

Active and Passive: Complementary, Not Competing, Strategies



Victor Zhang
Co-Chief Investment Officer

Executive Summary

- **The Active/Passive Debate.** The tension between active and passive approaches is growing as investors shift assets from active strategies to passive ETFs and index-replicating products. An extended period of active manager underperformance, as well as concerns about management fees and potential regulatory changes, are driving this shift. There also is continued debate around the efficiency of financial markets—proponents of efficiency argue for passive approaches, while behaviorists make a compelling case for active strategies.
- **No Longer Either/Or.** We view active and passive approaches as complementary, rather than competing, strategies. Portfolio construction and achieving financial objectives are complicated problems, and it strikes us as shortsighted to exclude half of the investment tools at your disposal out of hand.
- **Look Beyond Relative Performance.** Defining active management solely as an exercise in beating benchmarks casts the problem in the wrong way. Rather, we believe active management should be understood as a comprehensive exercise to design solutions to clients' financial problems. Certainly, building multi-asset portfolios requires active decisions about portfolio construction and asset allocation. Further, it requires an active decision to determine where to go passive and where to go active.
- **Passive Isn't a Panacea.** While indexing has obvious appeal as a cheap, efficient way to gain access to many markets and generate benchmark-like performance, it has some limitations. Not all markets are effectively or cheaply replicated, and passive approaches can experience high tracking error when volatility spikes. In addition, capitalization-weighted indexes carry underappreciated geographic, sector, industry, and security concentration risks, particularly during market bubbles. In addition, we find that active and passive approaches trade market leadership over time and the analysis of relative performance is highly end-point sensitive.
- **Active Management of Market Risk.** Active strategies tend to work best relative to passive during periods of uncertainty, high volatility, and high dispersion of returns. This was particularly evident during the internet stock bubble and 2007-09 financial crisis, two events often cited by behaviorists in their case against market efficiency. Precisely because risk in passive strategies is always equal to full market risk, we prefer to construct our own asset allocation portfolios using active strategies and a risk-aware approach.
- **Active Managers Have a Role.** Investors are correct to evaluate the role of active strategies in their portfolios and demand value for the fees they pay. Nevertheless, we believe superior active managers who consistently deploy their unique insights in service of solving a client's most pressing investment needs can and will continue to thrive.

Both passive and active...
strategies are tools
investors should consider
to achieve their desired
investment outcomes.

Introduction

We are in the middle of a massive transformation of the asset management industry, as assets under management are increasingly shifting from active to passive approaches. This change is being driven not only by the proliferation of low-cost, index-replicating investment products, but also by new regulations putting renewed focus on active management fees and distribution methods. Finally, passive strategies have outperformed the majority of active approaches in the wake of the Great Recession, leading to questions about the efficacy of active approaches more broadly.

Our primary goal is to emphasize that both passive and active (long-only and alternative) strategies are tools investors should consider to achieve their desired investment outcomes. Toward that end, we address the central tenets around passive, index-replicating approaches and point out some of the more notable strengths and weaknesses in these arguments. In addition, we provide a theoretical argument for considering both active and passive strategies even under “mostly efficient market” conditions. Further, we look at the episodic nature of the past relative performance of passive and active strategies. We conclude that the resolution to this classic debate likely is not in favor of one side or the other, but rather incorporates elements of both. Ultimately, we argue that the “right” outcome depends heavily on an investor’s goals, ability to select and commit to superior active strategies, risk tolerance, time horizon, and view on markets, among other factors.

Finally, we acknowledge that arguably the central value proposition of active investment managers, financial advisers, and investment consultants is to provide clients with integrated investment solutions to complicated financial problems, such as meeting pension obligations or providing for individuals’ retirement needs, to name just two prominent examples. Building such solutions requires an active, hands-on management approach based on experience, knowledge, and proven skills. Whether the underlying strategies are passive, active, or some combination, the active oversight is best handled by an experienced portfolio manager or other financial professional. For our part, our goal at American Century Investments® is to help clients invest effectively over time and across market regimes, asset classes, and geographies to meet stated investment objectives. In our own asset allocation portfolios, we have a bias toward actively managed approaches, reflecting our desire to intentionally manage risk exposures and opportunities in our underlying strategies. For long-term-oriented clients who seek to manage both risk and return while having access to superior active strategies, we believe strongly that investors should avail themselves of the benefits of all the investment tools at their disposal.

The Market as Zero-Sum Game

First, let us address the fundamental logic behind passive investing, as set forth by Bill Sharpe in his seminal paper *The Arithmetic of Active Management*. In it, he explains why the average active manager is disadvantaged relative to passive approaches as a result of active managers’ higher fee structure. The argument goes like this: The market is a zero-sum game composed of all investors, active and passive alike. Passive investors earn the market return. By definition, active managers—the remaining market participants—in aggregate must also earn the market return. On average, then, passive is to be preferred over active to the extent that index-replicating approaches generally carry lower expenses than their active counterparts.

Sharpe’s argument is simple and elegant. It is also compelling for a closed market characterized by a single index or other well-defined grouping of stocks. However, we should point out some important considerations relevant to active management

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approaches that lie outside the scope of Sharpe's original article. First, we must define what is meant by "the market." Sharpe himself gives the example of the S&P 500® Index. But the market of investable securities for strategies benchmarked to the S&P 500 typically are not limited to the stocks in the index.

