

Active and Passive Investing: Both Are Essential to Long-Term Financial Market Health

The growth of passive investing during the past decade has spawned volumes of research to support the merits of this low-cost investment approach, and to make the case either for or against active management. While many financial market participants continue to debate the merits of one approach or the other in this longstanding argument, both may warrant a place in a diversified portfolio given their respective risk characteristics and cyclical performance leadership.¹ This article will evaluate the growth of passive strategies in the context of risk, with a particular emphasis on systemic risk created by passive strategies.

In today's financial system, the presence of active and passive strategies contributes two necessary functions that help provide operational stability in the financial markets: information discovery and liquidity.

- **Information discovery.** In a free-market economy, financial markets play a key role in generating and distributing information about corporate, private, and sovereign issuers through active management, which in turn fosters independent decision-making and the effective allocation of financial capital. The prevalence of information influences security prices. If an investor has favorable information about a security, it will often lead to the purchase of that security and drive up its price. Conversely, unfavorable information often leads to selling activity and downward pressure on prices. Thus, active strategies can be viewed as "price makers." In the aggregate and over time, financial capital tends to flow to the securities issued by companies performing well, meaning those that are growing their earnings via the development of innovative products or services. Such a system helps foster economic advancement over the long term.
- **Liquidity.** A liquid asset is one that can be traded easily in a reasonable quantity without incurring large transaction costs. For financial markets to operate effectively, there has to be sufficient liquidity. A significant number of buyers and sellers must be present to represent each side of a trade. Otherwise, an investor holding a financial asset will not be able to recoup his or her investment at a desired market price. Passive strategies, such as index funds and exchange-traded funds that automatically purchase baskets of securities representative of an index's holdings near current market prices, provide a significant amount of liquidity to the financial markets. Passive strategies thus can be seen as "price takers," accepting both the current market price and the weight (i.e., importance) of those securities in an index, while injecting liquidity into the marketplace.

If information is not discovered and there is a lack of liquidity, a market will not operate as effectively. Put another way, just as an engine requires oil and gasoline to operate an automobile, a healthy financial market needs both the discovery of information and sufficient liquidity.

Growth of passive investing and equity market dynamics

During the past decade, two trends within the U.S. equity market—rising stock correlations and increased volatility—coincided with the rise in popularity of passive investing strategies. Specifically:

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KEY TAKEAWAYS

- Financial markets play a key role in the allocation of resources in a free-market economy, and two important functions vital to the healthy operation of financial markets are information discovery and liquidity.
- Passive strategies—those that purchase the holdings in an index at existing market prices—create liquidity in financial markets, but inject no information about companies into the markets.
- Active strategies—those that utilize independent research and analysis to make investment decisions—create information that leads to disparate investment decisions, and security price differentiation between "good" and "bad" companies at the expense of liquidity.
- The increase in market share of passive strategies during the past decade has diluted the amount of information in the marketplace, contributing to an increase in equity market correlations and volatility, as well as an amplification of systemic risk.
- Financial markets need a combination of both active and passive approaches to remain reasonably stable and liquid, and to drive the economy forward via the efficient allocation of financial capital.



- **Growth of passive strategies.** Since 1995, assets in U.S. equity index mutual funds and index ETFs have grown from 4% to 27% of total U.S. equity fund assets (see Exhibit 1, page 2). Five years ago, these two types of passive strategies represented 15% of total industry assets.²
- **Higher correlations.** During the past five years, correlations among U.S. equities have doubled. Since 2007, average stock correlations have risen to 0.42, up from a 0.24 average from 1995 to 2007 (Exhibit 1).³
- **Increased volatility.** The U.S. equity market has been significantly more volatile during the past five years (Exhibit 1, below). The number of trading days in which the broader equity market moved up or down by more than 2% was significantly higher during the past five years, reaching nearly a third (29%) of all trading days in 2011—the highest percentage since the 1930s. In fact, during three of the past five years, equity market volatility was higher than any year since the 1930s.⁴

Has the popularity of passive strategies and the increase in both correlations and volatility in the equity market been merely a coincidence, or is there a connection? Proponents of passive strategies argue that there have been other contributing factors, including the proliferation of electronic trading, globalization, unprecedented levels of unconventional monetary policy, and

