Active Alpha

The latest academic research suggests that there are certain common characteristics of active equity managers who deliver persistent outperformance.

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EXECUTIVE SUMMARY

One of the major trends in equity investing over the past several decades has been a shift by both individual and institutional investors toward passive, or indexed, investments. This trend has been encouraged by two assertions that until recently were widely accepted in academic circles, namely: 1) that active equity managers as a group are unable consistently to outperform market indices after their expenses and fees are deducted; and 2) that an equity manager's outperformance during a particular period is simply a matter of good fortune. However, a growing body of academic studies conducted over the past several years calls these assertions into question and allows investors to view certain active managers in a new light.

At Brown Advisory, we have an understanding of how we can add value for our clients as active equity managers, and this new body of research confirms many aspects of our approach. According to some of these studies, manager outperformance is not a random event. Instead, active equity managers with certain traits are more likely to outperform than others, and these traits generally can be identified ahead of time. Many of these characteristics, such as a high level of divergence from a strategy's benchmark, are core components of our investment philosophy.

In this paper, we synthesize some of the recent academic literature studying the subject of active equity manager performance, and examine how our firm's approach might be evaluated in light of that research.

BROWN ADVISORY

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ABOUT THIS PUBLICATION SERIES

Brown Advisory is an independent investment firm focused on meeting the wide range of investment challenges and goals of our individual, family and institutional clients. The goal of our Thoughtful Investing Series is to provide readers with insight into our philosophy and process by offering an in-depth view of specific aspects of our investment approach. Over time, we will cover such topics as our in-house fundamental research process, our asset allocation methodology and our systematic approach to investment in alternative investment classes.

In this first submission, we will discuss our active equity management philosophy. We will look at recent academic research and evaluate our firm's approach in light of those findings. We note that the evaluation and selection of an active equity manager is just one of many factors that go into the development of a comprehensive investment program, a process that starts with significant attention to asset allocation and includes manager selection across a wide range of asset classes. Some issues are more important to certain types of investors than others; families must consider a range of intergenerational and tax-related issues as they structure their wealth (with tax efficiency issues being of particular importance), while institutions face a variety of fiduciary considerations, including the current obligations that their portfolios are designed to meet.

We chose to begin the series with the topic of active equity management for good reason. Equity strategies play a major role in most of our client relationships, and we have made a significant commitment to building a high-quality investment team and a disciplined process capable of delivering attractive equity performance over time. We look forward to covering other aspects of our investment approach in future publications in the series.

Introduction

One of the major trends in equity investing over the past several decades has been a shift by both individual and institutional investors toward passive, or indexed, strategies. This trend has been encouraged within academic circles over time. Generally, the various academic arguments made in favor of passive equity investing can be boiled down to two simple statements:

1. *The aggregated performance of all equity investment managers will, by definition, roughly equal market returns. Therefore, the average manager should underperform the market by approximately the amount of management fees and expenses charged.*
2. *Some equity managers will outperform the market over varying periods of time, but it is impossible to predict which ones will do so in any given year.*

Statement 1 is a simple mathematical truth, so it is not surprising that most of the academic research studying average equity manager performance confirms that the average manager underperforms after fees. Michael Jensen studied this concept in his notable 1968 paper, in which he popularized the concept of investment "alpha"—a measure that indicates how an investment performed after accounting for its attendant risk—and showed that the typical equity manager's alpha was negative.[1] The underperformance of the average manager has been reconfirmed in numerous studies over the years; recent papers include studies by Barras, Scaillet and Wermers (2010), which demonstrated an aggregate negative alpha generated by active mutual fund managers,[2] and by Busse, Goyal and Wahal (2010), which showed that active equity institutional managers as a group did not generate statistically significant alpha.[3,4]

Statement 2 asserts that it is impossible for active equity managers to outperform the market for any reason other than chance, and it is this statement that is much more open to debate. There is now a wide range of academic studies refuting this assumption and supporting instead the hypothesis that a minority subset of active equity managers generates persistent outperformance ("persistent" outperformance is a commonly used phrase in the academic literature; if managers outperform during an initially studied period, and are found to outperform in a subsequent period, their performance is said to "persist"). Further, investors can greatly improve their chances of identifying these managers by screening for a variety of characteristics related to performance, portfolio make-up and other variables. It is on this statement that we will focus our discussion.