Active managers can and do invest outside their benchmark indices. Some managers might hold the stock of a foreign-based company traded on U.S. exchanges or reach down the capitalization spectrum into mid- or even small-cap stocks. Or, from the perspective of a small-cap manager, it might be advantageous to hold a larger-cap name that is not in the reference index. Other managers might avail themselves of the market for initial public offerings, buying stocks of newly minted companies that are yet to be incorporated into any market index. Indeed, it is possible to think of many potential investments that managers may deem attractive relative to investment opportunities found in the benchmark, such as convertible securities, options, futures, etc.

Efficient Markets Versus Behavioral Finance

It can also be useful to think of the active/passive dichotomy this way: Those who subscribe to efficient markets theory—believing that securities prices reflect all information available in the market—should be inclined toward passive, index-replicating approaches. Meanwhile, those who believe that markets tend to contain inefficiencies due to investor behavioral biases which create persistent security mispricings will be more inclined toward active strategies.

The larger argument between efficient market proponents and behaviorists is unlikely to be resolved anytime soon. Nobel laureate Eugene Fama, the father of the efficient markets hypothesis, is a strong proponent of passive strategies. To be clear, Fama does not claim that markets are purely efficient at all times, but simply that this is the most accurate model we have of markets at present. Behaviorists can marshal Nobel laureates of their own, led by Robert Shiller, among others. In *From Efficient Markets Theory to Behavioral Finance*, Shiller concludes that "while theoretical models of efficient markets have their place...we cannot maintain them in their pure form as accurate descriptors of actual markets." Nevertheless, behaviorists recognize that it is not easy to outperform the market, and would see the greatest opportunity for skilled investors in markets that are most inefficient or where pricing is most irrational, as represented by market bubbles.

For our part, we believe the truth likely lies somewhere in the middle, with efficient markets theory being a useful tool for thinking about markets in the abstract, but failing to capture the obvious inefficiencies in market behavior over time. Specifically, we believe there are opportunities for informed and disciplined investors to generate excess returns by capitalizing on informational and behavioral inefficiencies. One well-known study of active management by Jones and Wermers provides an important theoretical backing for this view. In their paper, *Active Management in Mostly Efficient Markets*, they rely on earlier work by Grossman and Stiglitz to conclude that markets must be "mostly but not entirely efficient" or managers would not be compensated for doing the necessary legwork to research, analyze, and evaluate corporate financial data. Importantly, Jones and Wermers go on to say that while the average active manager does not produce excess return relative to the passive alternative, "we expect to (and do) find informed traders (or 'superior active managers') who earn meaningful excess returns commensurate with their superior ability to gather and analyze information." Here we should point out that Jones and Wermers themselves note that their analysis was largely restricted to U.S. domestic equity mutual funds because studies relating to other asset classes or investment vehicles were "sparse or even non-existent"

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Indexing: Inefficiency, Cost, and Market Risk

Next, we should discuss certain characteristics of index-replicating approaches. On the one hand, the appeal of indexing is readily apparent—it offers investors low-cost access to financial markets, instant diversification, and relatively more predictable, benchmark-like performance. And as we've discussed, the more efficient the market, the stronger the case one can make for passive options. This intuitive appeal and strong recent performance relative to active strategies together explain the tremendous flows to passive funds in recent years. This has been evident in the market for U.S. large-cap stocks, particularly for funds replicating the S&P 500 Index. On the other hand, investors should be aware that certain asset and sub-asset classes generally cannot be indexed as efficiently or at a comparably low fee level to those replicating deeper, more liquid markets. In addition, there are certain limitations or challenges with respect to replicating index performance, particularly during periods of market stress.

First, let's touch briefly on the concept of market efficiency, which is a function of liquidity and transaction costs as measured by bid/ask spreads, market impacts of trading, volume of trading, extent of analyst coverage, availability and uniformity of corporate information to market participants, and market maturity. One need think only about the analyst coverage, trading volume, and regulatory environment in which U.S. companies and financial markets operate in comparison with those in some small niche market or emerging economy to see why the vast majority of passively managed assets track U.S. large-cap indices.

Second, the key advantage of indexed approaches is their low cost structure. However, there are select markets for which even passive investors must pay comparatively high fees, eroding this central value proposition relative to active strategies. For example, many sector funds, geographically segmented funds, commodity-related investments, and select alternative approaches carry fees only slightly below their active counterparts, where a passive option exists at all. Also, we should point out that certain market segments have no readily available, easy-to-replicate index, such as many alternative asset classes. Taken together, this suggests that there are a number of factors an investor will need to consider when making the active/passive decision in specific markets and asset classes.

