

CAN ACTIVE MANAGEMENT MAKE A COMEBACK?

Post-financial crisis underperformance by active portfolio managers is easily explained and, we believe, only temporary.

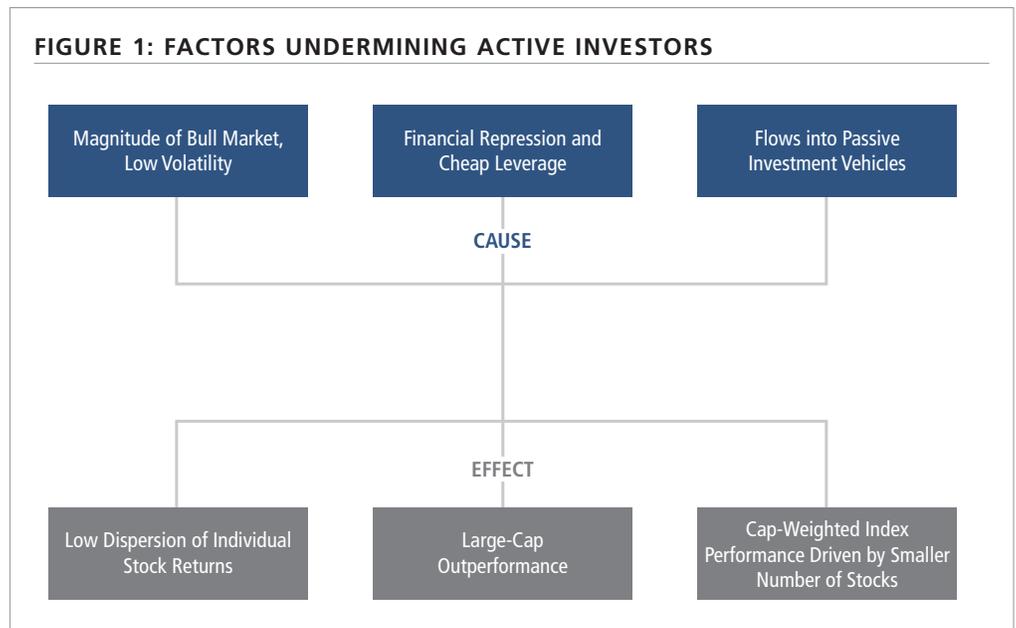
JULIANA HADAS, CFA
 ANDREA POMPILI
 INVESTMENT STRATEGY AND RISK

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The question of active-versus-passive investing has been top of mind for the investor community. Many are closely examining the role of active vehicles relative to passive products in constructing and managing investment portfolios. The reason is readily apparent: active managers have had difficulty in outperforming their benchmarks during the six-year equity bull market since the global financial crisis, particularly in the U.S. large-cap and all-cap segments. Managers in other universes, such as U.S. small caps, developed market ex-U.S. equities and emerging market equities, have fared better.

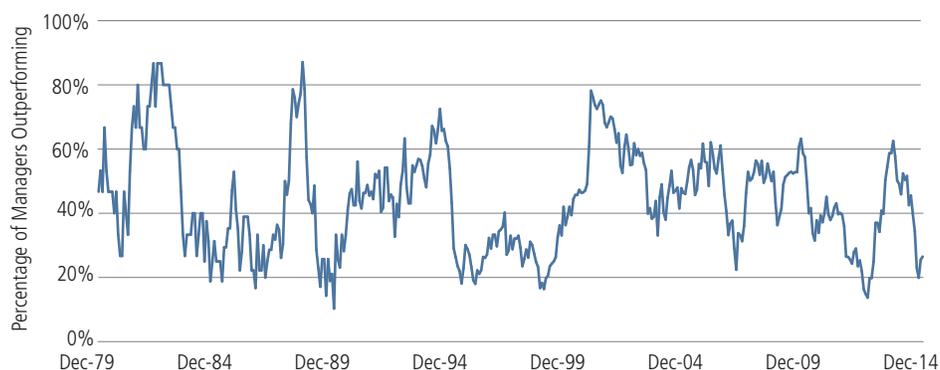
Why has this occurred? From our perspective, it is largely due to the distinctive qualities of the recent market environment. Indeed, the issues over this period can be boiled down to three fundamental causes and their three very tangible effects, as set forth in Figure 1. Not every factor has been a culprit in every year, but collectively and cumulatively they have created major headwinds for active managers.

FIGURE 1: FACTORS UNDERMINING ACTIVE INVESTORS



Source: Neuberger Berman. For illustrative purposes only.