Below, we look at the findings of some of the recent studies addressing active equity management and examine Brown Advisory's approach as it relates to each study. None of the studies reviewed should be seen as definitive on its own; each suggests one specific factor that to some extent influences the probability of good relative returns. It goes without saying that this is an area of rich and often contradictory academic inquiry; there are plenty of studies to support a variety of hypotheses. Taken together, however, these studies provide a useful checklist for evaluating managers for their likelihood of outperforming in the future—and additionally the discussion should provide some insight into how Brown Advisory thinks about investing.

One additional note: While some of the academic research in this space analyzes institutional managers, the majority looks at mutual fund data due to the quantity and quality of data available from publicly reported fund companies. In our view, the findings of these studies are useful for potential investors in actively managed equity strategies, regardless of the specific vehicle being considered.

"Many studies show that the average equity manager tends to underperform the index, but new research indicates that a minority subset of active equity managers have demonstrated persistent outperformance."

Active Share

FINDING

"Active share" is a recently defined measure of the degree to which the composition of a portfolio differs from its benchmark; the greater the difference, the higher its active share. Recent research indicates that strategies with a high active share are more likely to outperform their benchmarks and peers.

One of the most intriguing studies in recent years was that of Cremers and Petajisto (2009), which defined the concept of "active share" as the extent to which managers differ from their underlying benchmark, either by owning securities not included in the benchmark or by weighting differently those securities that are held in common. Their research, which looked at a universe of 2,647 actively managed funds sampled from the Center for Research in Security Prices (CRSP) mutual fund database for the period between 1990 and 2003, provided two interesting conclusions. First, it showed that if you group the universe of active equity funds into quintiles (i.e., the top 20%, the next 20%, etc.) by their active share percentage, only the top quintile—in other words, the funds that differ most significantly from their respective benchmarks—generated positive alpha (see Figure 1).[5] This finding was somewhat groundbreaking, and deceptively so, since the idea of active share is so easy to understand. Most studies simply view active management as a monolithic concept, but Cremers and Petajisto provide a scale by which to measure just how active a manager is; thus, one can quickly see the wide difference between a "benchmark-hugging" strategy and a truly active strategy (for actively managed funds, active share generally ranges from ~50% at the low end to close to 100% at the high end). Their research clearly shows that "average" managers hug their benchmarks relatively closely. Coupled with the higher fees earned by active managers, it's not surprising that "average" active managers are shown so often by research to underperform the market.

Additionally, Cremers and Petajisto's research recognized the importance of determining whether manager outperformance was persistent, so they looked at the top-performing funds during each year of the study and examined the performance of those funds in the subsequent year. As shown in Figure 2, only funds with high active share demonstrated persistent outperformance from one year to the next, while funds with low active share were more likely to follow a good year with a bad one.[6]

The Value of Nonconformity

Cremers and Petajisto studied the concept of active share for the universe of actively managed, all-equity mutual funds (excluding sector funds) for the period 1990-2003. Figure 1 shows that funds with top-quintile active share generated positive average annual alpha, while all other funds generated negative results. Figure 2 includes only funds with top-quintile performance in the prior year and shows the results of those funds the following year; the funds with first- and second-quintile active share showed persistent outperformance, while the other funds did not.

FIGURE 1: Positive fund alpha found in funds with high active share (1990-2003)

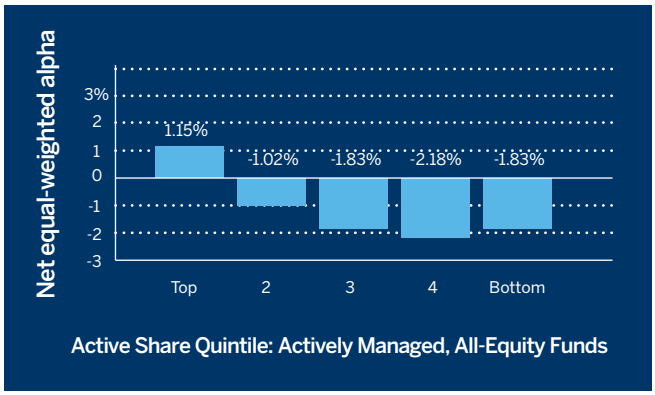
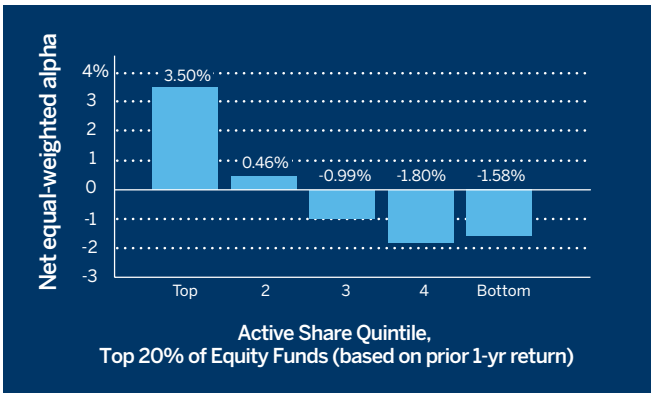