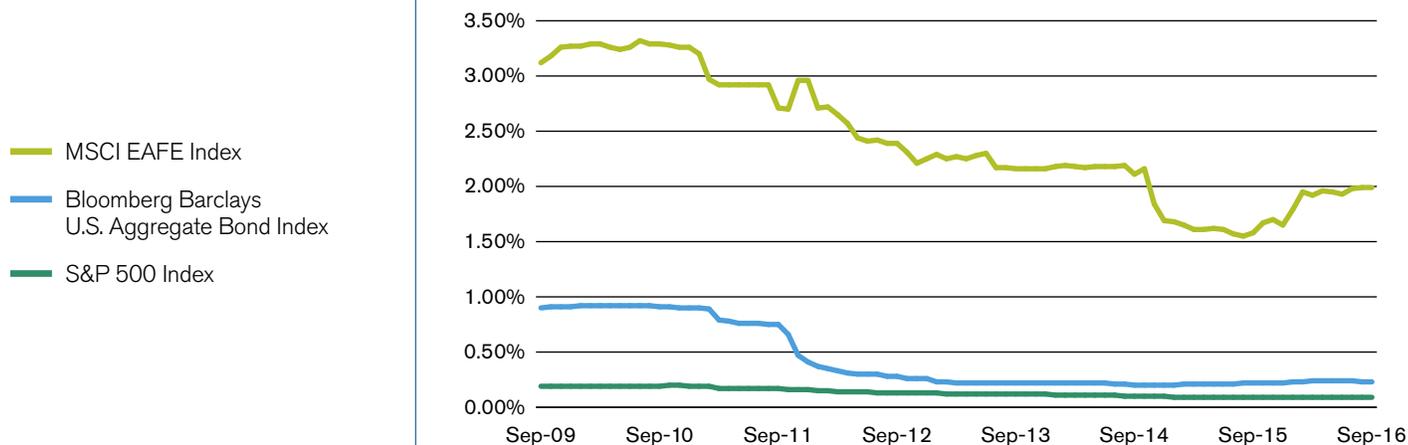
Finally, an important measure of the efficacy of index replication techniques is tracking error, or the volatility in the difference in returns between the benchmark and fund based on that index. Deviation in return between an index and its tracking portfolios results in part from market factors, such as volatility and correlation of the underlying assets. Another source of tracking error relates to the overlap (or lack thereof) in securities and proportional representation with the underlying index. Rapid changes in volatility and correlation of securities in a given market and lack of overlap between an index and its passive trackers can cause challenges for replicating performance. Specifically, during times of market stress, index-replicating instruments may experience undesirable levels of tracking error. In other words, they may not perform as expected in terms of mimicking index performance and risk characteristics at precisely those times when these traits are most prized from a larger portfolio diversification or risk-management point of view.

In Figure 1, we show historical tracking error for index funds across three leading markets: U.S. large-cap equities, developed large-cap equities, and the U.S. core taxable bond market. We show tracking error on a rolling three-year basis going back 10 years. This means that the first data point reflects performance from September 2006 to September 2009. The chart does a good job capturing the decline in volatility

in financial markets over the last decade. We see that tracking error for all three asset classes peaked during the financial crisis and has essentially been falling ever since, as central bank policy sent stock and bond market volatility in global markets to all-time lows. We don't show you this chart to make a market-timing argument; rather, we hope to indicate simply that for certain asset classes, index fund performance can deviate notably from the underlying benchmark during periods of financial stress.

Figure 1: Tracking Error of Passive Approaches Can Vary Considerably During Periods of Market Stress

Tracking Error of Index Funds Versus Benchmarks
Rolling 36 Months



Source: StyleADVISOR. Data as of 9/30/2016.

We should provide a bit more detail about these charts. In the course of working on this paper, we looked at performance data and characteristics across virtually every major asset class, and read a significant portion of the available literature on active versus passive investing. Reflective of indexing's comparatively recent explosion in popularity and expansion into niche markets, we found that relatively few markets have a deep and robust history of index-fund data with which to work. For example, not a single open-ended high-yield bond index fund is found in Morningstar's database, with only a handful of ETFs in this space. This severely limits the range and number of asset classes we can show you, though this is arguably instructive in its own right.

Performance analysis for passive products is further complicated by the fact that many index funds changed their underlying benchmarks in recent years. A number of other published reports we viewed based their analysis on one or a handful of the oldest index-replicating products, or the largest. While we can respect the desire and need to use the data available, we are reluctant to present findings based on only one or a few providers, or for only very short time periods. One reason we show only these three large asset classes is that we felt these were markets with a sufficiently large number of index products over time such that we could be confident in reaching robust conclusions about the data. Finally, the tracking error for portfolios mimicking the MSCI EAFE Index is fractionally higher than it might be otherwise due to the effects of fair-value adjustments made by index funds to their net asset values to account for timing differences in pricing between the securities in the portfolios and the index itself.

We believe fixed income is an area where an investor would do well to think very carefully about risk management...when making a decision about active versus passive strategies.

Common capitalization-weighted, index-replicating strategies may carry unintended risk exposures as a result of concentration by geography, sector, industry, or security.

Also, we should say a word specifically about fixed-income, index-based approaches. Decisions around index replication methods can be particularly important in core taxable fixed-income markets, which encompass many dimensions of risk and where indices are made up of a huge number of issues, many of which are thinly traded.