Many of these factors tend to be cyclical in nature and can change course quickly. As Figure 2 illustrates, active management performance has historically gone in cycles, with periods in which a significant number of managers outperformed the market, and other periods in which many managers underperformed.

FIGURE 2: PERCENTAGE OF ALL-CAP ACTIVE MANAGERS OUTPERFORMING THE MARKET

Source: Lipper, Bloomberg; data through December 31, 2014. Outperformance computed by comparing rolling 12-month net-of-fee excess returns for the Lipper Multi-Cap Core universe, as described in footnote 2, to the Russell 3000 Total Return Index. **Past performance is not indicative of future results.**

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In the following pages, we examine the “causes and effects” associated with the recent cycle of active underperformance, and evaluate the potential for a recovery moving forward.

THE CAUSES

Magnitude of Bull Market, Low Volatility

Since bottoming in early 2009, the U.S. equity market, as represented by the Russell 3000 Index, has returned an annualized 22.3%—compared to its 25-year annualized return of 9.8%.¹ In strong bull markets, the relative outperformance of active managers has been largely dependent on beta exposure, while generally low market volatility has tended to hinder alpha generation.

Importance of Market Exposure

Active returns have two components: beta and alpha. The beta component is the amount the portfolio is expected to return based purely on its exposure to the market, calculated as the product of the manager’s beta and the market’s return over the risk-free rate, plus the risk-free rate. The alpha component, which reflects the manager’s security selection skill, is the difference between the portfolio’s overall return and the beta component.

In strong equity markets, the beta component becomes the dominant source of a manager’s return. To see why, consider a simple mathematical example using a hypothetical manager with a beta of 0.9. If the market returns 30% above the risk-free rate, the manager’s expected return from market exposure would be 27% above the risk-free rate. In order to equal the market’s performance on a gross basis, the manager would then have to generate 3% alpha. In contrast, if the market were up only 5% above the risk-free rate, the manager would be expected to generate a 4.5% return above the risk-free rate from the market exposure component, requiring an alpha of just 0.5% to equal the benchmark performance.

¹ Total return data through December 31, 2014. Current bull market return measured from March 1, 2009.

Market volatility has been highly correlated to active managers' tracking error. Tracking error is a prerequisite to generating outperformance.

A beta below 1.0 may be the result of a manager holding a portion of the portfolio in cash. Active managers may hold cash for several reasons: risk mitigation and volatility dampening, subscription/redemption management (the amount of cash needed for this purpose is typically frictional), or the expression of a tactical view on the attractiveness of the overall market.

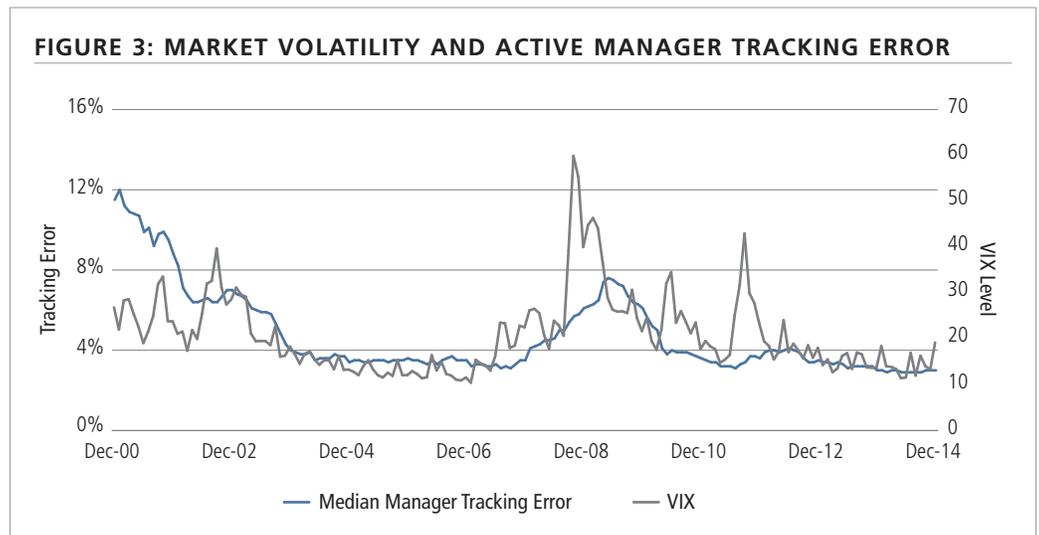
A beta below 1.0 may also be the result of an active manager overweighting sectors or stocks with lower betas than the index. Conversely, a portfolio that is overweight higher-beta sectors or stocks and holding minimal cash is likely to have a beta above 1.0.