FIGURE 2: Persistent positive alpha found in funds with high active share (1990-2003)



SOURCE: "How Active Is Your Fund Manager? A New Measure That Predicts Performance," Cremers & Petajisto, *Review of Financial Studies*, vol. 22, no. 9, 2009.
NOTES: The study measured the results within each active share quintile in terms of "net equal-weighted alpha," defined as the arithmetic average of the alpha of all funds within each quintile, net of fees and expenses.

Active Share

OUR PHILOSOPHY

"To be great, you have to be different."

Brown Advisory's investment philosophy has generally created equity portfolios with high active share scores. Figure 3 shows the active share scores of our core equity strategies as of Dec. 31, 2011. Our equity managers generally hold anywhere from 30 to 60 positions, depending on the asset class; strategies offered by other firms typically hold up to several hundred positions. And while we are aware of our benchmarks in terms of sector allocation, our managers are generally not constrained by sector-allocation limits when they feel that there are particularly strong opportunities in a particular sector. We believe that this approach best captures the value of our in-house research team's efforts.

At the risk of stating the obvious, we want to emphasize that simply diverging from one's benchmark isn't a viable investment strategy. On the contrary, we feel that equity managers who exhibit high active share should be doubly focused on adhering to a highly disciplined and consistent investment process to guide their decisions. The investment team at Brown Advisory has evolved and refined such a process, in which all our portfolio decisions are based on a consistently implemented approach that starts with internally generated fundamental research and ends with a financial model designed to quantify our view of a stock's upside potential and downside risk. We generally do not deviate from this process and ensure that our investment team has the resources it requires to implement this process.

Standing Out

Brown Advisory's core equity strategies address different asset classes but share a philosophical belief that a concentrated portfolio of carefully selected stocks can deliver above-average results over time. This approach has led to strategies with top-quintile active share scores within their respective peer groups as of Dec. 31, 2011.

FIGURE 3: Active Share of Brown Advisory Equity Strategies

	BROWN ADVISORY ACTIVE SHARE	PERCENTILE RANKING IN PEER GROUP
Large-Cap Growth	85.1%	82
Large-Cap Value	93.7%	82
Flexible Value	79.8%	81
Small-Cap Growth	93.0%	96
Small-Cap Value	97.4%	99
Equity Income	81.2%	86

SOURCE: Brown Advisory and Morningstar. Data as of 12/31/2011.
NOTES: Active share is calculated using a representative account for each strategy versus its benchmark. Percentile rankings are based on the strategy's corresponding Morningstar mutual fund peer group. Please see the notes at the end of the presentation for peer group and benchmark definitions.

Independent Thinking

FINDING

Top-decile or bottom-decile past performance may serve as a useful tool for selecting managers more likely to achieve persistent results.

Several recent studies suggest that past performance, when filtered with appropriate statistical techniques, can be useful in improving the probability of selecting managers who will outperform in the future. Figure 4 shows the results of a study by Kosowski, Timmermann, Wermers and White (2006), which found that top-decile performers over a three-year period generated average annual alphas of +0.96% in the following year.[7] Similarly, a study by Harlow and Brown (2006) sorted mutual funds by decile and found that top-decile performers over a three-year period generated average annual alphas of +1.58% the following year, while the figure for funds in the bottom decile was -2.18%.[8]