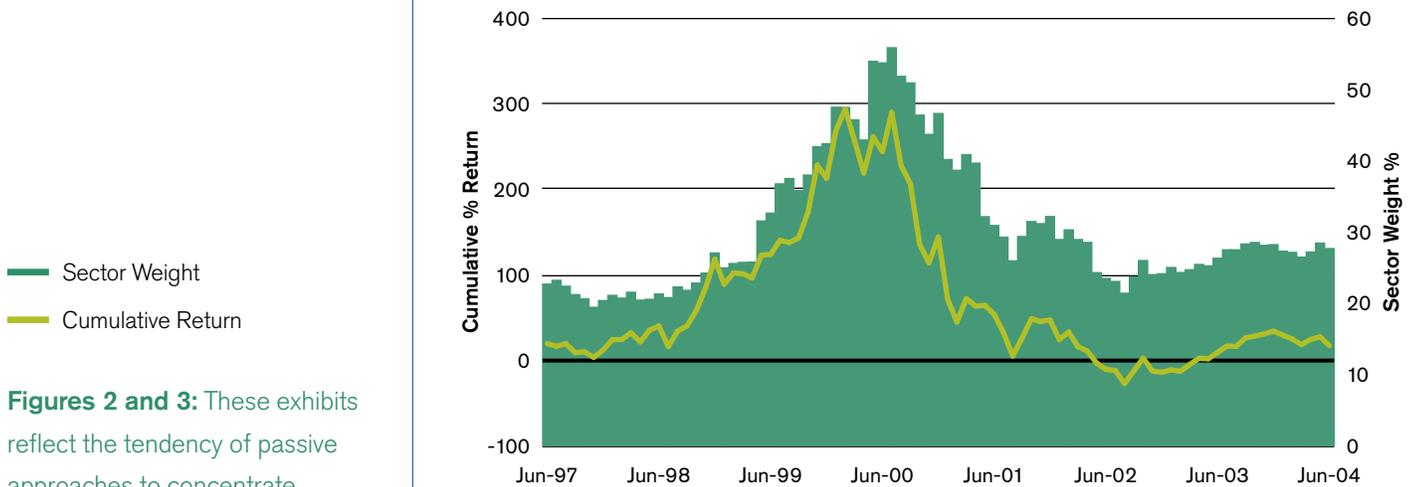
In addition, while much of the following material discusses misallocation of risk and concentration in specific equity sectors, the same general points apply to bond indices. For example, representation in a fixed-income index is driven largely by an issuer's amount of debt outstanding, rather than by price changes in the underlying securities. This can result in the perverse situation where the most capital-intensive and least-creditworthy companies, industries, and sectors can be disproportionately represented in an index fund. Think of the large telecommunication, media, and technology debt defaults in the high-yield market roughly mirroring the tech bubble in stocks in the late 1990s and early 2000s. Or consider the stress in the corporate bond market for energy and materials companies in the wake of the collapse in commodity prices beginning in 2014. In these cases, these sectors were heavily represented in the index at precisely the point when they were most economically sensitive and financially vulnerable. Finally, we would argue that investors should be mindful that a great many taxable bond sectors are *omitted* from the Bloomberg Barclays U.S. Aggregate Bond Index. These include Treasury inflation-protected securities, high-yield corporate bonds, taxable municipal bonds, and foreign bonds of all types.

Add it all up, and we believe fixed income is an area where an investor would do well to think very carefully about risk management and the exposures one may acquire when making a decision about active versus passive strategies. We think it is crucially important for investors to consider given risks resulting from historically low interest rates and credit spreads at present.

Turning back to equity indices, common capitalization-weighted, index-replicating strategies may carry unintended risk exposures as a result of concentration by geography, sector, industry, or security. In Figures 2 and 3, we show two prominent examples often cited by behaviorists against efficient markets theory. The first example is the dot-com bubble of the late 1990s and early 2000s, as shown in the performance and weighting of the information technology sector as a percentage of the Russell 1000® Growth Index over time (see Figure 2). The second example is the housing bubble, which burst in the 2007-08 period. The graphic shows the performance and weighting of the financials sector as a percentage of the Russell 1000® Value Index over time (see Figure 3).

Figures 2 and 3: Sector Concentration and Risk Increase During Asset Bubbles

Technology Sector Impact on the Russell 1000 Growth Index



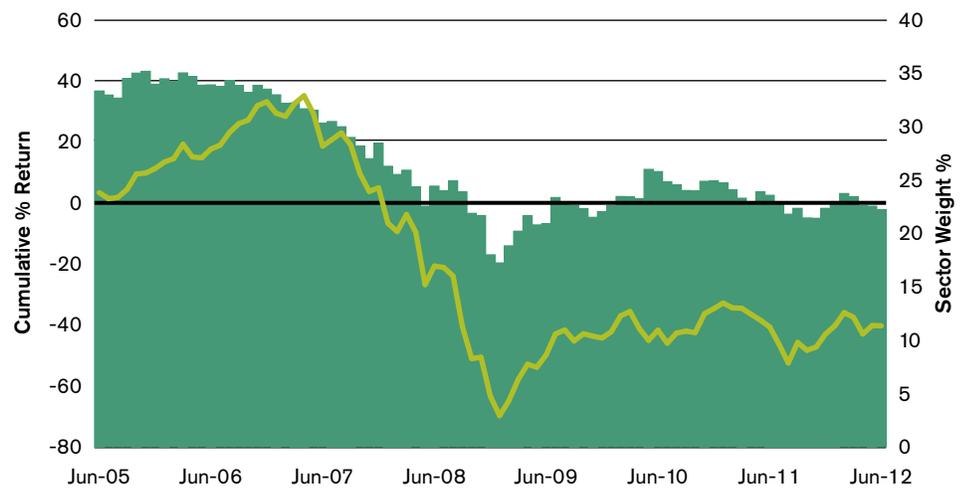
— Sector Weight
— Cumulative Return

Figures 2 and 3: These exhibits reflect the tendency of passive approaches to concentrate in winning stocks or sectors. This tendency helps explain outperformance during rising markets, but also creates downside risks, as shown in the accompanying performance data for each sector. Note that the sector concentration was at or near its peak when the sell-offs were most intense. Passive investors must be mindful of these unintended risks in capitalization-weighted products.

| Technology Sector | 6/97 | 6/98 | 6/99 | 6/00 | 6/01 | 6/02 | 6/03 |
|----------------------------------|------|------|------|------|------|------|------|
| Sector Weight (% of index) | 21% | 21% | 32% | 54% | 32% | 24% | 25% |
| Sector Return the Following Year | 36% | 65% | 62% | -55% | -41% | 5% | 25% |

Data from 6/30/1997 to 6/30/2004.
Source: FactSet.