We examined the performance of active managers within Lipper's Multi-Cap Core universe² from the market's initial recovery from the global financial crisis, in March 2009, through December 2014. This universe covers mutual funds, which tend to have higher fees than institutional separate accounts and may, therefore, present a tougher bogey. In this time period, the market returned an annualized 22.3%, and only 29% of managers in this universe outperformed the benchmark on a net-of-fee basis. Of the managers who outperformed, a full 82% had betas greater than 1.0. This speaks to the importance of market exposure in a strong equity market.

Impact of Low Volatility

Bull markets are typically characterized by low levels of volatility—a pattern that has held true over the past six years. Less volatile environments by definition mean fewer and/or smaller price movements for active equity managers to capitalize on.

In fact, market volatility has been highly correlated to the volatility of active managers' excess returns, known as tracking error (see Figure 3). Tracking error is a prerequisite to generating outperformance.



Source: Lipper, Bloomberg; data through December 31, 2014. Rolling 12-month tracking error for the Lipper Multi-Cap Core universe, as described in footnote 2, versus the Russell 3000 Index. The Chicago Board Options Exchange Market Volatility Index, or VIX, is a commonly cited measure of implied market volatility. **Past performance is not indicative of future results.**

² Universe benchmarked to the Russell 3000 Total Return Index throughout the paper. "Active managers" are as determined by Neuberger Berman by excluding managers with tracking error below 2%. We also excluded managers with tracking error above 15% to account for potential outlier managers who might skew the results from style drift. Manager results are net of fees. Where multiple share classes of a fund were available, we selected the one with the longest track record; if multiple share classes had the same length of track record, we selected the institutional share class where available.

The decline in interest rates has driven down the cost of borrowing, creating what we consider valuation distortions in equity markets.

What Happens When Dynamics Change?

Markets have historically moved in cycles. Strong bull markets—although sometimes perceived as invulnerable—have eventually slowed or come to a screeching halt. Exposure to cash and more defensive securities, which acts as a drag on returns in bull markets, can help mitigate losses in more difficult times. Moreover, bear markets tend to experience higher levels of volatility, which offers an attendant greater opportunity set for alpha generation.

For example, in the three-year bear market following the bursting of the dot-com bubble in April 2000, the market lost an annualized 15.8%, and volatility was above its long-term average. During this time, the median active manager within the Lipper Multi-Cap universe outperformed the benchmark by an annualized 3.7%—a result of both defensive beta positioning (a full 78% of the managers in this universe had lower betas in this period than they would in the subsequent recovery) and positive alpha generation (the median annualized alpha in this period was 2.3%).³

Financial Repression and Cheap Leverage

Since the global financial crisis, central banks have injected unprecedented levels of liquidity into the global financial system. The resulting decline in interest rates has driven down the cost of borrowing, creating what we consider valuation distortions in equity markets.

When companies can borrow at lower rates, their interest expense burdens are smaller, and the effects of too much indebtedness and relatively thin operating margins become muted. Strong operating cash flow generation becomes less critical when companies can finance expansion with cheap and easily obtainable debt. As a result, the market places a smaller premium on free cash flow generation and a smaller penalty on more aggressive capitalization structures than would be the case in a more normal interest rate environment. This leads to a narrower difference in valuations between higher-quality companies (those generating strong cash flows and employing less debt in their capitalization structures) and lower-quality companies.

