US Market Report
Do High Performing REITs Offer Diversification?

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Introduction

Investors are often tasked with choosing stocks that generate alpha while offering portfolio diversification benefits. Beginning in 2012, it appeared that Real Estate Investment Trusts, or REITs, ranked high in both categories. As of May 31, 2012, the MSCI USA IMI REIT Index returned 8.9 percent compared to a 5.2 percent performance of the MSCI USA IMI Index. On top of impressive capital gains, REITs also offer high yields, currently an average of 4.34 percent versus an average 1.87 percent for a 10-year note.

Although the sector has outperformed, some managers believe that the run-up in 2012, especially in US-focused investments, has dulled some of REITs’ recent appeal. Average earnings growth across REITs, however, is expected to be in the respectable high single-digits this year; at the same time, REITs are still considered a good portfolio diversifier.1

In this report, we look at a portfolio defined by the MSCI USA IMI REIT Index returns since May 2007, and analyze the sources of the recent and long run returns and risk to REITs using the Barra US Equity Model (USE4). We also use USE4 to investigate whether REITs actually provide a diversification benefit.

Analyzing REIT Performance

Although REITs derive their revenue from real estate investments, they are still publicly traded stocks, and are exposed to the same variety of risk factors as other stocks. To demonstrate this point, we chose to analyze the MSCI USA IMI REIT index as a representative portfolio, which has around 140 constituents.

We start by contrasting the year-to-date and longer term performance of this representative REIT portfolio relative to the broad market represented by the MSCI USA IMI Index.2 Risk and return sources

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2 We use the Barra US Equity Model (USE4) for this analysis.
can be grouped into the broad categories of industry, style and asset-specific buckets. In terms of industries, the portfolio is heavily exposed to the Real Estate factor (94 percent active weight relative to MSCI USA IMI), as expected, and the contributions of other industries are negligible both in the short and the long run.

The style profile of the portfolio is more dispersed with significant, stable exposures to several styles. Table 1 summarizes the relevant statistics, showing the average active exposures to style factors, and also their standard deviation which allows us to gauge how stable the exposures have been since May 2007.

The significant positive exposure to the Non-linear Size and negative exposure to Size reflect that these stocks were generally in the mid-to-small cap range. The significant positive exposure to Dividend Yield and Leverage implies that REITs were strong dividend payers (as imposed by the regulatory framework) and were more leveraged than the average stock.

Table 1: Style Exposure Statistics and Style Factor Contributions of the USA IMI REIT Portfolio Relative to the MSCI USA IMI portfolio, USE4 Model, May 2007 – May 2012.

<table>
<thead>
<tr>
<th>Style Factor</th>
<th>Mean Beta</th>
<th>Standard Deviation</th>
<th>Mean Contribution (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>0.85</td>
<td>0.59</td>
<td>2.22</td>
</tr>
<tr>
<td>Momentum</td>
<td>1.05</td>
<td>0.21</td>
<td>-16.47</td>
</tr>
<tr>
<td>Book-to-Price</td>
<td>1.32</td>
<td>0.21</td>
<td>6.26</td>
</tr>
<tr>
<td>Growth</td>
<td>-0.31</td>
<td>0.23</td>
<td>8.75</td>
</tr>
<tr>
<td>Liquidity</td>
<td>-0.56</td>
<td>0.14</td>
<td>-3.99</td>
</tr>
<tr>
<td>Residual Volatility</td>
<td>-0.42</td>
<td>0.38</td>
<td>2.05</td>
</tr>
<tr>
<td>Non-linear Size</td>
<td>-1.10</td>
<td>0.14</td>
<td>15.13</td>
</tr>
<tr>
<td>Non-linear Momentum</td>
<td>0.54</td>
<td>0.06</td>
<td>3.04</td>
</tr>
<tr>
<td>Non-linear Book-to-Price</td>
<td>0.00</td>
<td>0.36</td>
<td>9.04</td>
</tr>
<tr>
<td>Non-linear Growth</td>
<td>-0.21</td>
<td>-0.14</td>
<td>-0.44</td>
</tr>
<tr>
<td>Non-linear Liquidity</td>
<td>-0.73</td>
<td>-0.20</td>
<td>-2.88</td>
</tr>
<tr>
<td>Non-linear Residual Volatility</td>
<td>-0.50</td>
<td>-0.37</td>
<td>-0.56</td>
</tr>
</tbody>
</table>

Table 1 and Figure 1 show that style factor contributions to return were important between May 2007 and May 2012, totaling 23 percent cumulative contribution from styles as opposed to a -18 percent contribution from industry factors. Figure 1 also reveals that the strong divergence between style and industry factor contributions started in early 2009 with the QE-driven recovery of the stock market. The Size and Momentum factors were the two most important contributors over the long run, while the high exposure to the Leverage factor significantly hurt performance over the last five years.