Financials Sector Impact on the Russell 1000 Value Index



| Financials Sector | 6/05 | 6/06 | 6/07 | 6/08 | 6/09 | 6/10 | 6/11 |
|----------------------------------|------|------|------|------|------|------|------|
| Sector Weight (% of index) | 34% | 34% | 32% | 23% | 21% | 26% | 24% |
| Sector Return the Following Year | 13% | 13% | -43% | -37% | 19% | 12% | -3% |

Data from 6/30/2005 to 6/30/2012.
Source: FactSet.

Does it make sense to load the boat on one or the other investment approach? Again we ask, does it make sense to take full market risk all the time? Rather, we believe it suggests a mixed strategy may be preferable.

These charts help illuminate one of the central characteristics and core criticisms of passive approaches—that they capture all of the market risk, all of the time. From sector to sector, stocks carry radically different growth, quality, valuation, and momentum profiles, which in turn generate very different risk and return characteristics. As the previous graphics show, those sector exposures themselves can vary greatly over time. Passive, capitalization-weighted strategies are by definition price-takers—they are price momentum-based strategies that naturally tend to do well in rising markets characterized by concentration (in a few sectors or individual securities).

When markets are rising, this is desirable, but such concentration poses additional risks to investor portfolios and can be very costly during market downturns. Capitalization-weighted passive products are essentially forced buyers of overpriced assets during bubble scenarios. Nor do passive strategies make any claim to insight or analysis into their underlying holdings. By way of contrast, active managers, broadly speaking, make stock selection decisions on the basis of both corporate fundamentals and estimates of a stock's valuation.

These essential differences suggest that active management approaches should provide better downside protection, particularly during pronounced market declines. This can be important for investor outcomes, to the extent that study after study by Morningstar, DALBAR, and a number of academic papers find that investors are prone to sell investments *after* market sell-offs—one of the key, well-documented reasons that realized investor returns consistently underperform those of the mutual funds in which they invest. As a result, it is desirable to limit downside risk insofar as it can help reduce the likelihood that an investor will abandon his or her financial plan. Furthermore, the mathematics of compounding returns show that it is very beneficial over time to limit portfolio volatility and downside.

To be clear, we are not advocating that an investor should abandon passive portfolios in favor of low-downside, minimum-volatility strategies. But what we are saying is that there are times in the market and times from a portfolio efficiency point of view when it makes sense to take less than full market risk.

Active Versus Passive, Who Wins? It Depends

Now let's turn to the episodic nature of active and passive outperformance. The charts in Figure 4 show the relative ranking of common market indices compared with their relevant universe of active funds. So, for large blend, for example, we show where the Russell 1000® Index would rank among the actively managed funds in the Morningstar large blend peer group over time. Note the volatility and variability in the rankings. Does it make sense to load the boat on one or the other investment approach? Again we ask, does it make sense to take full market risk all the time? Rather, we believe it suggests a mixed strategy may be preferable.

One way to think about active/passive relative performance relates to economic and market cycles. Indeed, there is an extensive body of academic research to support the finding that active management approaches tend to perform best relative to a given benchmark during market downturns, periods of economic recession, high volatility, and high dispersion of returns. This was particularly true with respect to U.S.-focused equity strategies; the findings for non-U.S. markets are less clear, with results varying by country and market segment. Given the importance of the topic, it is perhaps not surprising that there is a deep body of research with sometimes conflicting conclusions. Perhaps we can summarize the broad sweep of findings by citing research by Investnet PMC in a paper titled *Active vs. Passive Asset Management: Investigation of the Asset*

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Class and Manager Selection Decisions. In it, the authors' findings are consistent with earlier academic work showing that "the average active manager outperforms in periods of recession and high volatility and dispersion." Further, they find that "performance of the average manager (in terms of active return and alpha) is much better in the bear periods compared to bull periods." The key distinction they make, however, is one that we have been accentuating throughout this paper; namely, that it is possible to identify skilled asset managers, and that "the active skilled manager does (a lot) better in bear markets than in bull markets."