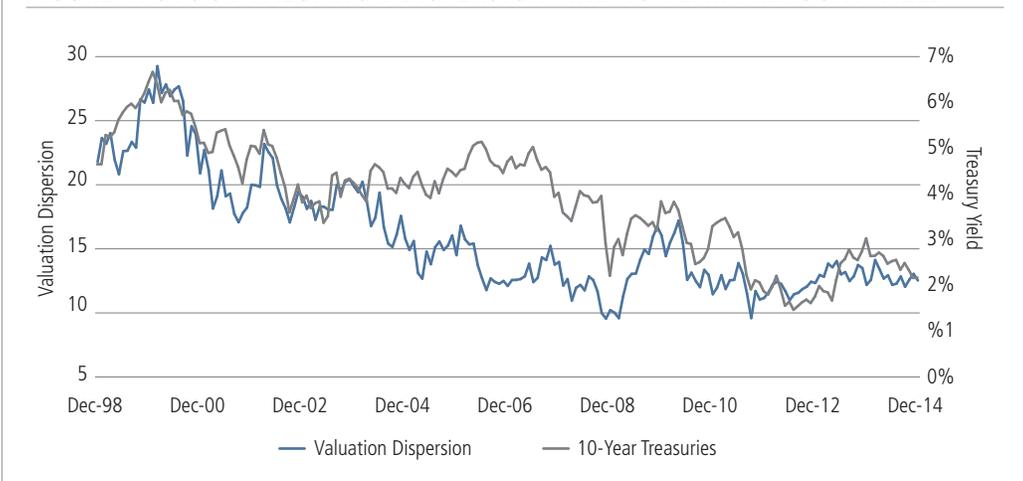
Low interest rates also distort valuations by reducing discount rates. Think of a company's value as the sum of its discounted future cash flows. Discounting makes distant cash flows less valuable than near-term cash flows of the same magnitude. Lowering interest rates reduces the discount rate used in this calculation and thus narrows the difference in valuation between near-term and distant, more speculative cash flows—making the latter more attractive than they might be in periods of higher interest rates.

Higher Rates, Valuation Dispersion and Alpha

The good news for active managers is that while low rates have suppressed stock valuation dispersion, higher rates have historically tended to have the opposite effect. As shown in Figure 4, we have found a positive correlation between interest rates and stock valuation dispersion, as measured by price-to-earnings ratio.

³ Source: Bloomberg, Lipper (universe described in footnote 2). Bear market was the period April 2000–March 2003; recovery was over the subsequent three-year period, April 2003–March 2006.

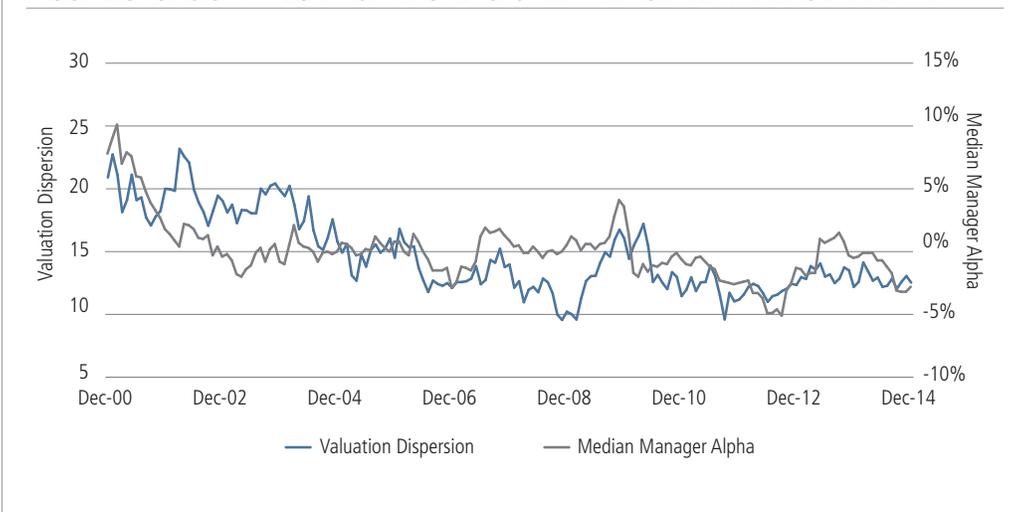
FIGURE 4: STOCK VALUATION DISPERSION AND 10-YEAR TREASURY YIELD



Source: Bloomberg, data through December 31, 2014. Valuation dispersion is the difference between the 80th percentile and 20th percentile price-to-earnings ratio of the stocks in the S&P 500 Index. **Past performance is not indicative of future results.**

Higher valuation dispersion has, in turn, been associated with higher alpha (see Figure 5). In our view, this relationship is not surprising. The price of a stock can be expressed as its earnings per share multiplied by its price/earnings multiple. The greater the variation in both of these factors, the more opportunities for managers to select stocks that could outperform the benchmark.

FIGURE 5: STOCK VALUATION DISPERSION AND ACTIVE MANAGER ALPHA



Source: Lipper, Bloomberg, data through December 31, 2014. Valuation dispersion is the difference between the 80th percentile and 20th percentile price-to-earnings ratio of the stocks in the S&P 500 Index. Median rolling 12-month net alpha for the Lipper Multi-Cap Core universe, as described in footnote 2, over the Russell 3000 Total Return Index. **Past performance is not indicative of future results.**

Rising rates have tended to benefit active managers, while declining rates have tended to act as a significant tailwind.

