

## Are low-volatility stocks overcrowded?

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### FOUR REASONS WHY IT'S NOT

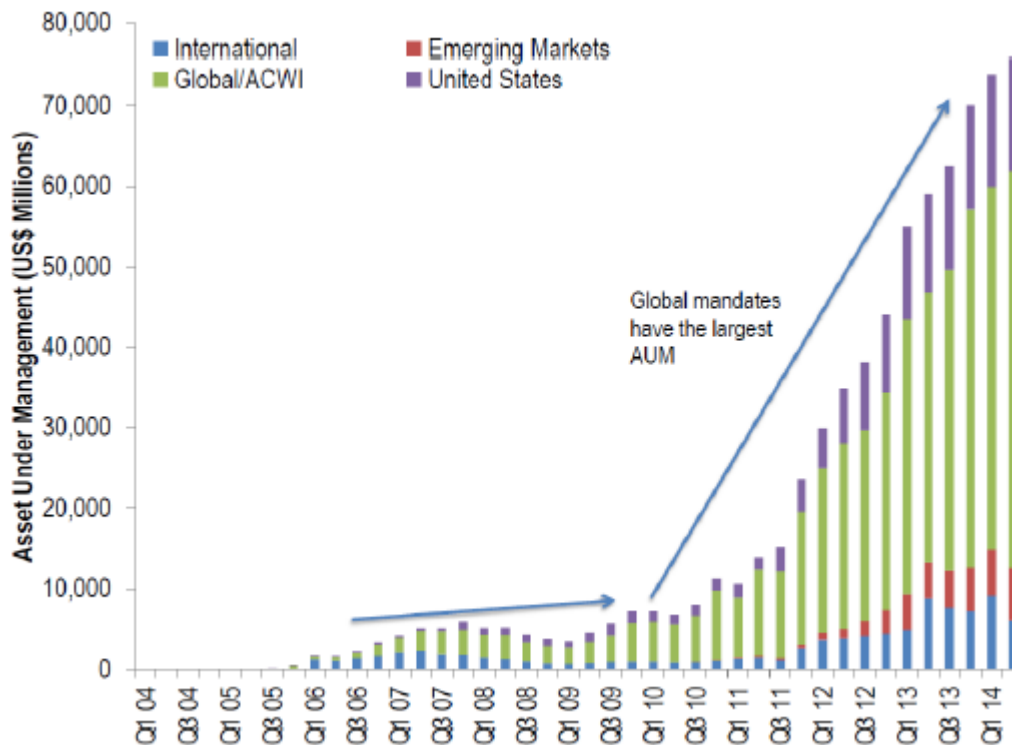
Whereas only 10 years ago, hardly anyone had heard about low volatility investing, nowadays many investors allocate to low-volatility stocks and many asset managers offer low-volatility products. As a result, there is a growing concern that low-volatility is starting to become an overcrowded trade and that the anomaly will disappear. This paper presents four arguments against this notion. It concludes that overcrowding does not appear to be a major concern, as the key drivers of the low-volatility effect remain strongly in place, and exploitation of the anomaly is still in a relatively early stage.

#### 1. Low-volatility is still in its infancy compared with small-cap and value investing

Small-cap and value investing took off in the early nineties, when Fama and French published their seminal paper documenting the existence of these effects. Also in that period, asset managers such as Vanguard and Dimensional Fund Advisors introduced the first funds specifically designed to capture these premiums, and Morningstar introduced its famous Style Box, which has been used since to classify mutual funds along the size and value dimensions. In the subsequent two decades, there was an explosion in the number of small-cap and value funds offered to investors.

Low-volatility is more than a decade behind the curve, and the number of product offerings is still relatively low. We estimate total assets in low-volatility strategies at around USD200 billion as of Q4 2014, or 0.5% of total equity market value. Total asset in active low-volatility products amount to around USD 75 billion (Figure1).

Figure 1: AuM of low-volatility products over time



Sources: eVestment Alliance database, Citi Research.

Figure 1 shows assets under management in active low-volatility funds since 2005.<sup>2</sup> This number pales in comparison with the assets in value funds. For instance, as of June 2014, AuM in value-related ETPs was over 10 times larger than the total AuM in low volatility ETPs.<sup>3</sup> Despite massive value investing, the value premium seems to be as strong as ever and few investors believe the premium will no longer be there in the future. It is then inconsistent to assume that the relatively small flows into low-volatility have already eliminated this market inefficiency.