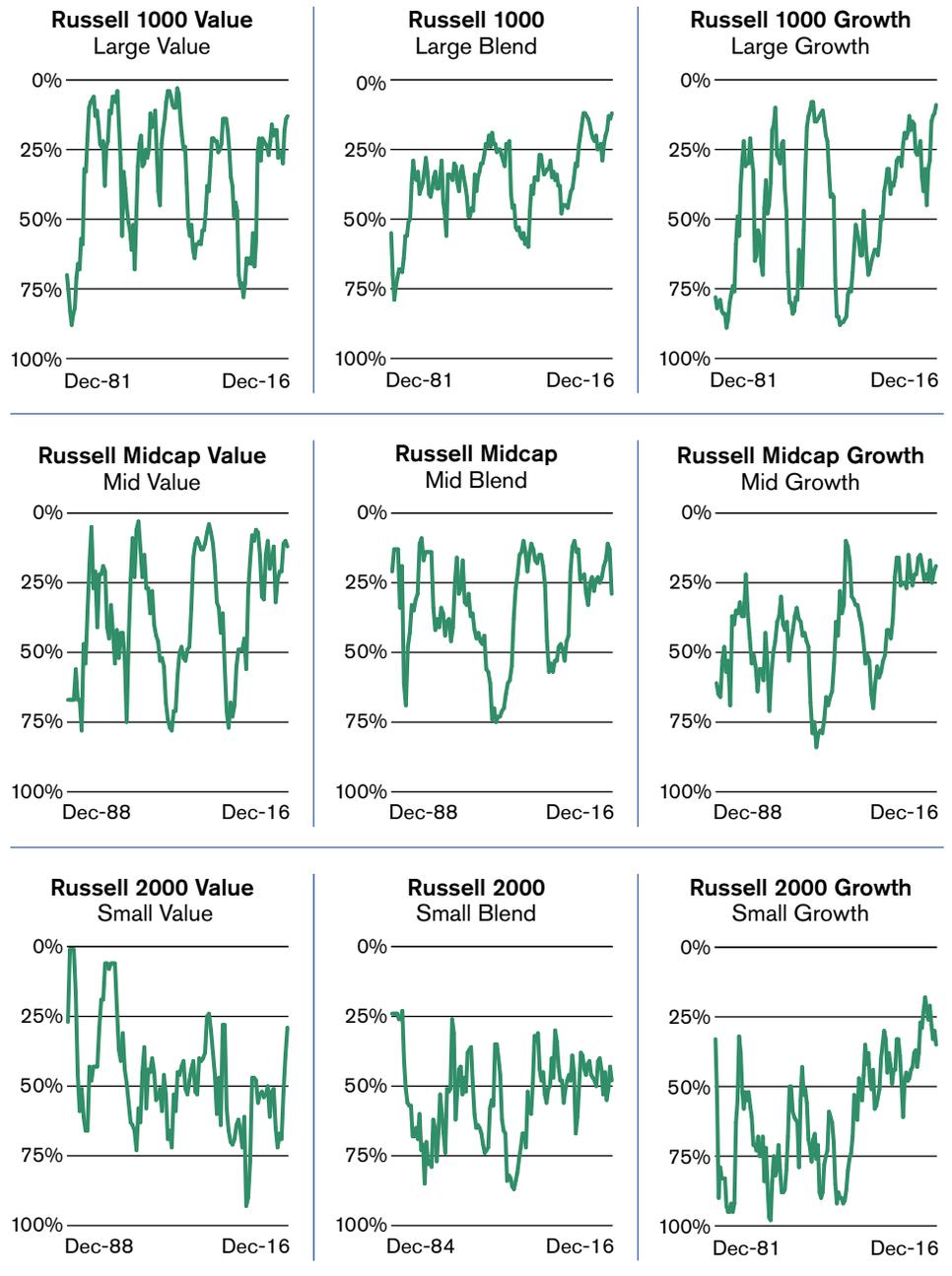
Crucial concepts to highlight here are volatility, correlation, and dispersion. Market volatility measures the dispersion of return among securities in an index, while correlation refers to the tendency of securities to move in the same direction. Dispersion refers to the magnitude of those movements. Here again, the literature is extensive and while it is nuanced, broadly points to the efficacy of active approaches during periods of high dispersion/volatility. For example, in the literature survey provided in "Active Management in Mostly Efficient Markets," the authors cite work by Kosowski and others, who found that "the average active fund performs better in periods of higher return dispersion and volatility, which are also likely to be periods of heightened uncertainty—and opportunity."

The above quote occurs in a larger section about active management performance under various macroeconomic regimes, in which the authors cite multiple studies showing that "the average active manager is more likely to outperform the market during recessions than at other times." Further, they clarify that this is likely "not the result of holding cash in down markets because Kosowski, in particular, adjusted returns for market risk." Similarly, Daniel Gardner of Russell Investments writes in the March/April 2015 edition of *Investments & Wealth Monitor* that "Russell's research shows that we can expect good active managers to perform better when ... cross-sectional volatility or "cross vol" is higher. Cross vol measures the returns dispersion of a universe of securities."

In Figures 4 and 5, we show where the respective market indices would rank within the universe of relevant actively managed funds tracked by Morningstar. For each style box, we begin the analysis when there are 20 active strategies in the constituent group and adjust for changes in category membership departure, so there is no survivorship or wrong-category bias. The performance of the active funds in the comparison are shown net of management fees; the returns of the indices naturally carry no expenses. The final data point for all graphics is December 2016. The first data point for the large-cap indices presented is for January 1979. The time frame for the remaining style boxes is shorter, reflecting the comparative lack of participating funds in these market segments over time.

Figure 4: Relative Performance of Active and Passive Approaches Varies Greatly Over Time
 (Index Percentile Rank Within Associated Morningstar Category)

Figure 4: These graphics show the rank of the applicable Russell indices versus the universe of actively managed strategies tracked by Morningstar in each of the nine style boxes. We use the indices themselves because we think it is important to show the greatest possible historical track record relative to active approaches. We believed this to be preferable to displaying the performance data of only one or a few index funds over (sometimes) much shorter time periods.