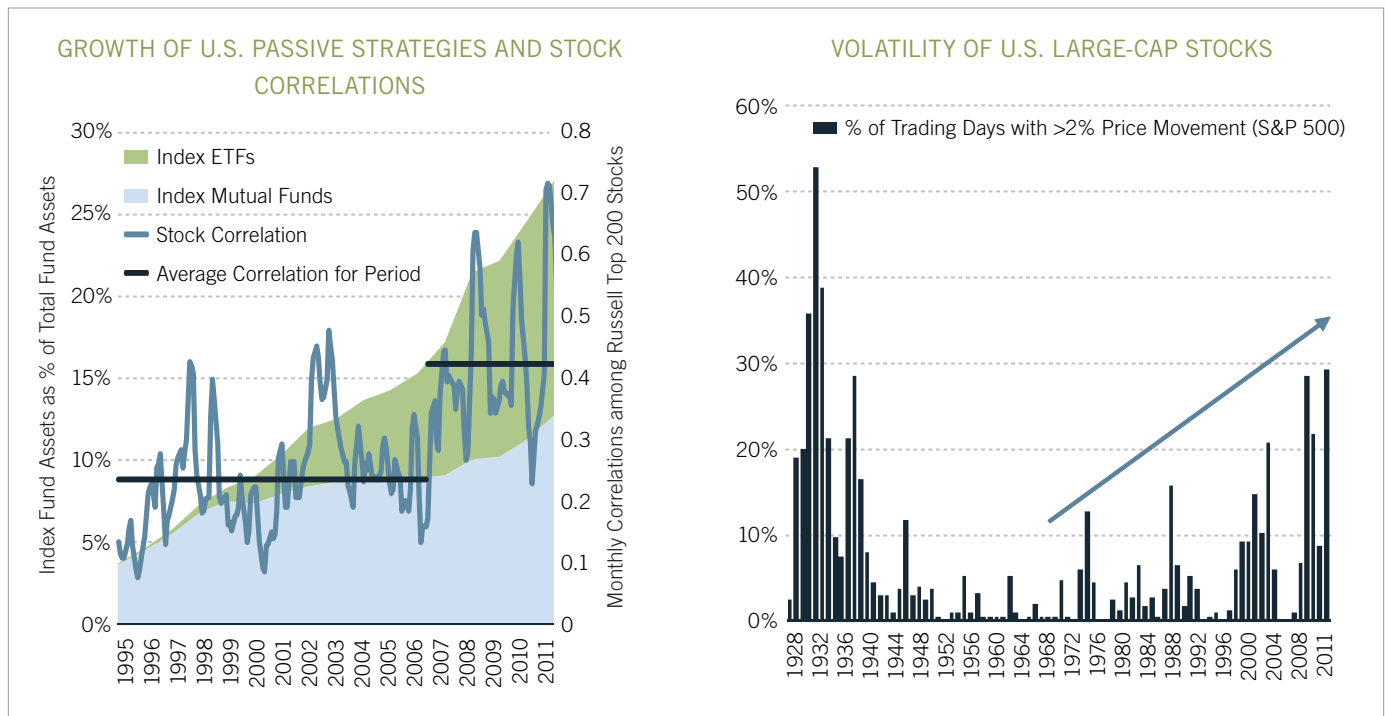
the prevalence of major market events, such as the 2008-2009 global financial crisis and the 2011 Japanese earthquake/tsunami. However, it is hard to deny that the increased adoption of passive strategies has been a contributor to these recent market trends.

The Millennium Bridge effect

To understand the link between these recent trends of higher correlations and volatility and the surge in flows to passive equity investment vehicles, consider the following:

In June 2000 in London, England, a new steel suspension bridge—the London Millennium Footbridge—opened to provide a pathway for pedestrians across the River Thames from the Bankside district to the city of London.⁵ After two days of limited use, the bridge was closed for almost two years while modifications were made to eliminate what many pedestrians felt was an uncomfortable, unexpectedly large swaying motion that occurred when the number of people walking on the bridge reached a certain level. The lateral vibration, or “wobble,” as it was called by many Londoners, was attributed to a “positive feedback phenomenon,”⁶ whereby pedestrians crossing a bridge that has a lateral sway have an unconscious tendency to match their footsteps to the sway, thereby exacerbating it. In military circles, this phenomenon is a reason why troops are instructed to break step—or step in the opposite direction—when crossing this type of bridge.