This finding is not, as might seem at first glance, contradictory with the standard warning about selecting investments based on past investment returns. In fact, there is not a correlation between past and future performance when looking at raw performance numbers. However, these studies did find a correlation by measuring performance with a more refined tool—in this case, a modified form of investment alpha that adjusts for "style bias," such as a fund's exposure to smaller capitalization stocks, value vs. growth stocks, or "momentum" stocks. (For example, in the case of small-cap bias, a manager's results in a particular period may be simply due to owning a greater proportion of small companies relative to the benchmark during a period when small companies outperformed.) Eliminating the influence of these sources of "noise" from a study is the way to isolate and identify managers whose performance is likely to persist.[9]

OUR PHILOSOPHY

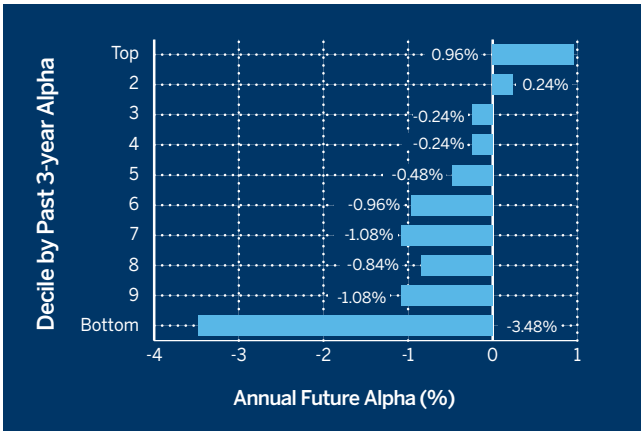
"Stick to your areas of excellence; partner with others who excel at the rest."

Brown Advisory employs both proprietary equity strategies and those managed by a handful of carefully selected third-party managers. We have demonstrated over time the ability to add value in a variety of U.S. equity asset classes, but at the same time we have a clear view of where our expertise stops. Accordingly, for certain other asset classes in which we do not have expertise, such as commodities, real estate and emerging markets debt and equity, we look to tap the excellence of others. The research on performance persistence offers some support for Brown Advisory's approach to portfolio management by showing that a top-down style bias is not a reliable way for a manager to generate consistent results. This concept is an important consideration for our firm, both in how we manage equity portfolios ourselves and in how we select outside managers.

The Existence of Persistence

The authors of this study sought to determine if manager alpha during rolling three-year periods from 1975 to 2002 had any correlation with those same managers' results in the subsequent year. Managers with top-decile alpha during those three-year periods generated positive average annual alphas of +0.96% in the following year, while bottom-decile managers generated negative average annual alphas of -3.48% in the following year.

FIGURE 4: Relationship between past and future alpha



SOURCES: "Can Mutual Fund 'Stars' Really Pick Stocks? New Evidence from a Bootstrap Analysis," Kosowski, Timmermann, Wermers and White, *Journal of Finance*, vol. 56, no. 6, 2006; "Active Management in Mostly Efficient Markets," Jones and Wermers, *Financial Analysts Journal*, vol. 67, no. 6, 2011.
NOTES: Results based on a sample of 2,118 U.S. equity funds listed during the period covered in the Center for Research in Security Prices (CRSP) mutual fund database.

Independent Thinking

In some cases, our internally managed strategies deliberately eliminate such biases from their investment process. For example, our large-cap growth strategy specifically screens out momentum stocks and cyclically sensitive stocks in order to keep the portfolio focused on companies that, in our team's estimation, can reliably grow EPS at 14% or more per year in a variety of economic scenarios. We do have strategies labeled as "growth" and "value," but as mentioned previously, we do not constrain ourselves with benchmark-related or other externally developed definitions. Instead, we maintain a standalone investment thesis for each of our equity strategies, using criteria to evaluate growth or value that we have independently developed based on years of experience. We believe that this approach offers the advantage of uncovering growth or value opportunities in places that may be less obvious to conventional growth or value investors.

We also apply this concept as we select outside managers. We generally seek out managers who share a philosophy similar to our own; among a variety of other factors, we look for managers who generate results from bottom-up research and strong individual security selection, while avoiding managers whose results are primarily driven by a systematic bias that may move in and out of favor over time.

