# International Diversification

The unedited version of the following post is at https://www.blackrockblog.com/2016/11/03/international-markets/

## Are international markets back?

Russ Koesterich, CFA Head of Asset Allocation for BlackRock's Global Allocation Team 11/3/16

Very slowly, almost stealthily, international equity markets are clawing back relative to the United States. ...

What accounts for the turnaround and, more importantly, can it continue? Three factors stand out:

**1. U.S. growth remains uninspiring, despite expectations for a rebound.**

The relationship between economic growth and market performance is unreliable and often non-existent. But for a market that is increasingly dependent on earnings growth, a lack of economic growth is a challenge. Although the U.S. economy continues to grow, it is not obvious that it is accelerating. More interestingly, relative to other parts of the world U.S. economic data is disappointing. The Citigroup Economic Surprise Index is once again negative for the U.S. while it is positive for a broader array of major economies.

**2. The Federal Reserve will no longer ride to the rescue.**

For most of the post-crisis period investors could, and often did, dismiss soft growth on the assumption it would lead to more monetary easing. That is no longer likely. While the Fed has verbally committed to a shallow and short tightening cycle, interest rates are still likely to rise. This is also putting upward pressure on the dollar, which will in turn pressure U.S. earnings.

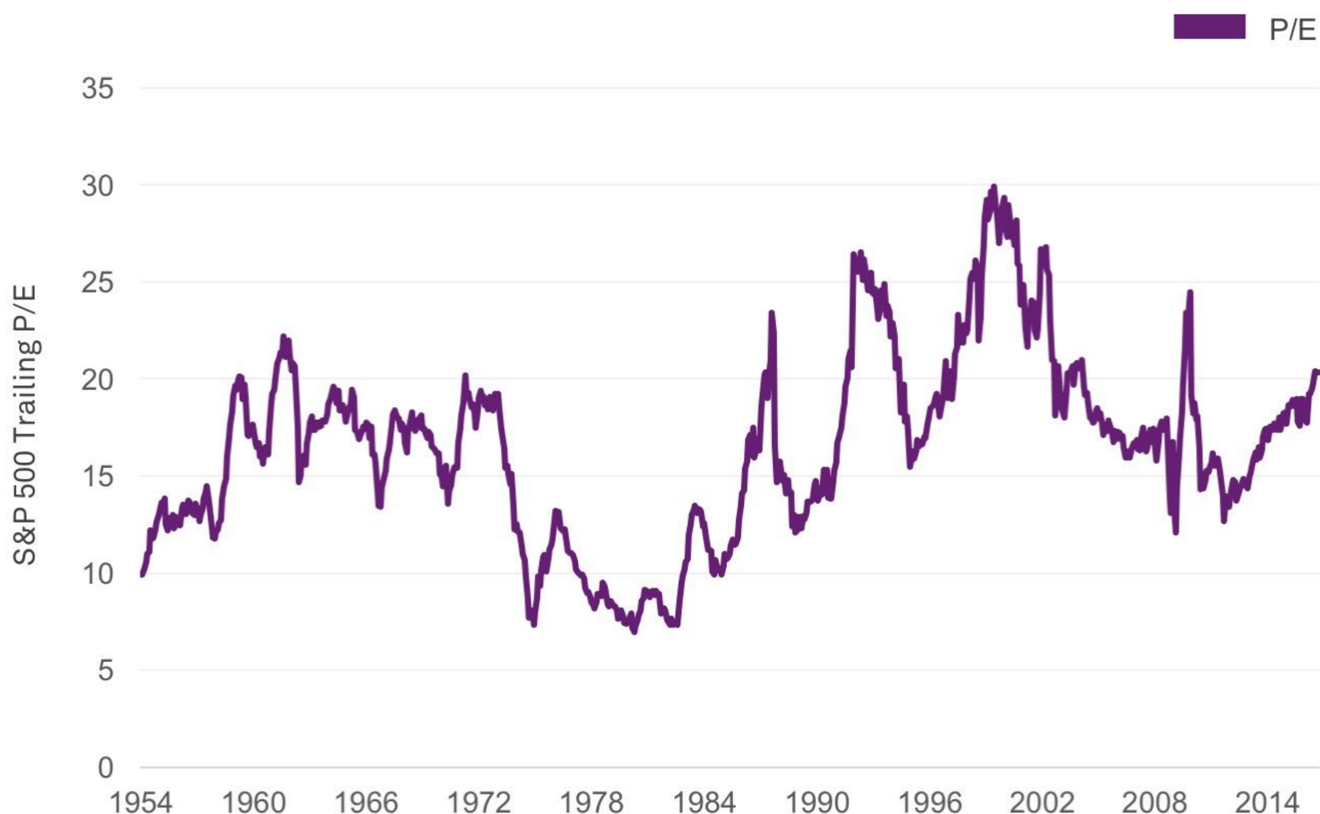
**3. U.S. stocks are expensive; other markets aren't.**