## 2. P/E may be a bit high, but not due to recent flows into the strategy

An often-heard argument to justify the overcrowding concern is that generic low-volatility strategies are relatively expensive nowadays, in terms of P/E or P/B, compared with the market. Does this indicate that too much money has flowed into these strategies already? We don't think so. In a previous note, we showed that it is actually not unusual for low-volatility stocks to be more expensive than the market because, based on US data from 1926 onwards, we see this happening with generic low-volatility over one third of the time, e.g. after severe recessions.<sup>4</sup>

It is also interesting to note that although generic low-volatility is indeed a bit expensive nowadays, this is actually not a recent phenomenon. Figure 2, which depicts the P/E difference between the MSCI World Minimum Volatility index and the standard MSCI World index over time, shows that generic low-volatility has been about 10% more expensive since 2006, when hardly anyone had even heard about the strategy. Over the past years, this number has fluctuated, but without any clear trend. As the main flows into low-volatility strategies occurred in the most recent years, it is hard to argue that these flows are responsible for today's slightly higher valuations.<sup>5</sup>

**Figure 2: Relative P/E MSCI World Minimum Volatility index and Conservative Equities**



Sources: Factset, MSCI

An enhanced low-volatility approach, which avoids the most expensive low-volatility stocks, is an effective way to deal with higher valuations. Figure 2 shows that over this real life period, the Robeco active low-volatility approach – which avoids the most expensive stocks – had a P/E ratio that was structurally lower than the Minimum Volatility index and most of the time lower than the market. This confirms our argument that a more selective low-volatility investment approach can effectively deal with valuation concerns.

### 3. The marginal buyer has been buying high-volatility stocks in recent years

Our third argument against overcrowding is that the significant underperformance of the MSCI World Minimum Volatility index in 2012 and 2013 implies that the marginal buyer was buying high-volatility stocks and selling low-volatility. The key thing to remember is that

prices are determined 'at the margin' by price-sensitive investors. Figure 3 shows that since September 2011, the MSCI World Minimum Volatility index has underperformed the MSCI World index by more than 20%. This illustrates how misleading it can be to look at the growth of a small segment of the market in isolation. It may be true that in 2012 and 2013 more money than ever before was directed towards low-volatility strategies, but much more important is what the other 99.5% of the market was doing over the same period. This is reflected in the overall performance of different segments of the market, which unequivocally shows that, on balance, investors were not flocking into low-volatility stocks, but rotating out of defensive stocks, into more volatile cyclical stocks. Perhaps the continued interest in low-volatility, despite three years of relative underperformance, illustrates a change in investors' mindset.<sup>6</sup> It might be that the global financial crisis has left a mark on the risk tolerance of investors, similarly to how many investors were affected for the rest of their lives by the great depression in the 1930s.

**Figure 3: Relative Performance MSCI World Minimum Volatility index since Sep 2011**



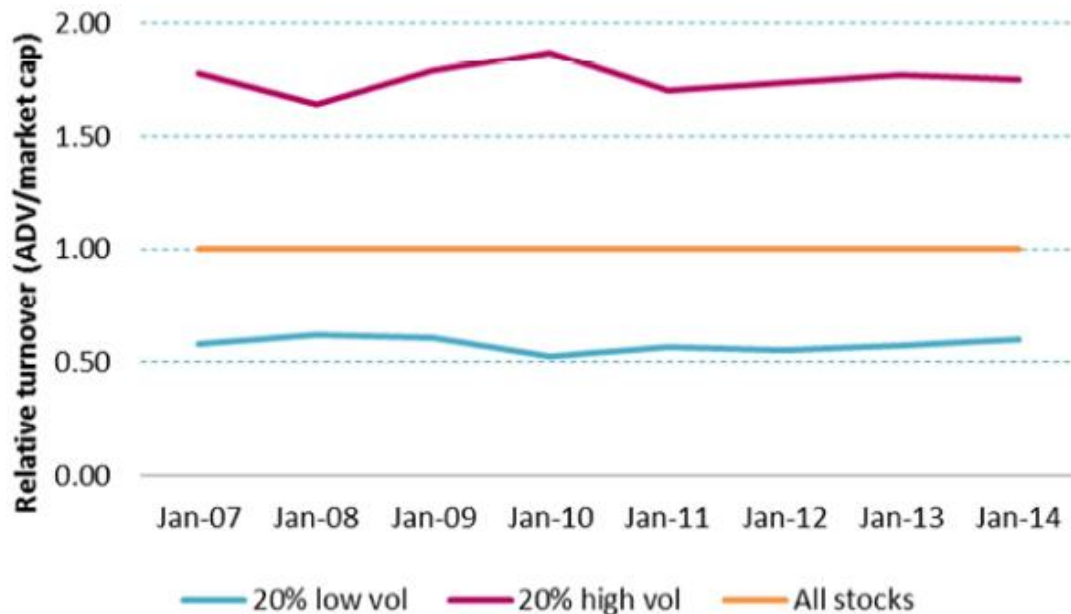
Sources: Factset, MSCI

#### 4. Low-volatility stocks are still not exciting

One of the explanations for the volatility effect is that high-volatility stocks are more in the news and therefore grab more attention than low-volatility stocks. These differences in investor attention are reflected in differences in relative trading volumes. If it is true that low-volatility stocks have become more attractive, even up to the point that the strategy has become an overcrowded trade, one would expect this to be clearly visible in the form of increased trading volumes. We tested this hypothesis by considering relative (market cap-adjusted) trading volumes for the 3,000 largest stocks in developed markets, and for the

20% stocks with the lowest and highest volatilities in particular. On average, roughly 0.8% of a company's market value is traded on a daily basis, varying between 0.6% (2007) and 1.2% (2009). This translates into an average holding period of about 130 trading days, which is historically low.

