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Volatility Drag

Why a rigid investment model may be hazardous to your wealth

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Of all the experts that we would expect to undermine the basis of passive (index) investing, Standard and Poor's, the creator of the widely-followed S&P 500 Index, was not high on our list. However, in a recent piece *The Low-Volatility Effect: A Comprehensive Look*[i], the company inadvertently does just that. The paper is a review of the mountains of academic and industry literature that has emerged bucking some of the widely-held beliefs of Modern Portfolio Theory, including the premise that investors get paid for taking more risk (see our January 2012 commentary on the subject in our article *What Color Is Your Parachute?*). S&P concludes, ". . . low-risk investing outperforms the broad market as well as high-risk strategies over a long-term investment horizon with much less realized volatility." Damning as this may be for the index approach - the epitome of market volatility - we believe indexing can *at times* still offer a cheap and tax-efficient way to capture market returns. As professional investors and fiduciaries, however, it is a single tool in a broader tool kit to maximize risk-adjusted returns, and not the one-size-fits-all hammer often wholesomely sold to main street investors.

The gist of the research is that market volatility has been a powerful enemy of long-term performance. The relationship has held in various asset classes and across geographies. The lower volatility approach invariably has delivered higher returns with anywhere from one-half to two-thirds the risk when compared to the broad market index. While the S&P study cited data going back 20 years, other studies have found a similar relationship going back more than 80 years.[ii]

While these findings shouldn't be surprising on their own, it is disarming for crusaders of the passive investing movement because indexing has always been peddled as a cheap, tax-efficient and *safe* way to get market returns. And, while it is unquestionably the cheapest and among the most tax-efficient ways to invest, safe it is not, the research shows.

Here's why: while indexing generally allows investors to diversify individual company risk and still get 100% of the market return, it also exposes investors to 100% of the market's volatility. And, as we know, volatility is toxic to long-term performance. What is known as 'volatility drag'

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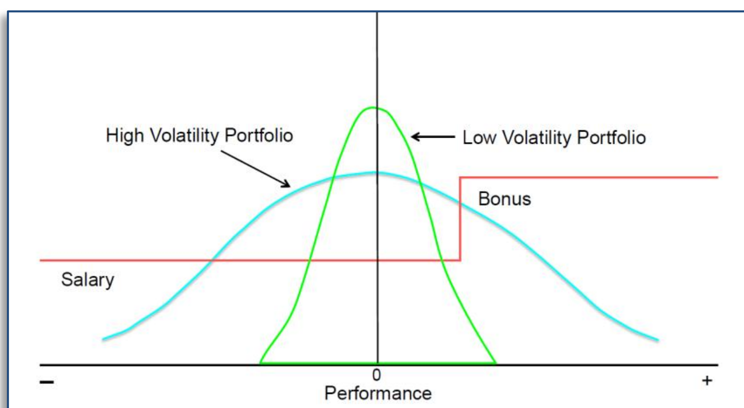
– the exponential recovery needed to offset losses (e.g. you have to gain 100% to recover from a 50% loss) – is the primary culprit for the high cost of volatility and it is part and parcel of getting such direct market exposure. An important secondary culprit is that volatility magnifies fallible investor behavior.[iii]

A third volatility cost that indexes bring to the table is due to their construction. Because of their formulaic nature, many indexes are prone to distortions over time (as we saw in the late 90's, valuations on tech stocks drove up their market capitalizations and caused the tech weighting of the Russell 1000 Growth Index to hit 50% by 2000. Again in 2007, high flying financials rose to 36% of the Russell 1000 Value Index the year before delivering crushing losses). This is the basis of the argument that indexes are prone to "buying high and selling low." To the extent market capitalization is driven by excessive leverage (and it almost always is toward the end of the credit cycle!), and to the extent leverage amplifies volatility, many market-cap-weighted equity indexes may actually have a built-in feature increasing portfolio volatility through excess business-cycle leverage. Oddly enough, this happens to be how market-cap weighted bond indexes are explicitly constructed: the higher the debt level, the greater the market cap and therefore the greater the concentration in the worst priced, highest risk credits!



