Cap Distribution of Russell 2000 Growth



Market Cap Return Distribution of Russell 1000 Growth



Market Cap Return Distribution of Russell 2000 Growth

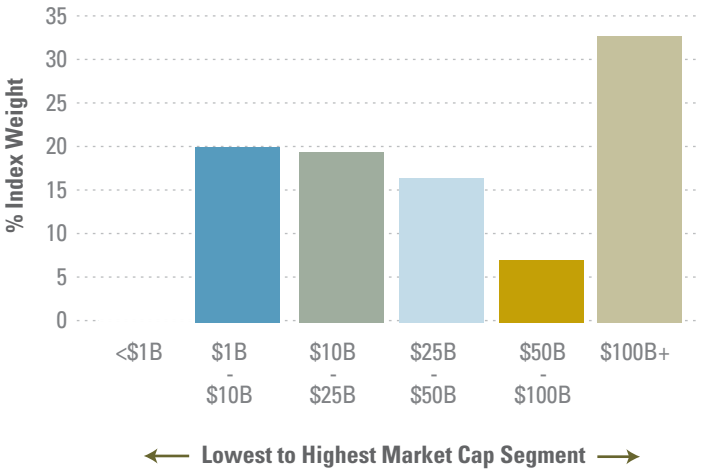


The relative capitalization weights and performance for the Large and Small Growth stock universes are similar to the results observed for the Core indices.

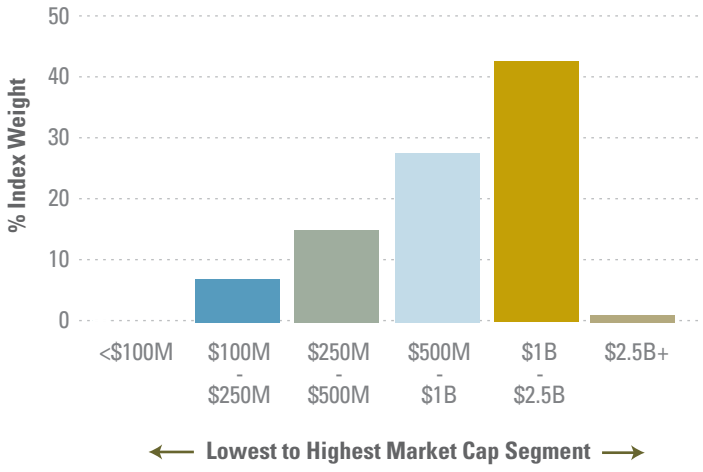
However, for Value stocks, (depicted in FIGURE 22), the performance difference was even more pronounced. The largest market segment ($100 billion +) represents about one-third of the index universe and returned negative 13.82% vs. a positive return of over 19% for the midcap segments ($1 billion and $10 billion), which represents about 20% of the index's holdings.

FIGURE 22

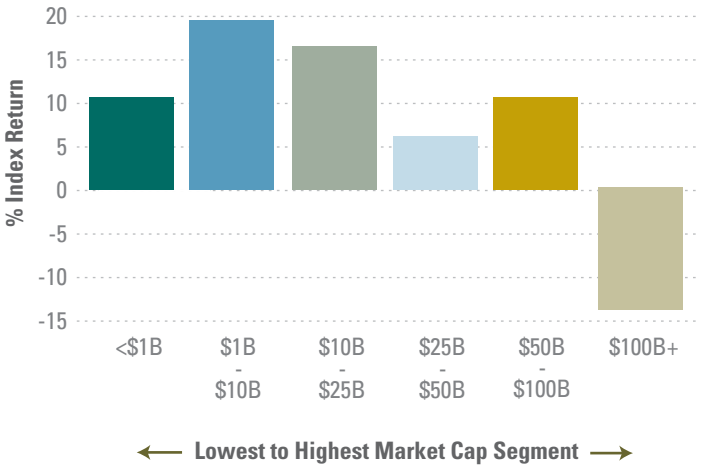
Market Cap Distribution of Russell 1000 Value