As shown in the chart below, U.S. equities are trading at over 20x trailing price-to-earnings (P/E) .... Valuations at these levels have historically been associated with lower forward returns. In contrast, equity markets in Europe, Japan and emerging markets appear somewhere between fairly valued and relatively inexpensive.

For long-term investors, the final point is particularly important. Value is often irrelevant in the short term, but over the long term valuations tend to mean-revert. For example, during the past 60 years, annual changes in the P/E of the S&P 500 had a -0.20 correlation with the change the following year.

This is one of the reasons many investors are lowering their long-term return assumptions for U.S. equities. Indeed, the BlackRock Investment Institute forecasts a 4% annual return for large cap U.S. equities over the next five years. This below-average forecast assumes a steady 2% annual compression in multiples. In other words, if correct, investors will be less willing to pay more for each dollar of earnings and stocks will climb at a much slower pace.

Many international markets face their own challenges, but at the very least they are less likely to contend with the steady headwind of multiple compression. This suggests that the recent recovery in international markets can continue.



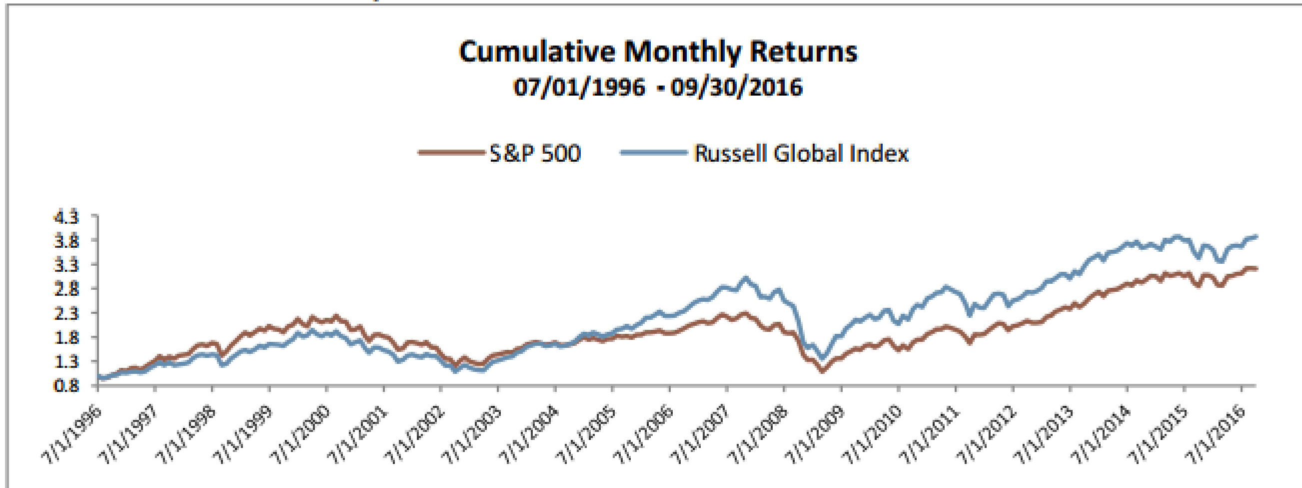

**Our thoughts**

Hughes Capital Management (HCM) is a sub-advisor to Quest Opportunity Fund (QOF). QOF's early investment in and relationship with Grandeur Peak made it possible for HCM clients to invest in Grandeur Peak Funds that are hard closed, such as GPIIX which we use for Foreign Small Cap exposure in taxable accounts. The following is from Grandeur Peak's 3rd Quarter Market Commentary, with our parenthetical note in red:

Lately we've been hearing market pundits talking about just passively investing in "the market" and calling it good and for most of these pundits "the market" is simply the S&P 500. At Grandeur Peak, when we talk about "the market" we are referring to the global equity market (as might be measured by the Russell Global Index or the MSCI All Country World Index, the All Cap version of which is HCM's benchmark). Instead of measuring the 500 largest companies in 1 country, the Russell Global Index (RGI) contains 10,000 companies across 47 countries; and this is still 20,000+ companies short of the global equity universe from which we select the Grandeur Peak portfolio holdings.

We think the larger opportunity set and added diversification is important. From the RGI's inception on July 1, 1996 through September 30, 2016, it has delivered an annualized return of 6.9% vs. 5.9% for the S&P 500 (as shown in Exhibit 1).

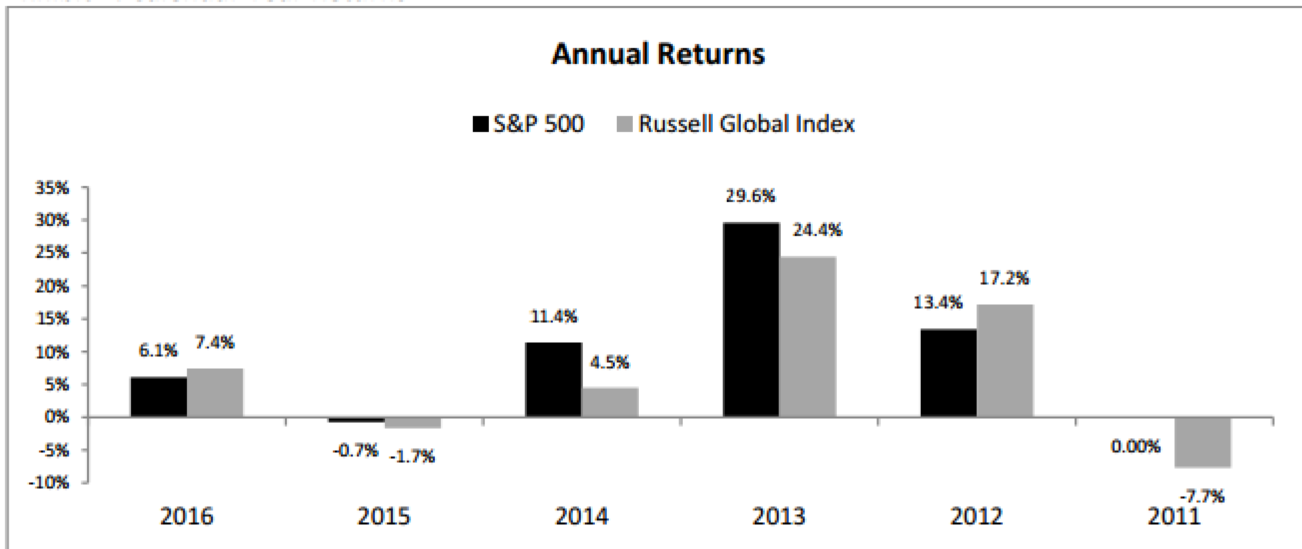
**Exhibit 1: Cumulative Monthly Returns**




*source: FTSE Russell; Bloomberg (data from 07/01/1996 – 09/30/2016*

However, over the past five years (9/30/11 – 9/30/16), the S&P 500, which is essentially a small sub-set of the RGI, has outpaced the RGI (13.9% vs. 11.5% annualized). As shown in Exhibit 2, the S&P 500 has beaten the RGI four out of the last five full calendar years (although year-to-date in 2016 the RGI is slightly ahead of the S&P).