EXHIBIT 1: The growth of passive investing strategies during the past several years has coincided with a significant increase in the performance correlations of U.S. stocks (left)...as well as a sharp increase in volatility, particularly during the past five years (right).



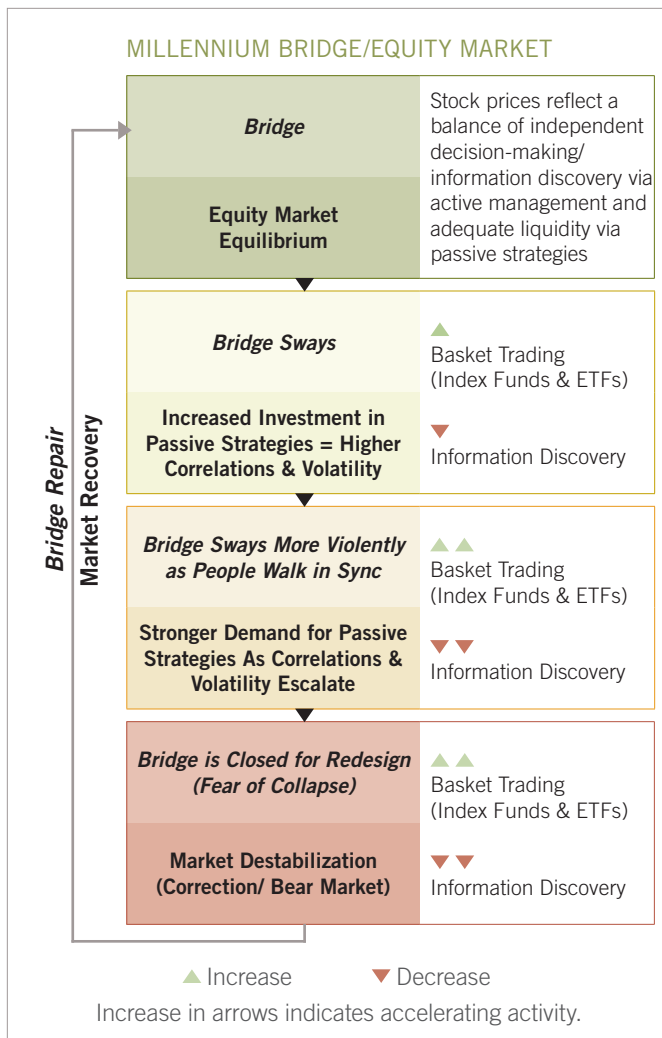
Left chart: Source - Investment Company Institute, Simfund, Haver Analytics, Fidelity Investments as of Dec. 31, 2011. Right chart: S&P 500 Index representative of U.S. large-cap stocks; Source: Standard & Poor's, Bloomberg, Fidelity Investments as of Dec. 31, 2011.

The Millennium Bridge example is analogous to the increased flows to passive strategies and the unwanted side effects of higher correlations and volatility (see Exhibit 2, below). Passive strategies reflect the independent investment decisions of many people, but in reality all passive investors are making the same investments (or steps)—just like the pedestrians walking independently on the bridge. Eventually, the bridge (i.e., equity market) starts to sway in the same direction (i.e., higher correlations), and then more violently in the same direction (i.e., heightened volatility) as more people walk (or invest) the same way.

The question of market destabilization

One concern many market participants may have overlooked is the systemic risk driven by the increased popularity of passive investing strategies. To fully grasp this point, let's review the characteristics of both passive and active investment approaches.

EXHIBIT 2: Healthy markets require a balance of information discovery and liquidity.



Source: Fidelity Investments.

- Passive investment strategies.** Passive investing is based on the tenets of the efficient-market hypothesis, the cornerstone of which is that security prices generally reflect all publicly available information at any given time.⁷ Many passive strategies attempt to replicate, or buy and hold, all the securities in a specific benchmark index, such as the Standard & Poor's 500 Index. As a result, passive investments, including index funds and ETFs, typically offer market-like returns, favorable liquidity, transparency, low costs, and relatively more efficient capital gain taxation.