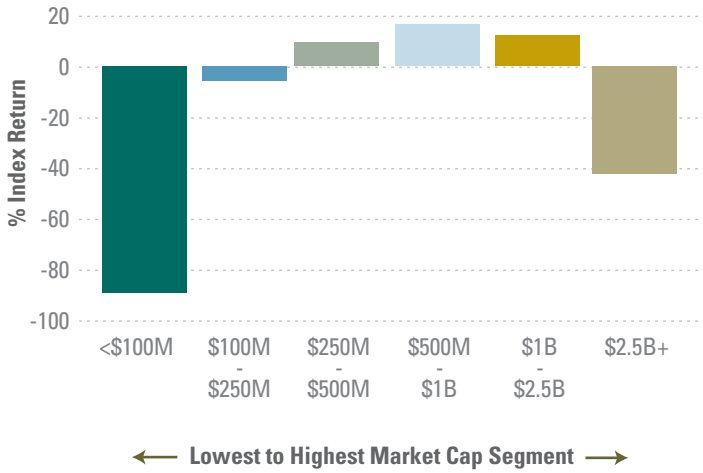
Market Cap Distribution of Russell 2000 Value



Market Cap Return Distribution of Russell 1000 Value



Market Cap Return Distribution of Russell 2000 Value



The previous analysis demonstrates that at AUM levels above certain thresholds there is limited access to the full range of the liquidity spectrum within the market opportunity set. With standard institutional diversification guidelines that limit ownership in the outstanding shares of listed securities, Established managers' impaired ability to invest in less liquid and often higher returning market segments also appeared to impair their returns relative to Entrepreneurial managers. In order to access these less liquid market segments, Established managers can alternatively increase their number of holdings (in order to avoid breaching the position size threshold). This is likely why our analysis over the years shows that Established managers hold substantially more positions than Entrepreneurial managers. However, the downside of this approach is that the manager's portfolio begins to be more index-like, thereby diluting stock specific alpha.

CONCLUDING OBSERVATIONS ON ENTREPRENEURIAL VS. ESTABLISHED MANAGERS

Even though most Entrepreneurial managers offer active management strategies with relatively high tracking error, Entrepreneurial managers still outperformed their Established manager peers over the five years ending December 31, 2010 without incurring appreciably more risk. Entrepreneurial managers exhibited more concentrated, higher conviction portfolios with higher tracking error than their Established manager peers. We believe it is the combination of these factors that led Entrepreneurial firms to produce more excess return per unit of tracking error for 4 of the 5 major equity categories studied (Large Value, Large Growth, Small Cap and Global Ex-US Equity). Established managers had the edge in only one category: Large Core. However, even for that category, Entrepreneurial managers actually outperformed. Another key structural performance advantage appeared to be derived from Entrepreneurial managers' greater flexibility to invest in less liquid and higher returning market segments. The combination of large asset pools with commonly used guidelines that limit a manager's exposure to a maximum percentage of the outstanding shares of listed companies likely constrained Established managers' ability to take advantage of the higher returns generated by smaller and less liquid stocks. In order to access these less liquid market segments and stay within such position limits, Established managers would have had to increase their number of holdings. This is likely why our analysis over the years shows that Established managers hold substantially more securities than Entrepreneurial managers. However, the downside of this approach is that the Established manager's portfolio would begin to become more index-like; thereby diluting stock specific alpha.

[1]After over 20 years of researching and allocating mandates to small firms, we feel that "Entrepreneurial manager" more accurately describes institutional investment firms characterized by: 1) assets under management below generally accepted thresholds, by asset class; 2) more concentrated portfolios; and 3) smaller, relatively flat organizational management structures than the term "emerging manager". Hence, in this document we refer to Entrepreneurial managers and contrast them with Established managers.

[2]*Why We have a Correlation Bubble*, J.P. Morgan, October 2010

[3]Tina Byles Williams and Xiaofan Yang, *Study on the Performance Drivers for Emerging Managers, Three Years ending December 31, 2007*, FIS Group, July 2007.

[4]*Trading Costs – A Sizeable Competitive Advantage*, Huber Capital Management, July 2008.

[5] Tina Byles Williams and Xiaofan Yang, *Study on the Performance Drivers for Emerging Managers, Three Years ending December 31, 2007*, FIS Group, July 2007.