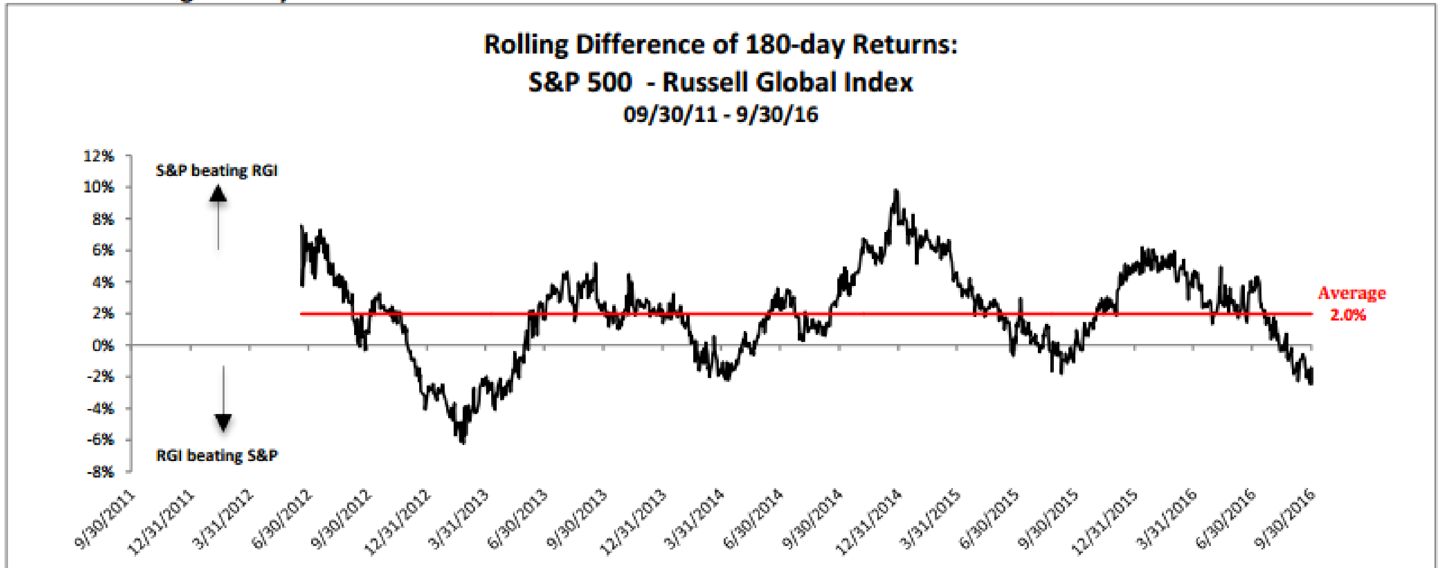
**Exhibit 2: Calendar Year Returns**




*source: FTSE Russell; Bloomberg (data from 12/31/2010 – 09/30/2016)*

No wonder a number of U.S. investors have been throwing in the towel on diversification. But to this we have two words of caution: markets cycle. A quick look back at rolling daily returns of the two indexes over the last five years gives us a glimpse into the short-term cycles. We computed the rolling 180-day returns for each of the two indexes and then subtracted the return for the RGI from the S&P's. There are 1,079 such observations from June 19, 2012 through September 30, 2016. The average difference of the 180-day returns of the two indexes is 2%. In other words, over the past five years, the S&P 500 has delivered, on average, a 2% higher return than the RGI over a roughly 6-month period. However, as shown in Exhibit 3 below, this return differential has been highly cyclical.