Taken together, these relationships show a correlation between interest rates and manager alpha. Research has shown that, historically, this relationship has been strong—rising rates have tended to benefit active managers, while declining rates have tended to act as a significant tailwind.⁴

⁴ For an analysis of this relationship going back to 1962, please see “Interest Rates and Active Management’s Outlook,” Nomura Securities, December 2, 2014.

At this point, the market is expecting a return to a more normalized monetary and interest rate policy in the United States. Once that begins to happen, we believe that many overly leveraged, lower-earning, lower-quality companies will be viewed more critically relative to their higher-quality peers. This, in turn, will likely be reflected in increasing valuation dispersion among companies, which could support the efforts of active managers.

Flows into Passive Investment Vehicles

Passive investment vehicles (index funds and ETFs) have grown rapidly in recent years, driven in part by the challenges experienced by active managers. Most passive vehicles track broad market indices, investing in large baskets of companies in proportion to their index weights (often based on market capitalization). They are therefore essentially commoditizing a heterogeneous group of companies that, over time, may fare very differently. Some of these companies may succeed brilliantly, others may fail, and most will likely emerge somewhere in between. Because passive strategies invest in all these companies without regard to their relative attractiveness, they have the effect of lessening the differentiation in demand for the underlying stocks. This, in turn, can dampen the dispersion among returns of the various stocks in the index.

A further compounding influence has been the risk-on/risk-off environment of the post-crisis recovery. During this period, markets have often been driven more by macroeconomic and policy factors than by specific company considerations. Central bank activity, in particular, has caused numerous broad-based moves in the markets over the past six years.

In such a context, it has not been surprising to see passive vehicles outperform active strategies. We note, however, that passive vehicles may still underperform their benchmarks due to fees. While generally lower than active manager fees, passive manager fees still act as a drag on net returns. Of the index funds in Morningstar's Large Blend universe (which includes funds tracking large-cap and all-cap indices), 81% underperformed the S&P 500 Index, with the median index fund underperforming by 24 basis points, annualized, in the period since the global financial crisis.⁵ When compared to the Russell 3000 Index over this time period, 94% of the funds in this group underperformed, with the median index fund underperforming by 66 basis points on an annualized basis.

When Active Has Outperformed

In general, environments that have favored a passive approach have tended to be followed by periods in which idiosyncratic stock considerations drove returns. Should this shift occur again, companies with attractive fundamentals that may have been overlooked by passive investors due to their smaller index weights could see increased demand as their fundamentals become more fully appreciated.

Another prominent type of environment ripe for active manager outperformance over passive vehicles is the aftermath of the bursting of market bubbles. Although not by design, passive investing represents a de facto momentum strategy. Since the indices tracked by many passive products are market-cap weighted, a sector exhibiting significant price momentum (a potential sign of a bubble) will receive an increasing weight in a passive

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⁵ Source: Morningstar. Where multiple share classes of a fund were available, we selected the one with the longest track record; if multiple share classes had the same length of track record, we selected the institutional share class where available. Data is for the period March 2009 through December 2014 – the same period as the active manager data referenced on page 3. Morningstar database used in absence of index fund data on Lipper.

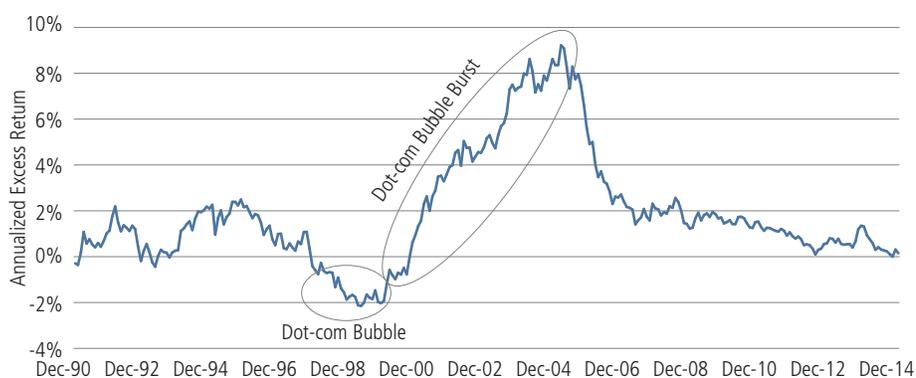
In the unwinding of bubbles, active managers have a chance to really shine.

portfolio—often reaching extremes. To illustrate, a passive investor tracking the Russell 3000 Index would have held 33% of his portfolio in Information Technology stocks in March 2000, right before the bursting of the dot-com bubble, and 23% in Financials at the end of 2006, ahead of the global financial crisis.⁶

In the unwinding of such bubbles, active managers have a chance to really shine. They have the ability to mitigate the fallout from a bubble’s bursting, such as by underweighting a troubled sector. Passive products, in contrast, cannot do so, and therefore do not have the ability to mitigate the negative impact that the bursting of a sector bubble can have on an index.