Wasatch Advisors is a good example of the kind of disciplined, independent-minded manager that we favor; hence, our decision to select the Wasatch Emerging Markets Small Cap strategy for our clients in early 2011. Based on demographic and economic developments around the world, we decided to invest a portion of client portfolios in such a way as to benefit from the secular rise of the middle class in emerging markets. However, we felt uncomfortable with many managers who—consistent with popular benchmarks—invested heavily in global energy and materials companies as opposed to companies that more directly cater to the rising affluence of the populations of developing nations. After an extensive due-diligence process, we were attracted to Wasatch's strategy, which exhibited a number of the desirable characteristics outlined so far in this paper. First, its focus on the emerging-markets middle class theme was one example of a general philosophical willingness to intelligently diverge from the benchmark; as a result, its active share as of Dec. 31, 2011, was 95.4% compared to its benchmark—relatively high compared to other funds we considered. Additionally, Wasatch takes care to protect itself from any style bias, focusing on bottom-up, fundamental factors as its primary basis for decision making.

"We select outside managers who share a philosophy similar to our own—based on bottom-up research, strong security selection and avoidance of systematic biases."

Collaboration

FINDING

Performance is not solely the product of "star managers"; instead, it is a joint product of managers and their firms, and in the majority of cases the firm is more responsible for performance than the manager.

A recent study by Baks (2003) sought to build a model that separately attributes performance to fund managers and the overall firm structure supporting the funds being managed. Baks built a database that tracked over 2,000 fund managers and their responsibilities for different funds during their careers from 1992 to 1999; he subsequently built a regression framework to learn about the contributions of managers and fund organizations by studying results when managers change funds or manage multiple funds simultaneously. While the results of the study were not entirely conclusive, they did generally point to the importance of the fund organization in driving fund returns. Baks found that managers were typically responsible for no more than 50% of performance results and at times as little as 10%.[10] His results are somewhat surprising, given the attention paid to "star managers" in the financial press, and they emphasize the value of identifying strategies that are backed by strong research teams rather than just a well-regarded manager.

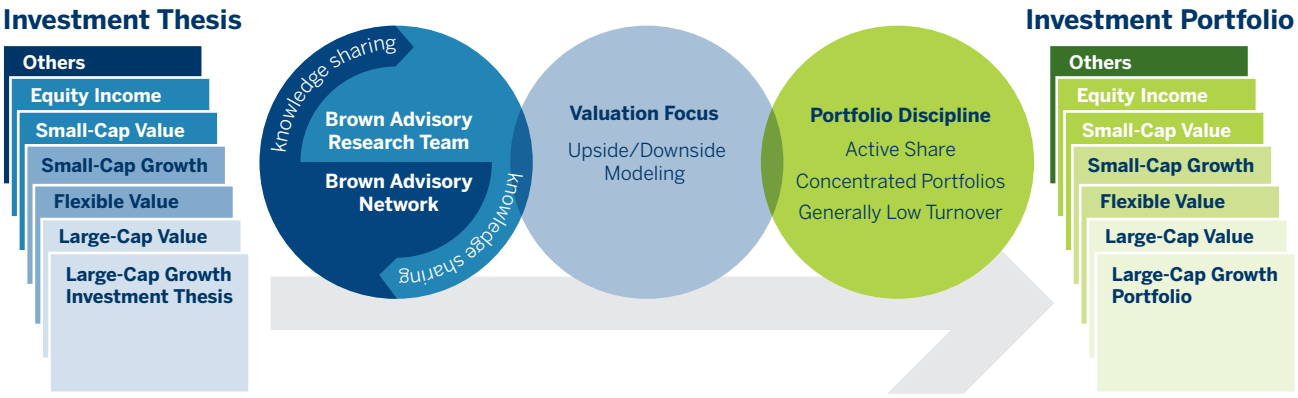
OUR PHILOSOPHY

"Make excellence a collaborative process."

Over the years, Brown Advisory has deliberately built a disciplined equity investment process, intended to serve as a "performance engine" that powers our proprietary equity strategies, as illustrated in Figure 5. The first component of this engine is a strong and interdependent team, now comprising more than 30 seasoned portfolio managers and research analysts. Importantly, all full-time members of the team are equity owners of Brown Advisory, a factor that keeps turnover to a minimum and aligns the long-term interests of our employees with those of our clients. In addition, and in contrast to many investment

Many Strategies, One Common Engine

FIGURE 5: From Investment Thesis to Investment Portfolio



firms, we don't view portfolio managers as necessarily senior to research analysts. Instead, these roles are viewed as equally valuable, collaborative functions; analysts need not "jump the fence" to become portfolio managers in order to increase their compensation or standing within the firm. The level playing field among investment professionals promotes the frank discussion of issues and keeps the Brown Advisory team stable and focused. While our research analysts generate most of the ideas for our portfolios, our due-diligence process on those companies is typically a collaboration between portfolio managers and research analysts, each lending relevant skills and experience to the task.