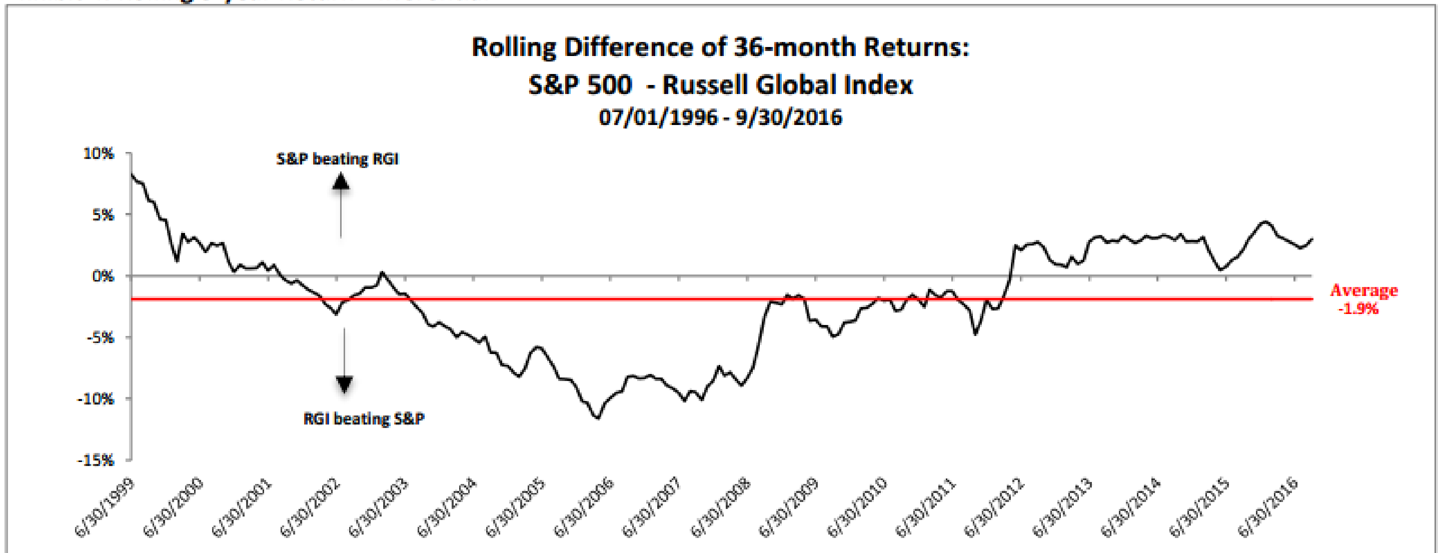
**Exhibit 3: Rolling 180-day Return Differential**




*source: FTSE Russell; Bloomberg (data from 09/30/2011 – 09/30/2016)*

Stepping back to a longer view, we compared rolling 36-month returns going back to the July 1996 inception of the RGI. You can see the longer-term cycle in Exhibit 4, which shows that over the longer term, the 3-year return of the S&P 500 has underperformed that of the RGI, on average, by 1.9%.

**Exhibit 4: Rolling 3-year Return Differential**




*source: FTSE Russell; Bloomberg (data from 07/01/1996 – 09/30/2016)*

## Our thoughts continued

We were reminded of the following article that we shared over a year ago with clients. At the time we noted that, "*HCM's target allocation for international stocks is 40% for clients focused on Capital Appreciation, leaving 50% for domestic stocks and 10% for Real Estate ....*" That recommended allocation hasn't changed and the exact same arguments for International Diversification made 15 months ago can be made today, despite the fact that our MSCI ACWI AC benchmark is up .9% over the past year while excluding U.S. stocks, half of the index, results in a 1.6% loss.

# How Foreign Should Investors Get?

## Some advisers say U.S. investors should have up to half of their stockholdings overseas

By Chana R. Schoenberger

August 10, 2015

In their stock portfolios, Americans often have stuck close to home. Now, as they increasingly cross borders to buy shares, how far should they take it?

The answer might startle some U.S. investors, who typically hold perhaps 20%, at most, of their holdings in non-U.S. stocks. A number of advisers are recommending much higher percentages—with some making the case that half or more of an investor's stockholdings should be overseas.

Asset manager BlackRock for instance, recommends investors keep between 30% and 50% of their stock portfolios in overseas shares.