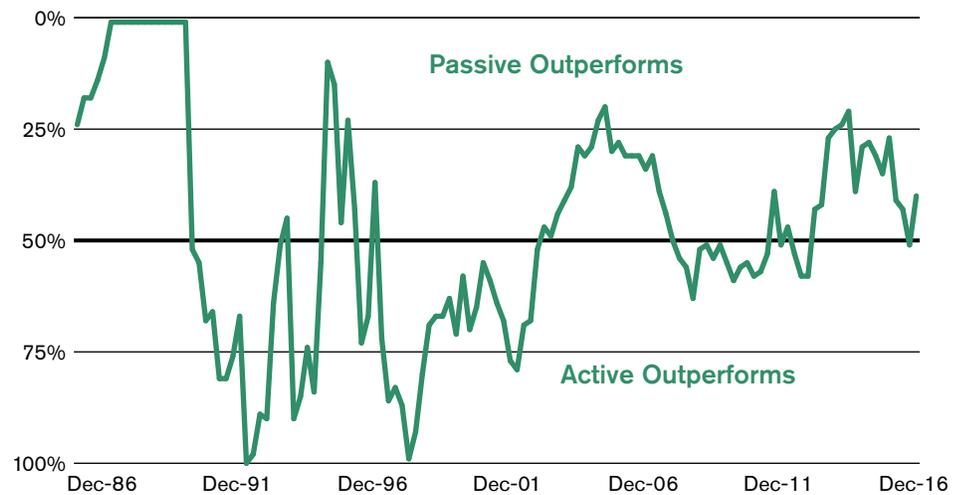
Source: FactSet. Data as of 12/31/2016.

Note, too, that we do not depict the performance of any particular index-replicating product in the interest of showing the greatest meaningful time period of index and active fund performance. Had we done so, the relative ranking of passive strategies would have been lower than those of the index, reflecting their management costs, however modest. Rather, our aim here is simply to show that active manager performance relative to relevant broad market indices tends to be highly episodic. So

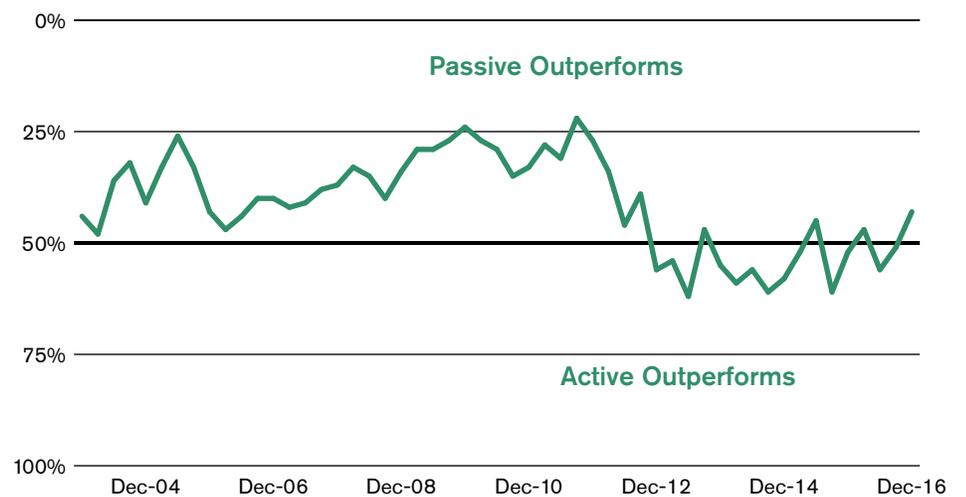
which is better, active or passive? The answer is, it depends. It depends on the time period and market regime under study—it is possible to point to periods of both active and passive outperformance over time across investment styles and geographies. And, crucially, it depends on the role to be played in an investor's portfolio, that investor's time horizon and risk tolerances, and numerous other portfolio construction considerations. From this seemingly simple question we arrive at a complex, highly contingent answer.

Figure 5: Developed and Emerging Market Equities Show Similar Variability in Active/Passive Performance Over Time

MSCI EAFE Index Rank Versus Morningstar Foreign Large Blend Category



MSCI EM Index Rank Versus Morningstar Diversified Emerging Markets Category



Source: FactSet. Data as of 12/31/2016.

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One of the key benefits of professional management is the ability to build diversified portfolios to provide solutions to very real, vexing investor problems, such as saving for retirement or meeting income needs.

The reasons for this variability in performance are many and varied. Moving beyond the theoretical arguments proffered by those who hold to efficient markets hypothesis and behaviorists, we can offer some specific reasons or market characteristics that help explain why active and passive approaches would trade market leadership. This is because there are several conditions that determine whether the market rewards individual security selection (alpha) over the broadest possible market exposure (beta). These conditions vary over time and relate to market volatility, which itself is a function of the correlation and dispersion of return among individual securities, and the availability of liquidity in the market. Finally, many of these conditions and the overall backdrop for active and passive investments have been greatly influenced by fundamental economic factors.