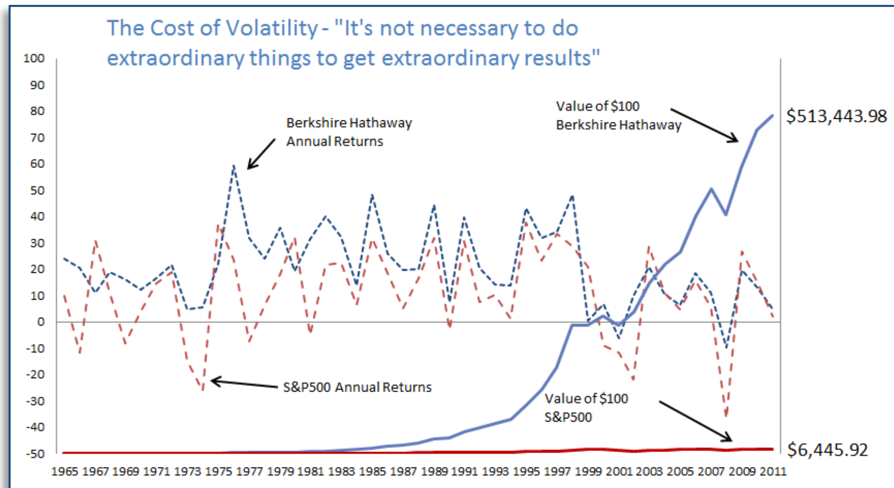
Source: Baker and Haugen

While those held back by the limited toolkit presented by a passive line up have tortured their offerings in recent years to include the likes of enhanced indexing and fundamental indexing to avoid some of these pitfalls, they don't fully address the important volatility side of the equation. A step closer to active management, these approaches attempt to limit the shortcomings of capitalization weighting by emphasizing fundamental factors like valuation. Unfortunately, while they have delivered slightly higher returns, they continue to deliver volatility similar to the broad market,[iv] albeit with higher fees and turnover.

Unfortunately, many active strategies haven't fared much better. The typical active manager often ends up with a similarly high volatility basket of investments, but for different reasons. A recent study by one of the earliest pioneers of the low volatility effect, found that benchmark-focused active managers often have incentives that help explain why they continue to chase riskier securities in spite of overwhelming evidence that lower-risk investments win the race. In short, active managers get paid an annual salary and, if they do well enough against their respective benchmark, they get paid a bonus. Track the index too closely, or fail altogether, and the manager gets paid the salary he / she is due; chase higher volatility investments and he / she increases the potential of a fatter paycheck as depicted in the figure to the left.[v]

However, the professional investor who is benchmark agnostic, who doesn't seek to eke out every penny of return at the expense of risk, who focuses on downside protection, and who is not handcuffed by a certain business model – be it active, passive or otherwise – has better odds of controlling for volatility. Contrary to popular belief, the famed investor Warren Buffet has managed to compound wealth at many times the market index not by shooting for the stars, but by investing in lower-volatility assets.[vi] The annual standard deviation of the Berkshire portfolio since inception has averaged 14.6% versus the S&P500 at 17.5%, a seemingly small difference. However, Buffet's focus on

lower risk has allowed the strategy to participate in significantly less market downside, avoiding the toxic effect of volatility drag on longer-term wealth creation (see figure below). In other words, it's not nearly as important to beat the market when the market is up as it is to beat it when it's down. In Buffet's own words "it's not necessary to do extraordinary things to get extraordinary results."[vii]



Source: Berkshire Hathaway, Rain Capital Management

That said passive strategies remain a cheap and predictable way to gain exposure to specific parts of the market when needed. They capture equity market growth very well and, during periods of central bank easing when fundamentals are washed over by the flood of liquidity the Fed is restoring to the system, index strategies typically perform better than their active counterparts. Passive strategies can be an outstanding compliment to great active strategies that may underperform in hot markets, but limit downside volatility, allowing wealth to compound at a higher rate over time. When combined in a portfolio that is well diversified around factors that drive the entire economic cycle, one begins to be able to proactively limit the corrosive effects of volatility while still capturing growth prospects.

Safety and wealth creation, it turns out, are the innocent victims in the war between active and passive business models. The constructs of 'beating the market' or 'keeping up with the market' every year which suit the warriors so well do nothing to address the fundamental reality, strongly backed by modern research, that volatility is one of the most important risk factors to control for in portfolio construction. Compounding wealth is very much about *effective* risk control and a professional investor simply cannot diversify around the core drivers of the economy and capital markets, as well as the core drivers of portfolio risk – volatility, interest rates, credit spreads, liquidity, growth, and inflation – without the broadest toolset available.

Chris Abbruzzese David Reichle Ellen Kim

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[i] Aye M. Soe, "The Low-Volatility Effect: A Comprehensive Look, S&P Dow Jones Indices Research & Design, August 2012.

[ii] Pim van Vliet, "Low-volatility investing: a long-term perspective," *VBA Journal*, Number 108, winter 2011.

[iii] Ted Seides, "The Surprising Cost of Volatility," paper presented to the CFA Institute 2010 Annual Conference, April 26, 2010.

[iv] Robert Arnott, Jason Hsu, and Philip Moore, "Fundamental Indexation," *Financial Analyst Journal,* Volume 61, Number 2. 2005.

[v] Nardin Baker and Robert Haugen, "Low Risk Stocks Outperform within All Observable Markets of the World," April 27, 2012.

[vi] Andrea Frazzini, David Kabiller, and Lasse Pedersen, "Buffet's Alpha," August 29, 2012.

[vii] Berkshire Hathaway, Annual Report, 1994.

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