"The problem is, most U.S. investors don't have anywhere close to that much allocated" to international stocks, says Russ Koesterich, BlackRock's global investment strategist. ...

"If you look at the U.S., fundamentals are deteriorating in terms of the stock market," says David Larrabee, a director at the CFA Institute, an association of investment professionals. He says that while there is no one-size-fits-all portfolio, in general investors shouldn't have more than half of their stock investments in U.S. shares.

A strong dollar is compressing exports, rising labor costs are likely to hurt corporate profits, and interest rates are set to rise, he says. Plus, stock valuations in the U.S. are at their highest levels in at least six years by several measures, he says. ...

Some investors are looking for monetary policy abroad to give overseas stocks a boost the way low interest rates have contributed to the run-up in U.S. stocks in the past several years, says Gary Chropuvka, head of customized beta strategies for Goldman Sachs Asset Management's quantitative investment strategy team, which manages $60 billion.

Having seen how well U.S. stocks did as the Federal Reserve's monetary-policy moves spurred economic expansion, "people are more and more convinced that there are a lot of similar opportunities to the U.S." overseas, particularly in developed Europe and Japan, Mr. Chropuvka says. Efforts by the central banks of the European Union and Japan to boost their economies seem poised to succeed, along with a push in Japan for greater productivity and more effective corporate governance, he says.

Goldman recommends that the average investor keep about half of a stock portfolio in international shares. ...

**Still thinking**

More recently we shared this with our clients: "*What percentage of your portfolio should you invest in Stocks (90%), Bonds (0%), Cash (0%), Real Estate (10%), and Commodities (0%)? For an investor focused on Capital Appreciation, our current recommendation for each Asset Class is given. But that is just the first level of allocation. For that 90% we recommend in stocks, what percentage should be invested Domestically vs. Internationally? The global benchmark we measure our performance against, MSCI ACWI AC, has just over a 50% weighting in the U.S. BCA Research recommends underweighting U.S. stocks on relative valuation, despite acknowledging that the U.S. is doing far better economically than the rest of the world, with far fewer geopolitical risks. Is there a better approach than trying to weigh all the variables? An interesting study from Antonacci, some of whose work we have previously shared:*

# Momentum for Buy-and-Hold Investors

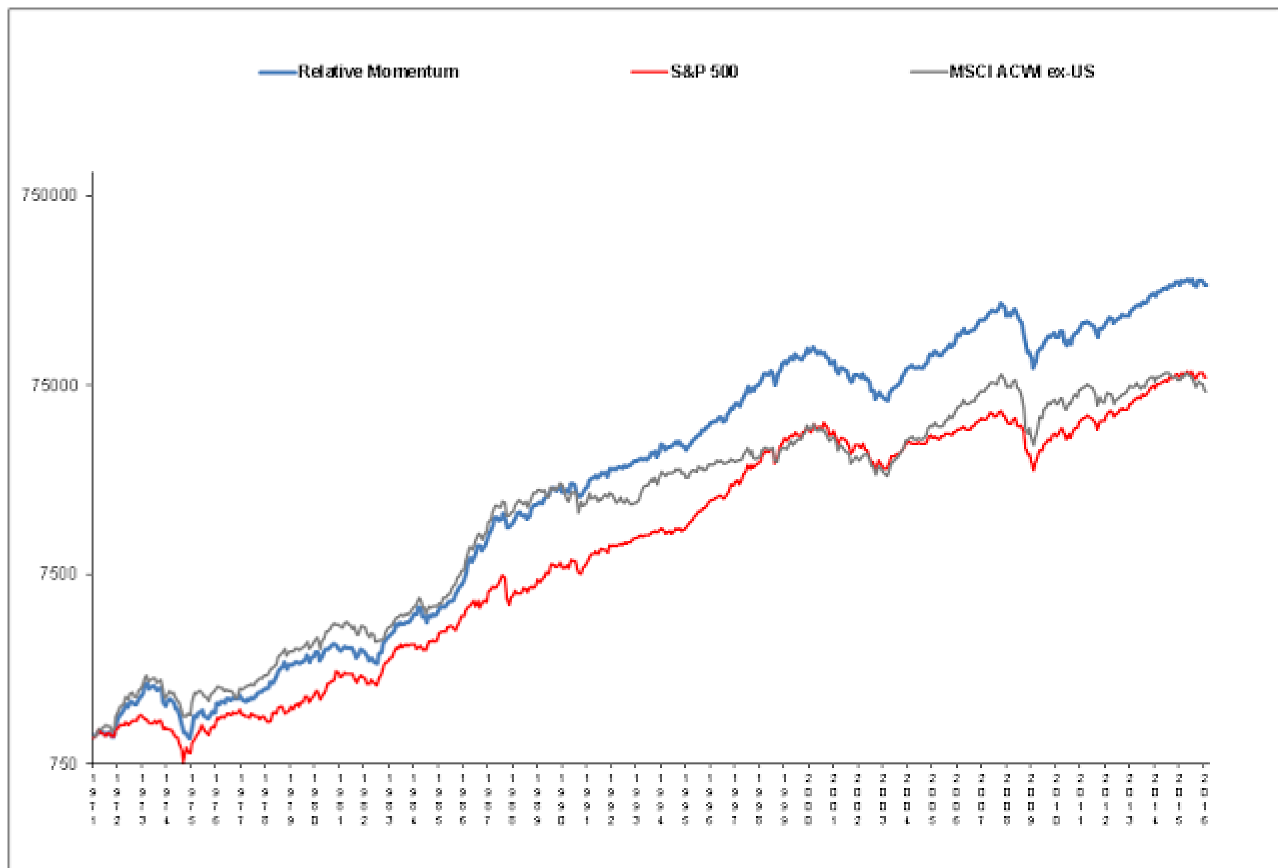
Posted by Gary Antonacci on March 25, 2016