Another critical component of this engine is our disciplined process for modeling upside potential versus downside risk (see Figure 6). Our analysts and portfolio managers calculate the potential upside to an investment if things go well, and a downside worst-case price. This tool is a cornerstone of our process and used in several important ways. Most obviously, it is useful for individual security evaluation at the time of purchase, but it is also helpful in ongoing portfolio management decisions, in which existing holdings and new ideas are constantly competing for one of the limited spots in our portfolios based primarily on each stock's "upside/downside" (our shorthand term for our team's estimate of the ratio of the stock's upside potential versus its downside risk). "Upside/downside" is also a key factor driving our sell discipline and our decisions regarding position size within the portfolio. When we increase or trim exposure to a stock (or sell it outright), our decisions may be influenced by fundamental changes to a company's business, valuation considerations or competing ideas we find more attractive. All of those factors, however, are boiled down to their respective impacts on our upside/downside model and whether the stock's price is still attractive in light of the model.

In short, we believe that our equity strategies are driven by a comprehensive system, not just by individual managers.

Darwinian Capitalism in Action

Brown Advisory's equity analysts model the upside potential and downside risk for each stock they follow. By comparing the two, our portfolio managers get a sense of the relative attractiveness of potential stock holdings. This methodology is also valuable when applied to our concentrated portfolios. New ideas and current holdings compete for scarce places in our portfolios in a kind of "Darwinian capitalism," all based on upside/downside.

FIGURE 6: Example of upside / downside calculations

	ANALYST PROJECTIONS				
	UPSIDE FROM CURRENT PRICE	DOWNSIDE FROM CURRENT PRICE	RATIO	CURRENT PORTFOLIO WEIGHTING	SUGGESTED ACTION
Stock A	40%	17%	2.35	3.00%	Increase
Stock B	27%	18%	1.50	2.50%	Hold
Stock C	35%	24%	1.45	1.75%	Hold
Stock D	25%	23%	1.08	2.50%	Trim
Stock E	14%	25%	0.56	1.50%	Sell

SOURCE: Brown Advisory

Consistency and Discipline

FINDING

Funds that display a consistent level of risk generally outperform those whose risk levels vary over time.

Huang, Sialm and Zhang (2010) studied what they called mutual fund "risk shifting," motivated by the relatively high level of change they observed in the annual volatility of a significant percentage of mutual funds.[11] The study looked at the impact of risk shifting on performance during the period between 1980 and 2009; the authors believed that risk shifting is most often driven by motivations apart from shareholders' interests, such as when underperforming managers "juice" performance at the end of a reporting period by taking on added risk, or when managers lock in gains for purposes of protecting their compensation.[12] By looking at a risk shifting measure (RS)—which they defined as the difference between past realized volatility of a fund versus the volatility of its current holdings—they found that 20% of mutual funds each year shifted their annual volatility levels by more than 6 percentage points, indicating that these funds were fundamentally changing their risk stance and therefore their investment strategy. Moreover, they found that funds in the highest RS decile generated negative annualized alpha of -3.5% during the period covered by the study.

OUR PHILOSOPHY

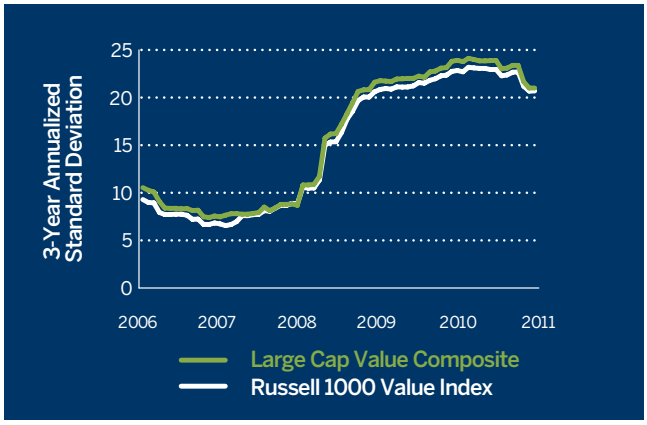
"Long-term investors needn't worry about quarter's end."