Figure 6 shows the rolling five-year excess returns of the top-quartile manager in the Lipper Multi-Cap Core universe around the dot-com era. While active managers trailed the index during the bubble, they more than made up for that underperformance in its aftermath. In fact, peak outperformance after the market collapse was more than four times that of the worst underperformance during the bubble itself.

FIGURE 6: TOP-QUARTILE ACTIVE MANAGER 5-YEAR EXCESS RETURN DURING AND AFTER DOT-COM BUBBLE



Source: Lipper, data through December 31, 2014. Top-quartile manager’s net excess return in the Lipper Multi-Cap Core universe, as described in footnote 2, over the Russell 3000 Total Return Index. **Past performance is not indicative of future results.**

It is also important to remember that, over the long term, fundamentals have been the primary driver of stock returns. For example, earnings-per-share growth has accounted for 70% of the S&P 500 Index’s total returns over the past 20 years.⁷ As such, we believe that differences among individual companies are likely to eventually emerge again in their share prices. Therefore, we believe strongly that there is an opportunity to outperform indices by selecting the securities that appear more likely to generate better-than-index earnings, and cash flows, over time.

THE EFFECTS

Having focused on underlying causes, we now turn to their effects, which have had a dampening impact on the returns of active managers.

⁶ Source: FactSet. Based on the composition of the Russell 3000 index on March 31, 2000 and December 31, 2006, respectively.

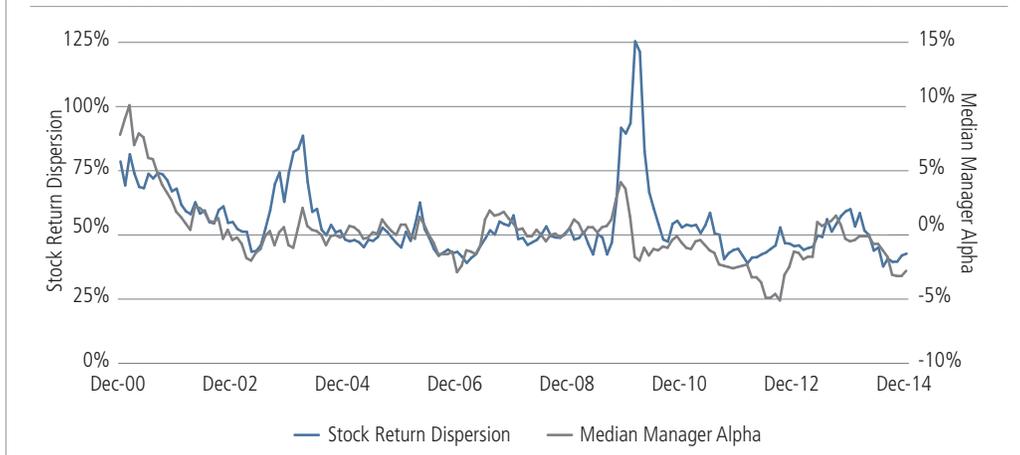
⁷ Source: Bloomberg.

Active managers' alpha has moved in step with the level of stock return dispersion.

Low Dispersion of Stock Returns

Low levels of market volatility, low valuation dispersion and stock commoditization have all led to low dispersion among individual stock returns. In such environments, the potential rewards for active management decrease. Even if a portfolio's active share (the percentage of holdings that differ from the benchmark) were to stay constant over time, low stock return dispersion would likely cause the portfolio to experience a decline in tracking error. This means less opportunity for alpha generation. It is not a surprise, therefore, to see that active managers' alpha has moved in step with the level of stock return dispersion (see Figure 7).