There are many investors who prefer to remain invested in stocks at all times. Perhaps they think tactical allocation is some kind of voodoo. Maybe they have a strong psychological bias against occasional whipsaw losses and do not mind bear market drawdowns. Maybe they have institutional constraints requiring them to always be in stocks. Whatever the reason for their buy-and-hold orientation, let us see how they or anyone can use relative momentum (half of dual momentum) to get improved investment results.

Our core holding will be the S&P 500. To use relative momentum, we need at least two assets. We will use the MSCI All Country World Index ex-US (ACWI ex-US) as our second one. Each month we will invest in whichever of these two has performed better over the preceding 12 months.
Here are the results from January 1971 through February 2016 for this simple momentum approach rebalanced monthly. Relative momentum allocates to the S&P 500 55% of the time and to the ACWI ex-US 45% of the time. Transaction costs are negligible, since there is on average less than one trade per year.

| | Momentum | S&P 500 | ACWI ex-US | EqualWeight |
|---|---|---|---|---|
| Annual Return | 14.5 | 11.5 | 11.5 | 11.5 |
| Standard Deviation | 16.1 | 15.2 | 17.3 | 14.8 |
| Sharpe Ratio | 0.51 | 0.36 | 0.32 | 0.37 |
| Worst Drawdown | -54.6 | -51.0 | -57.4 | - 54.2 |

Using relative momentum, there is almost a 300 annual basis point increase in return compared to holding each asset or a blend of both assets!  Please look closely at the following performance chart to see how these increased profits come about.