Active and Passive in the Context of “Investment Solutions”

One of the key benefits of professional management is the ability to build diversified portfolios to provide solutions to very real, vexing investor problems, such as saving for retirement or meeting income needs. The key consideration for any multi-asset approach is the asset allocation of the larger portfolio. This portfolio construction process requires active decisions about asset class weightings, correlations, geographic and other risk exposures, and de-risking over time (in the retirement example). The asset allocation decision for such multi-asset portfolios has no reference benchmark or index for a provider to replicate. While the underlying investments may be passive, active, or some combination thereof, the relative asset weights and changes over time reflect active decisions with their own risk/reward assumptions. Properly understood, then, there is no such thing as a passive asset allocation portfolio.

A recent article by Jeff Hussey, *Investing today: Why active vs. passive is passé*, neatly summarized the problem this way: “The active versus passive discussion is out of date. It misses the point that there are multiple active decisions that must be made to generate the outcome clients are interested in attaining. Yes, this includes the decision on where to go active and where to go passive. But, in our view, a multi-asset solution also requires active decisions in allocating assets, finding the right securities to harvest various risk premiums, hiring the right managers, and dynamically responding to changing market conditions.”

As a firm, we are focused on ensuring that the diversification our asset allocation portfolios provide is effective across the entire market cycle, so that investors are truly getting the best risk-adjusted returns they can achieve for the level of risk they have chosen to accept. As a result, we want to be very thoughtful about the inclusion of any strategy—active or passive—into a multi-asset portfolio. With this in mind, we would encourage investors to think about how the constituents of an asset allocation portfolio function together across varying market regimes, rather than look at the characteristics of each portfolio alone. Fees are an important element of that analysis. We simply want to emphasize that investors should take the additional step of evaluating correlation and interaction effects of portfolio constituents to balance risk. With respect to risks associated with passive approaches in multi-asset portfolios, we refer again to a critique by Russell’s Dan Gardner, who writes that “capitalization-weighted investment options introduce other risks, such as sector, factor, and other exposures.”

Our own philosophy holds that multi-asset portfolios should be structured to maximize the opportunity for success for a broad range of investors across diverse market regimes and scenarios. Toward that end, we first adopt a long-horizon view, believing this is essential to avoid common behavioral investing mistakes and to allow full market cycles for diversification and allocation benefits to be realized. Second, we use a holistic

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We believe superior active managers who consistently deploy their unique insights in service of solving a client's most pressing financial needs can and will continue to thrive.

approach to decision-making—all allocation decisions are made in the context of the entire portfolio. We are not looking to build a team of the best individual players, but the best overall lineup, seeking to maximize risk-adjusted performance. Related to this is the third key concept, which is a risk-aware approach that aims to minimize downside volatility and places importance on overall capture with the goal of maximizing wealth generation for a given level of return. Fourth, risk-budgeting is central to our portfolio construction process, with specific risk ranges, sophisticated portfolio attribution and risk measurement, and management of intended and unintended risks. Next, we argue for foundational and complementary portfolio exposures, which allow for maximum diversification benefit in the former case, and enable specific fine-tuning for desired portfolio risk and return profiles and outcomes, in the latter case. Finally, we believe that there is a maximum number of underlying holdings in a well-diversified portfolio, which is essential to yield a meaningful diversification benefit across the entire portfolio. In other words, beyond a certain point, simply adding additional asset classes or positions is a naïve approach with limited actual diversification benefit.

In summary, our own approach to managing multi-asset portfolios seeks to maximize return while minimizing volatility and downside risk. Risk and return are largely functions of the overall asset allocation; however, the underlying composition and management of those assets also contribute to the larger portfolio risk and return profile. Specifically, risk for passive approaches is by definition always equal to full market risk. Because we want to be very intentional about the risks we take and seek actively to limit downside risk, our own bias is toward actively managed portfolios in our retirement-oriented portfolios. This is also consistent with the view expressed elsewhere in this paper that many asset classes are simply not readily accessible, or at a sufficiently low level of fees, to make passive approaches appropriate for all components of a multi-asset portfolio. We discuss this topic in greater detail in our 2016 paper “Beyond Labels: Advancing Your Approach to Target-Date Evaluation and Selection.”

Conclusion

In this paper, we have provided both theoretical and practical considerations around the active/passive debate. Rather than attempt to resolve this debate, our goal has been to help readers think in a more comprehensive, informed way about the topic. In future papers, we will outline specific strategies or applications of these theories in specific markets.

This debate marks the next stage in the evolution of the asset management industry, as intense competition for both alpha and assets pressure active managers at a time when regulatory trends also place greater focus on costs and lesser emphasis on the benefits of different investment approaches.

In any industry, clients deserve value for the fees they pay. With respect to asset management, that value comes in the form of a manager's unique insights as expressed by the consistent application of their philosophy, process, and judgement. These insights seek to serve only one goal—to help clients achieve their stated investment objectives. In the case of specific portfolios, this investment management value-add may come in different forms—achievement of excess return, reduction in risks, diversification of exposures, obtaining income requirements, etc. However it is expressed, we believe superior active managers who consistently deploy their unique insights in service of solving a client's most pressing financial needs can and will continue to thrive.

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American Century Investments
4500 Main Street
Kansas City, MO 64111-7709

American Century Investments
330 Madison Avenue, 9th Floor
New York, NY 10017

American Century Investments
1665 Charleston Road
Mountain View, CA 94043

American Century Investments
2121 Rosecrans Avenue, Suite 4345
El Segundo, CA 90245

American Century Investments
30 Haymarket
London, SW1Y4EX
United Kingdom

American Century Investments
Suite 3201 Champion Tower
3 Garden Road, Central
Hong Kong