FIGURE 7: STOCK RETURNS DISPERSION AND ACTIVE MANAGER ALPHA



Source: Lipper, Bloomberg, data through December 31, 2014. Median rolling 12-month net alpha for the Lipper Multi-Cap Core universe, as described in footnote 2, over the Russell 3000 Total Return Index. Stock returns dispersion measured as the difference in the rolling 12-month return between the 80th percentile and 20th percentile stocks in the Russell 3000 Index. **Past performance is not indicative of future results.**

The last time investors saw an analogous market was from 1994 to mid-1997.⁸ In that period, the Russell 3000 Index returned an annualized 21.3%, and both market volatility and stock return dispersion were below their long-term averages. The median active manager within the Lipper Multi-Cap Core universe trailed the Russell 3000 by an annualized 2.7%, and only 14% of the managers outperformed the market.

Large-Cap Outperformance

Abundant central bank liquidity has helped drive demand for equities since the global financial crisis, in part because many investors searching for yield have moved higher on the risk spectrum to yield sources such as equities. Historically, in such liquidity-inspired bull markets, benefits have tended to accrue to the most liquid (i.e., largest) names. Over the last four years, the S&P 500 has outperformed the Russell 2000 by an aggregate 16%.

For all-cap active strategies (and for large-cap strategies as well), periods of large-cap outperformance have tended to act as a drag on excess returns. Since most commonly used benchmarks for these managers are capitalization-weighted, they are skewed towards the largest names. In the Russell 3000 Index, for instance, the largest 1% of stocks made up 28% of the overall index weight.⁹ Active all-cap and large-cap portfolios, however, tend to be skewed toward smaller-cap names relative to the index. This means that the relative

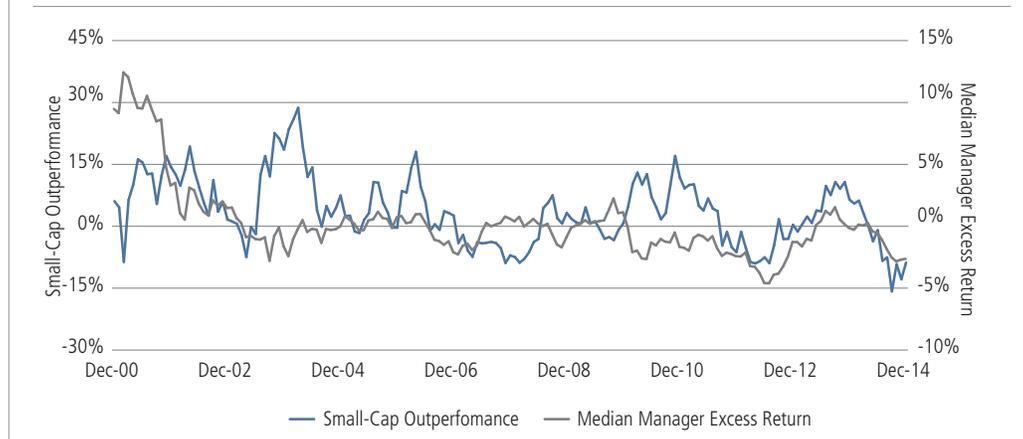
The relative performance of smaller caps versus larger caps can make a significant impact on portfolios.

⁸ Source for all market data in this paragraph: Bloomberg. Based on monthly total return data for the period January 1994–June 1997. Small-cap stocks represented by the Russell 2000 Index; large-cap stocks represented by the S&P 500. Fund data is from the Lipper database, the universe described in footnote 2.

⁹ Source: FactSet, as of December 31, 2014.

performance of smaller caps versus larger caps can make a significant impact on portfolios, a point illustrated in Figure 8.

FIGURE 8: SMALL-CAP OUTPERFORMANCE OVER LARGE CAPS AND ALL-CAP ACTIVE MANAGER EXCESS RETURN



Source: Lipper, Bloomberg, data through December 31, 2014. Median rolling 12-month net excess return for the Lipper Multi-Cap Core universe, as described in footnote 2, over the Russell 3000 Total Return Index. Small-cap outperformance measured as the rolling 12-month returns of the Russell 2000 Total Return Index over the S&P 500 Total Return Index. **Past performance is not indicative of future results.**

In similar fashion, the recent outperformance of U.S.-domiciled stocks relative to internationally domiciled stocks has created a drag on returns for many U.S. active managers, as such managers often hold some percentage of their portfolios in companies domiciled outside the U.S. In the current bull market, U.S. stocks have outperformed international stocks by an annualized 8%.¹⁰ In 2014 alone, the difference between U.S. and non-U.S. stock performance was 16%. A 5% allocation to international stocks last year would have therefore created an 80-basis-point drag on excess return before accounting for the impact of any security selection decisions.