We are firm believers in a consistent approach to portfolio risk. Because our portfolios are built based on the intrinsic value of individual companies, we seek to avoid changing our risk stance in response to short-term performance events or market reactions (Figure 7). Additionally, we are long-term, low-turnover investors (Figure 8); since we intend to hold positions for longer periods of time, we choose our entry and exit points based on carefully constructed models. The notion of trading simply for the sake of improving the portfolio cosmetically is not a consideration.

Steady As She Goes

While our equity managers respond to risks and opportunities that are presented by changing company fundamentals, their intent is to generally maintain a consistent risk stance over time. The chart below demonstrates an example of this consistency by showing how steadily the volatility of our Large-Cap Value strategy has tracked with the volatility of its benchmark over the past five years.

FIGURE 7: Trailing 3-year annualized standard deviation



SOURCE: Factset. Data as of 12/31/2011.
NOTES: Performance volatility information, as measured by 3-year annualized standard deviation, is represented by the Brown Advisory Large Cap Value Comopsite and is compared to the Russell 1000 Value Index. The GIPS-compliant presentation for this composite is available upon request and provides more information about the composite. Please see the notes at the end of the presentation for index definitions.

Holding On

One of the tenets of our firm's equity investment philosophy is to buy companies that we believe have the potential to be long-term portfolio holdings. While circumstances may change our view with respect to an individual security, our approach generally results in portfolio turnover that is equal to or below our various peer groups.

FIGURE 8: Portfolio turnover, Brown Advisory vs. peers

	STRATEGY	PEER GROUP
Large-Cap Growth	30%	74%
Large-Cap Value	64%	61%
Flexible Value	33%	55%
Small-Cap Growth	61%	85%
Small-Cap Value	55%	53%

SOURCE: Internal data, Morningstar data as of 12/31/11.
NOTES: Portfolio turnover figures are calculated using a representative account for each strategy for the 12-month period ended 12/31/11. Please see the notes at the end of the presentation for peer group definitions.

ACTIVE EQUITY MANAGER PERFORMANCE THROUGHOUT THE ECONOMIC CYCLE

The academic research summarized so far suggests that there is a set of tools that may be useful in identifying managers with a higher likelihood of persistent outperformance. Taking these ideas one step further, other studies suggest that there are particular environments in which active managers as a group tend to deliver better performance.

Unfortunately, there is no definitive data on this topic covering the current market cycle; the most recent study by Kosowski (2011) covers the period between 1962 and 2005. That study suggests that active managers add the most value in difficult markets (see Figure 9); as a broad group, active managers generated positive alpha during periods of economic recession during the period studied. The author was careful to control for recession-related effects within the study, such as the higher propensity of funds to carry cash to meet fund redemptions and the possibility of survivorship bias as a result of weaker funds exiting the sample via fund liquidations or mergers. During the period of the study, actively managed equity funds as a group generated average annual alpha of more than 4% a year during recessions, while generating negative average annual alpha of -1% during expansion periods. Similar results were shown by funds across the range of fund styles studied.[13]

These striking results are backed up by other studies, such as that of Moskowitz (2000),[14] and Avramov and Wermers (2006).[15] All of these studies strongly support the idea that active equity managers add the most value in difficult markets,[16] when the market isn't a one-way street upward, when careful selection is essential to identifying firms that can thrive in challenging conditions, and when a watchful eye can minimize exposure to particularly risky investments.

Performance When It Counts

Actively managed equity funds generated significant value during recessionary periods in the last half of the 20th century.

FIGURE 9: Average annual four-factor alpha for equity funds, 1962-2005

	RECESSION PERIODS	EXPANSION PERIODS	FULL SAMPLE
All Growth Funds	3.87%	-1.27%	-0.37%
Aggressive Growth Funds	0.82%	-1.63%	-0.98%
Growth Funds	3.21%	-1.22%	-0.41%
Growth & Income Funds	3.27%	-1.21%	-0.40%
Balanced & Income Funds	5.48%	-1.69%	-0.71%
ALL EQUITY FUNDS	4.08%	-1.33%	-0.43%

SOURCE: "Do Mutual Funds Perform When It Matters Most? U.S. Mutual Fund Performance and Risk in Recessions and Expansions," Kosowski, *Quarterly Journal of Finance*, vol. 1, no. 3, 2011.
NOTES: Recession and expansion periods defined by the National Bureau of Economic Research. Results based on all U.S. equity funds listed during the period covered in the Center for Research in Security Prices (CRSP) survivor-bias free mutual fund files. Fund categories constructed by the authors based on each fund's reported investment objectives.