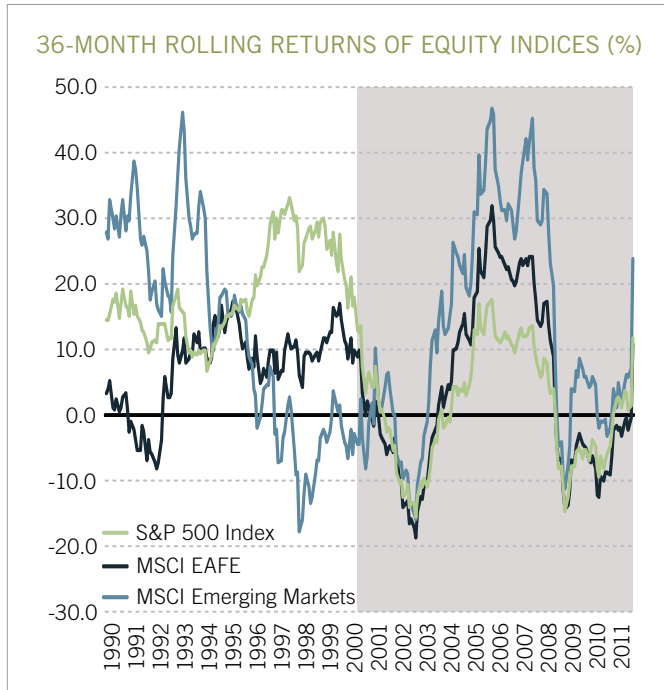
“For certain markets to remain healthy and allow investors to achieve diversification benefits, some combination of active and passive market share is ideal.”

- Active investment strategies.** Many investors choose actively managed investment strategies, such as mutual funds, separately managed accounts, and other pooled investments, believing that stock markets are not always efficient and that skilled investment managers can exploit these market inefficiencies to generate alpha.⁸ Active managers contend that in-depth analysis of companies—their financial conditions, products, industries, and competitors—can identify securities that may be mispriced and thus undervalued (passive strategies generally have no valuation component). Further, proponents of this approach believe that fundamental research is the best method for estimating corporate earnings growth or the ability of a company to service its debt obligations, and is a key element in successful security selection. Active managers rely on their research, analysis and judgment—information discovery—to buy those securities they believe provide the best potential for alpha generation. While actively managed portfolios offer the potential for excess returns relative to a stated benchmark, investors must also be willing to accept below-benchmark returns, and any results come with the cost of higher management fees relative to passive strategies.⁹

Information discovery and overall market health

As the Millennium Bridge analogy helps illustrate, when a greater number of investors are choosing the same investments via passive strategies, there is less independent decision-making, and therefore less information discovery driving market prices (see Exhibit 2). The increased equity market correlations seen during the past several years corroborate this point. Markets have greater potential to remain more stable when there is a sufficient number of investors making diverse, independent investment decisions (i.e., information discovery), as opposed to an overabundance of

EXHIBIT 3: During the past decade, the performance patterns of various stock market indices have grown more in synch and to extremes, reflecting a more highly interconnected global financial system.



Index returns: 36-month rolling annualized total return. Source: Fidelity Investments as of Oct. 31, 2011. See index definitions on page 5.

investors acting in unison via passive strategies (i.e., no information produced).

Given their attributes and cyclical performance relative to actively managed strategies,¹ passive investments help create liquidity and provide investors with a viable option to construct diversified portfolios. However, at some degree of market share they pose an undesirable level of systemic risk due to the dilution of information. For certain markets to remain healthy and allow investors to achieve diversification benefits, some combination of market share among both active and passive approaches is ideal.