When turning to a recent period, we find a sharp contrast to this picture, as Figure 2 shows. The recent outperformance has been driven mainly by the industry factor recovery (6.1 percent), as style factors contributed much less (-0.2 percent) to the total. Somewhat at odds with general beliefs about high yields being the drivers behind this performance, we also found that the Dividend Yield factor had a negative contribution in 2012. This is due to the negative performance of the Dividend Yield factor to which the REIT portfolio was heavily exposed.
Figure 1: Long-run Performance Attribution of USA IMI REIT vs. USA IMI, USE4 Model, May 2007 – May 2012.

Figure 2: Year to Date Performance Attribution of USA IMI REIT vs. USA IMI, USE4 Model, 3 Jan 2012 – 14 Jun 2012.
This analysis showed a clear difference between the drivers of long-run and recent returns. Over the long run, style and industry factors had equally important but opposite contributions, while in the recent period industry factors clearly dominated.

REIT Correlation and Risk

We examine now another often cited reason for holding REITs in a portfolio: the claim that they are a good diversifier because of their low correlation with the market.

At first glance, Figure 3 seems to confirm this statement. The forecast correlation between the US Country factor (representing the general movement of the US market) and the US Real Estate factor (playing an important role in the REIT IMI portfolio) has been low since 2007. Even in the turbulent market conditions of late 2008, the correlation reached only 0.2 and returned to small negative levels since then.

Figure 3: Forecast Correlation Between US Country and US Real Estate Factors, USE4L Model, Jan 2007 – May 2012.
But what is true for factor correlations cannot be directly transposed to portfolio correlations. Although the exposure of the USA IMI REIT portfolio to the Real estate factor is high, the role of other factors cannot be neglected. To illustrate this, we looked at the forecast correlation between two complementary portfolios: the USA IMI REIT and the USA IMI ex REIT portfolio, which contains all stocks from the USA IMI Index except REITs.

The results are shown on Figure 4. This comparison reveals that the correlation of portfolio returns is much higher (around 0.8) than one would expect based on the low level of factor correlations. What is causing this apparent contradiction?

According to our model results, the reason behind this can be attributed to both portfolios sharing common exposure to the broad equity market. When looking at those portfolios in isolation, the most important source of risk is still broad equity market risk, while other factors play a smaller role. This common source of risk also influenced the correlation of the two portfolios. While other risk sources could modify this picture, they were not strong enough to sustain portfolio correlation much below the 0.8 level for longer horizons.

Low correlation with other segments of the equity market is generally presented as an additional reason to hold REITs. The example above shows that correlation could be higher than expected and warrants a reevaluation of REITs in a portfolio.

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3 In MSCI model jargon, this is called the US Country factor.

4 Figure 4 also shows the negative correlation between style and industry factor contributions to the two portfolios’ return. This is expected for mutually exclusive portfolios.
Finally, even if correlation is high, the relatively low level of risk could make the case for the inclusion of REITs in a portfolio. However, we find in Figure 5 that during the last five years, and especially during the most turbulent times in 2008, the risk of REITs was not lower than the risk of the broad market portfolio. Furthermore, the analysis also revealed that during the 2008 crisis period, style factors were an important contributor to active risk, equally important as industry factors (see Figure 6). We see here a repeated pattern already highlighted in the previous section on “REIT Correlation and Risk”: that is, holding REITs brought along additional exposures to style factors, such as Size, Dividend Yield, Non-linear Size or Leverage, which also could heavily influence the risk of the REIT portfolio.

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5 Calculating realized risk (standard deviation of returns) would not have changed our conclusions, since it behaved in a very similar manner.
Figure 5: Total Risk Forecasts of the MSCI USA IMI and MSCI USA IMI REIT Portfolios, USE4L Model, May 2007 – May 2012.

Figure 6: Factor Contributions to the Active Risk of the MSCI USA IMI REIT Portfolio, USE4L Model, May 2007 – May 2012.
Conclusion

Although the real estate market as a whole has not fully recovered from the crisis, there are certain segments that have recently provided impressive returns. Publicly traded REITs are an example of that phenomenon.

In light of recent returns and advertised diversification benefits, this report looked at REITs from the perspective of a portfolio manager contemplating an increasing allocation to REITs.

When buying REITs, one does not only buy exposure to this specific industry, but also to several unrelated sources of risk and return represented by style factors. And these sources could sometimes be just as important as the industry factor itself.

For example, over the past five years, only the important positive contribution from style factors (e.g., Size, Momentum, Residual Volatility) could counterbalance the negative contribution from the Real Estate industry factor. Furthermore, style factors were also an important source of active risk during the turmoil in 2008.

REITs have also been much more correlated to the rest of the US market than is generally believed or advertised. While the variety of risk sources foreshadows a lower correlation, they are not enough to offset the important exposure to the broad market. This might be a warning sign for investors wishing to add REITs to their portfolio for diversification purposes.
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1 As of June 30, 2011, based on eVestment, Lipper and Bloomberg data.