
INVESTMENT

Low Volatility For Institutional Investors

By: Chris Doll

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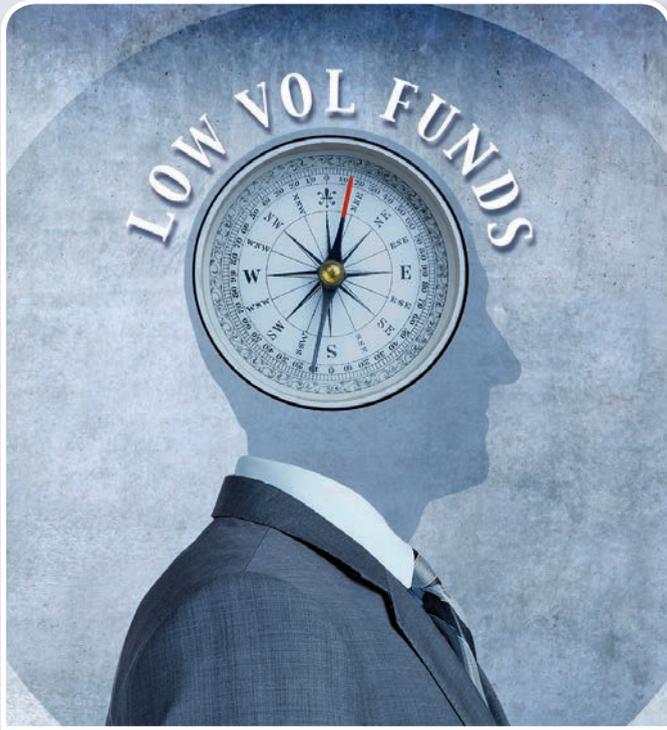
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Factor-based investing is not new – institutional asset managers have used alternative weighting and factor-driven strategies since the 1970s. But in an environment of plan de-risking, a low volatility strategy may suit plans seeking to reduce risk while maintaining equity exposure.

Because volatility is generally viewed as a proxy for risk, intuition would tell us that low volatility investing should lead to lower returns. This notion forms the basis of the Capital Asset Pricing Model (CAPM) and has become engrained in the investment psyche.

Reconstructed performance data (see *Exhibit 1*) shows low volatility indexing has historically generated about 25 per cent to 35 per cent less volatility (as measured by standard deviation) over the long term versus capitalization-weighted indices such as the S&P/TSX Composite Index or the S&P 500 Index.

More Value

But there is more value to low volatility investing than pure risk reduction. This investment approach has historically resulted in higher relative performance compared with cap-weighted indices over the long term. A low volatility portfolio of equities may offer a better way for long-term investors to own equities – even if they aren't seeking lower risk exposure.

'Better returns with less risk' defies the logic of CAPM, which states that in an efficient market, proportionately higher

risk should be rewarded with proportionately higher returns. According to CAPM, the cap-weighted market portfolio is expected to provide the highest level of return for its unit of risk, while the low-risk, low volatility portfolio is expected to provide commensurately lower returns.

Yet empirical analysis suggests that the market portfolio is not efficient. Historically, the cap-weighted portfolio has not priced risk appropriately and has failed to deliver sufficient excess return to compensate an investor for the risk taken, compared with the risk/return of the low volatility portfolio. In academic circles, this has been called the 'low volatility anomaly,' whereby higher risk (defined as standard deviation) does not always translate into higher returns.

The long-term excess returns history suggests a low volatility strategy may be a viable substitute for a traditional, cap-weighted 'core' equity holding, rather than being treated as a temporary sanctuary in risk-off periods.

Market volatility at the beginning of 2016 provided institutional decision-makers an opportunity to re-examine the performance record of low volatility, yet there may still be some skepticism regarding how these strategies will hold up through another down-market cycle.

Risk Parity

Since the financial crisis, the funded ratios of many Canadian pension plans have improved dramatically. This has accelerated the de-risking of pension plans seeking to remove the major sources of volatility in funded status, while still achieving short-term return objectives. As a complement to liability-matched bond portfolios, plan sponsors may benefit from closer analysis of smart beta equity strategies that offer a wide array of absolute and relative-risk reduction solutions.

Plan sponsors may adopt a low volatility strategy as their primary equity market exposure in order to increase their risk budgets. With less volatility in the equity sleeve, the overall plan may accept incrementally more risk in other asset sleeves without increasing overall portfolio risk.

Public equities tend to be one of the two largest allocations within a plan (the other being bonds). A slight reduction in volatility in such a large allocation may allow for a greater increase in risk budgeted to a smaller sleeve such as private equity, real assets, or commodities.

Managing volatility is of critical importance to many plan sponsors as it has the potential to erode capital quickly. When choosing a low volatility strategy, it is important to consider the construction of that strategy.

Some low volatility indices currently in the market impose sector constraints which preclude them from deviating too far from the allocations of their parent index. This may limit the effectiveness of the index in capturing the long-term excess returns associated with low volatility as an investment factor. Such a strategy will fail to achieve pure exposure to the low

volatility factor as they include elements of the cap-weighting strategy at the heart of the parent index.

Focus On Volatility

If the intent of an investment strategy is to isolate the low volatility factor, it may be prudent to seek an index that reflects the most current information and focuses exclusively on volatility, without arbitrary constraints. Such an index would select and weight its holdings based on the volatility of the individual securities within its parent index. While an unconstrained approach may increase tracking error relative to the plan benchmark, this approach has consistently provided the truest exposure to the low volatility factor.

Can the low volatility factor continue to reward investors with better returns for less risk? The answer lies in an analysis of how these excess returns were generated. Behavioural biases have historically led to investor demand for higher volatility stocks, beyond what is warranted by fundamental valuations. Such behaviour is based on the inability of many investors to evaluate small

differences in probabilities – especially when large outcomes are possible – creating an apparent preference for riskier assets which become ‘overbought,’ consequently leading to their underperformance.

Another key contributor to the low volatility anomaly is the ‘limits to arbitrage.’ In these situations, institutional investors may be constrained or reluctant to deviate from index benchmarks, which may limit the opportunity to arbitrage between overpriced stocks and undervalued stocks. A common mandate for many money managers is to maximize the information ratio relative to a specific benchmark – in other words, to maximize the active return while minimizing tracking error versus the benchmark.

Higher Total Returns

Having a benchmark makes institutional investors less likely to exploit the low volatility anomaly. Given the choice between investing in two stocks (both with the same expected alpha, but one having a beta of 0.75 and the other having a beta of 1.25), the manager may invest in

the higher beta stock which is expected to generate higher total returns. Both stocks involve the same amount of active risk (they deviate equally from a beta of one), but the higher beta stock offers the benefit of being levered to the positive returns of the market, offering higher expected active returns. With so many money managers acting under this mandate, high beta stocks end up being overbought, leading to future underperformance, while low beta stocks can end up being oversold, leading to future outperformance.

The combination of irrational investor demand for high volatility and investment managers’ focus on fixed benchmarks has flattened, and even inverted, the relationship between risk and return.

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