Investment implications

Investors should recognize how both active and passive strategies influence financial markets, particularly if the adoption of passive strategies accelerates even more and they become a significantly larger share of a market's overall asset base. Healthy markets need a sufficient amount of information-based decision-making provided by active management. There has been a significant amount of research¹⁰ produced that illustrates how highly synchronized, connected systems (i.e., markets) tend to move toward extremes, like the Millennium Bridge (see Exhibit 3, left). For example, increased market share among passive strategies could lead to even further increases in equity market correlations and volatility. At some level of market share, the widespread adoption of passive strategies could create a degree of systemic risk that leads to an undesirable market outcome, triggered potentially by an unexpected macro event (e.g., military conflict, recession, natural disaster) or an unforeseen risk within the financial system (e.g., U.S. real estate securitization and the 2008 financial crisis).

“If too many investors seek diversification by investing the same way via passive strategies, then is anyone really diversified?”

As importantly, investors should not view the decision to invest solely in passive strategies as a way to minimize their risk exposure in a certain asset class. Many investors may be choosing passive strategies independently, but in aggregate they are all investing in the same basket of securities in a respective index. In essence, passive-only investors may be attempting to minimize idiosyncratic risk while being unaware of the increased systemic risk being created.¹¹ If too many investors seek diversification by investing the same way via passive strategies, then is anyone really diversified? Passive and active strategies each has its own advantages and disadvantages that should be carefully evaluated by an investor when constructing a diversified portfolio to meet his or her investment objectives.

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Endnotes

¹ The annual relative performance among actively managed strategies and passive strategies has varied over time due to a number of factors, such as market breadth or stock performance dispersion. Actively managed equity mutual funds have tended to outperform indexes during broad markets (those featuring a high dispersion of stock returns, where active strategies have greater potential to exploit mispricing), and passive strategies have performed relatively better in narrow markets (low stock return dispersion and fewer opportunities to identify mispricing). In a comparison of relative performance among broad and narrow large-cap U.S. stock markets from 1990-2009, there were 10 calendar years that could be classified as broad markets, eight classified as narrow, and two that featured no dominant trend. Across this 20-year period, the average return was 10% for the S&P 500 Equal Weight Index and 8.2% for the market cap-weighted S&P 500 Index. During periods when the equal-weighted index outperformed, this generally signaled significant market breadth and stronger performance among smaller companies in the index. During periods when the market-cap-weighted index outperformed, this generally signaled that stock market performance is being driven by the larger companies in the index. Source: Morningstar, Inc.; Standard & Poor's (August 2010), Fidelity Investments as of May 14, 2012.

² Source: Simfund, ICI, Fidelity Investments.

³ Correlation: a measure of how the prices of two securities (or average price levels of two securities) have moved in relation to one another. 1 = perfectly correlated; 0 = no correlation; -1 = perfect negative (inverse) correlation.

⁴ Source: Haver Analytics, FactSet, Fidelity Investments.

⁵ See YouTube video summary on London Millennium Bridge: http://www.youtube.com/watch?v=eAXVa__XWZ8&feature=related.

⁶ "Positive feedback phenomenon" is known as synchronous lateral excitation: The natural sway motion of people walking caused small sideways oscillations in the bridge, which in turn caused people on the bridge to sway in step, increasing the amplitude of the bridge oscillations and continually reinforcing the effect.

⁷ The efficient-market hypothesis was developed by Professor Eugene Fama at the University of Chicago, Booth School of Business, as an academic concept of study through his published Ph.D. thesis in the early 1960s. Source: Fidelity Investments.

⁸ Alpha: the excess return over a benchmark, taking into account the risk taken to obtain that return. Source: Fidelity Investments.

⁹ The average expense ratio of actively managed mutual funds is higher than index funds and ETFs. Source: Morningstar.com as of May 14, 2012.

¹⁰ Related research: "Individual vs. Systemic Risk and the Regulator's Dilemma," Proceedings of the National Academy of Sciences (PNAS), Beale, Rand, Battay, Croxson, May and Nowak, www.pnas.org; "Ubiquity: Why Catastrophe's Happen," M. Buchanan; "Linked: How Everything is Connected to Everything Else and What It Means," Albert-Laszlo Barabasi; "Sync: How Order Emerges From Chaos in the Universe, Nature, and Daily Life," Steven H. Strogatz.

¹¹ Idiosyncratic risk: the risk tied to unique circumstances or fundamentals of a specific company or its security. Systemic risk: the collapse of an entire financial system or financial market based on interdependencies.

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