Conclusion

The academic literature on the topic of active versus passive management is hardly conclusive. Rigorous research makes persuasive cases on both sides of this question, and we expect a healthy back and forth debate to continue in academic circles well into the future. However, there is a strong body of work that suggests that some top-quality active equity managers can in fact outperform the market consistently, and that those who do often share certain attributes, philosophies and processes. Not surprisingly, the attributes for success suggested by this body of research are quite similar to those sought by the institutional investment community: track record, proven consistency, strong managers supported by strong research teams, and a process that focuses on well-supported and consistently smart divergence from the benchmark.

Over time, Brown Advisory has sharpened its investment philosophy, and we are encouraged that the firm's approach seems to be validated by academic research. Ultimately, however, we judge the success of our philosophy by the results that we generate for our clients; the academic confirmation covered herein only strengthens our commitment to a process that we follow on behalf of our clients every day. ■

Peer Group Definitions: Portfolio information throughout this paper is taken from representative accounts within Brown Advisory's equity strategies; please see the attached GIPS-compliant presentations for Brown Advisory's equity strategies for more information. Representative accounts are compared to the following peer groups, with data provided by Morningstar, Inc.: Brown Advisory Large Cap Growth strategy is compared to a peer group of 174 institutional funds within the Morningstar Large Growth category; Brown Advisory Large Cap Value strategy is compared to a peer group of 136 institutional funds within the Morningstar Large Value category; Brown Advisory Small Cap Growth strategy is compared to a peer group of 99 institutional funds within the Morningstar Small Growth category; Brown Advisory Small Cap Value strategy is compared to a peer group of 50 institutional funds within the Morningstar Small Value category; Brown Advisory Flexible Value strategy is compared to a peer group of 174 institutional funds within the Morningstar Large Blend category; Brown Advisory Equity Income strategy is compared to a peer group comprised of a subset of 39 institutional funds within the Morningstar Large Blend category, which have a primary prospectus objective of "Growth & Income." Morningstar data contained herein: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information.

Benchmark Definitions: The Brown Advisory Institutional Large Cap Growth strategy is benchmarked to the Russell 1000 Growth Index, which measures the performance of the large-cap growth segment of the U.S. equity universe. It includes those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values. The Brown Advisory Large Cap Value strategy is benchmarked to the Russell 1000 Value Index, which measures the performance of the large-cap value segment of the U.S. equity universe. It includes those Russell 1000 companies with lower price-to-book ratios and lower expected growth values. The Brown Advisory Small Cap Growth strategy is benchmarked to the Russell 2000 Growth Index, which measures the performance of the small-cap growth segment of the U.S. equity universe. It includes those Russell 2000 Index companies with higher price-to-book ratios and higher forecasted growth values. The Brown Advisory Small Cap Value strategy is benchmarked to the Russell 2000 Value Index, which measures the performance of the small-cap value segment of the U.S. equity universe. It includes those Russell 2000 Index companies with lower price-to-book ratios and lower forecasted growth values. The Brown Advisory Flexible Value and Equity Income strategies are benchmarked to the S&P 500 Index, an unmanaged index, that consists of 500 stocks chosen for market size, liquidity, and industry group representation. It is a market-value weighted index (stock price times number of shares outstanding), with each stock's weight in the Index proportionate to its market value. **One cannot invest directly in an index. The Russell 1000® Index, Russell 1000 Growth® Index, Russell 1000 Value® Index, Russell 2000® Index, Russell 2000 Growth® Index, and Russell 2000 Value® Index are trademarks / service marks of the Frank Russell Company. Russell® is a trademark of the Frank Russell company.**

Brown Advisory is the marketing name for Brown Advisory, LLC, Brown Investment Advisory & Trust Company, Brown Advisory Securities, LLC, Brown Advisory Ltd., and Brown Advisory Trust Company of Delaware, LLC.

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