Figure 4: Trading activity in low-volatility stocks versus high-volatility stocks



Sources: Robeco, Factset

Figure 4 shows to which extent the relative trading volumes of low-volatility stocks and high-volatility stocks deviate from the market average. For low-volatility stocks this ratio is very stable at around 60%, meaning that these 'boring' stocks are traded 40% less than the average stock. We do not find any evidence of an upward trend in trading activity which might suggest that investors have started to pay more attention to these stocks. High-volatility stocks, on the other hand, are traded about 70% more than the average stock, and here we do not see any evidence of a structural change in recent years either. We conclude that investor attention for low-volatility stocks versus high-volatility stocks has remained stable over time.

### Does this mean all concerns are unjustified?

We are fully aware that total assets under management in low-volatility products are growing rapidly, but we pointed out that as a percentage of the entire market low-volatility allocations are still very tiny. We also acknowledge that valuation can be a concern, but we argued that this is not a recent phenomenon and also something that can be effectively dealt with by using a more selective approach.

This does not mean, however, that we simply reject all potential concerns related to overcrowding. For instance, if investors are worried that there may be market environments in which all low-volatility offerings may struggle at the same time, they are probably right. We would attribute that to strong common factor exposures though (e.g. a low beta), which does not mean that the anomaly has disappeared. We also have some concerns with regard to the capacity of certain publicly available low-volatility indices, which may be falling victim to predatory trading. Although that specific issue could mean overcrowding risk for certain individual stocks, again it does not mean that the entire low-volatility effect has disappeared.

#### **AS LONG AS THE DRIVERS REMAIN IN PLACE, THE LOW-VOLATILITY EFFECT IS LIKELY TO PERSIST**

In a recent paper we provided an extensive overview of possible explanations for the low-volatility anomaly.<sup>7</sup> We identify explanations related to preferences and incentives (e.g. relative performance objectives of delegated portfolio managers), constraints (e.g. on leverage) and behavioral biases (e.g. overconfidence). We also argue that these explanations relate to deeply ingrained institutional structures and human nature, which makes it highly unlikely that the anomaly will disappear anytime soon.

As long as the vast majority of investors face misaligned incentive structures or hard constraints, it is actually rational for them to act in such a way that the low-volatility effect is sustained, rather than arbitrated away. A good moment to start worrying about the future persistence of the low-volatility anomaly would be if, at some point, we were to see drastic changes along these lines. For instance, if portfolio managers would be rewarded for achieving the same return as their benchmark with lower risk or, if taking a 150% long position in low-volatility stocks with a 50% short position in cash would suddenly become very easy and acceptable. In the meantime, thoughtful long-term investors can benefit from the anomaly that arises from such conditions.

## ENDNOTES

1. The USD200 billion number is a 'guestimate' and can be split into one third passive strategies and two thirds active strategies as of Q4 2014. USD65 billion passive consists of USD15 billion in ETPs (such as SPLV, USMV, EEMV) and USD50 billion in institutional funds. USD135 billion is in active low-volatility funds, USD50 billion is managed by institutional investors themselves and around USD85 billion by active managers of which Robeco manages USD11 billion. Sources: Robeco, Citi Research, ETFDB, Morningstar.
2. Citi research, 1 October 2014, The rise of low-volatility investing: is it getting crowded over there?
3. Source Morningstar, "A global guide to strategic beta exchange traded products", September 2014. See exhibit 8 for US and exhibit 30 for Europe. The total combines to more than USD200 billion in value-related ETPs and USD15 billion in low/minimum volatility/variance ETPs.
4. Van Vliet (2012), "Enhancing a low-volatility strategy is particularly helpful when generic low-volatility is expensive", Robeco client research paper.
5. Other valuation measures give a mixed, but similar picture with no clear trend. As of July 2014, the Minimum volatility index offers 0.2% more yield compared to the market, but the P/B ratio is higher (2.5 versus 2.2). Since 2006 these differences averaged 0.6% and 0.2 respectively.
6. More and more investors start to look at the Sharpe ratio to evaluate the performance of low-volatility moving away from Information ratio. On a risk-adjusted basis low-volatility stocks have done much better than without controlling for risk over the past couple of years.
7. Blitz, Falkenstein and van Vliet (2014), "Explanations for the Volatility Effect: An Overview Based on the CAPM Assumptions", *Journal of Portfolio Management*, Vol. 40, No. 3, pp. 61-76.

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