Cap-Weighted Index Performance Driven by Smaller Number of Stocks

Another distinguishing characteristic in the recent environment is the small number of stocks that have driven overall index performance. Looking at the Russell 3000 Index, the number of constituent stocks outperforming the overall index has recently dipped to lows not seen since the dot-com era (see Figure 9).

The number of constituent stocks outperforming the overall index has recently dipped to lows not seen since the dot-com bubble.

¹⁰ Source: Bloomberg. Based on the performance of the Russell 3000 Total Return Index and the MSCI ACWI ex-U.S. Total Return Index in U.S. dollars, for the period March 2009–December 2014.

FIGURE 9: STOCKS OUTPERFORMING INDEX AND ACTIVE MANAGER EXCESS RETURNS



Source: Lipper, Bloomberg, data through December 31, 2014. Median rolling 12-month net excess return for the Lipper Multi-Cap Core universe, as described in footnote 2, over the Russell 3000 Total Return Index. Stocks above index represented by rolling 12-month returns of Russell 3000 Index constituents, compared to the performance of the Russell 3000 Index itself. **Past performance is not indicative of future results.**

This may be due in part to strong flows into passive products—the larger the proportion of new market inflows that replicates the index, the more difficult it becomes for an individual stock to outperform the index itself. It is also consistent with recent larger-cap outperformance: if only 40% of stocks are outperforming the index, it follows that those stocks tend to be the ones with larger weights in the index.

The fewer names that outperform the benchmark, the harder it is for an actively-managed portfolio to outperform.

CONCLUSION AND OUTLOOK

The confluence of factors we've discussed has yielded a challenging environment for active managers. However, we believe that many of these factors are cyclical and are likely to reverse in the future.

If equity market returns moderate, approaching longer-term averages, we would expect to see active managers who generate positive alpha perform better than those who rely primarily on beta exposure. In a more “average” return environment, volatility should also be higher than in recent experience. This should create more opportunities to take advantage of price movements. Outperformance of larger caps over smaller caps may also moderate or reverse course in due time, as may the outperformance of U.S.-based stocks over international stocks.

Once central bank activity abates and interest rates begin rising, the valuation distortions created by aggressive central bank easing will likely reverse, in our view, creating a market environment in which underlying company fundamentals start to once again matter more. This would likely help drive greater valuation dispersion among individual stocks, providing for attractive outperformance potential for fundamental stock pickers with effective security selection skill.

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As the environment for alpha generation becomes more favorable, investors may “rediscover” active managers, and flows to passive strategies should moderate. Stock performance gains are likely to become more broadly based, with a greater number of constituent stocks outperforming the overall index. This, in turn, should provide greater opportunities to beat the benchmark. In a virtuous cycle, these developments should further improve the environment for active managers.

For all these reasons, we caution investors against making portfolio decisions in reaction to recent market experience. We believe that maintaining a longer-term view, across market cycles, continues to be the prudent approach.

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Lipper Multi-Cap Core universe: Consists of fund classified as Multi-Cap Core by Lipper. Includes funds that, by portfolio practice, invest in a variety of market capitalization ranges without concentrating 75% of their equity assets in any one market capitalization range over an extended period of time.

Morningstar Large Blend Index Fund universe: Large-blend portfolios are fairly representative of the overall U.S. stock market in size, growth rates, and price. Stocks in the top 70% of the capitalization of the U.S. equity market are defined as large cap. The blend style is assigned to portfolios where neither growth nor value characteristics predominate. This universe consists of large blend funds that have been identified by Morningstar as being index funds based on their investment attributes.

Russell 3000 Index: Float-adjusted market capitalization total return index that measures the performance of the largest 3,000 U.S. companies based on market capitalization, representing approximately 98% of the investable U.S. equity market.

S&P 500 Index: Capitalization-weighted index of 500 stocks, designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 U.S.-listed stocks representing all major industries.

Russell 2000 Index: Measures the performance of the 2,000 smallest companies in the Russell 3000 Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index. The index is market cap-weighted and includes only common stocks incorporated in the United States and its territories.

MSCI ACWI ex-U.S. Index: A free float-adjusted market capitalization total return index that is designed to measure global equity performance, excluding the U.S.

The Chicago Board Options Exchange Market Volatility Index: The VIX is a commonly cited measure of implied market volatility. Past performance is not indicative of future results.

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Neuberger Berman LLC
605 Third Avenue
New York, NY 10158-3698

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