**How We Earn Momentum Profits**

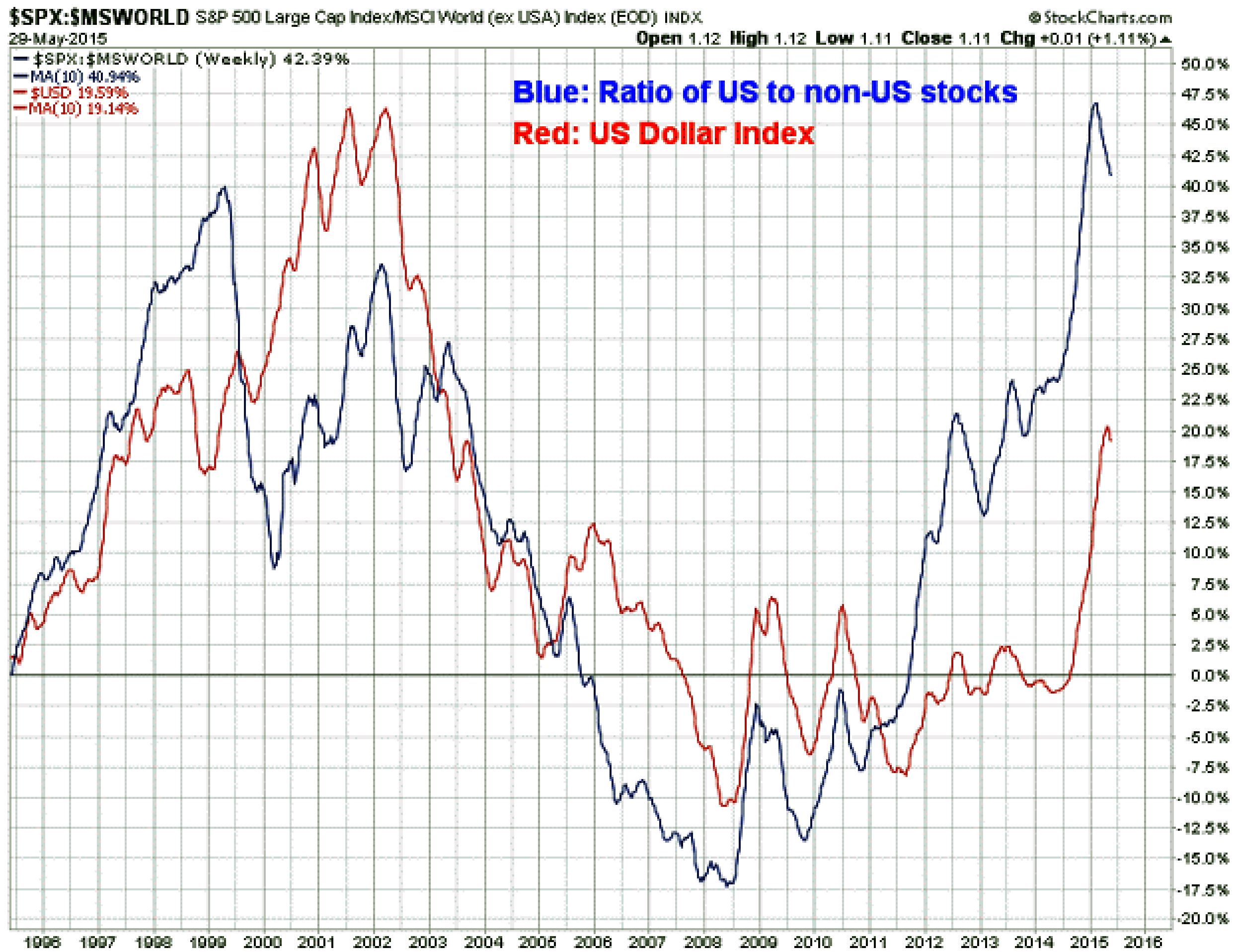
From 1975 through 1990, ACWI ex-US outperformed the S&P 500. Relative momentum invested in the ACWI ex-US then similarly outperformed. The S&P 500 did better than ACWI ex-US from 1990 through 2000. Relative momentum switched over to the S&P then and so also outperformed the ACWI ex-US. Both indices moved together until 2003 when ACWI ex-US outperformed the S&P 500. Momentum switched back to the ACWI ex-US and also beat the S&P 500. In 2009, the S&P 500 took the lead again ,and momentum once again moved higher with the S&P 500. It is as if each time a faster train comes along, relative momentum hops on board to win the investment race. ...

**Why Global Diversification Works**

The only concern I have heard about this strategy is that the world is now more globalized. There may no longer be as much to gain from geographic diversification. It is true that many large corporations derive a significant amount of their revenue from international operations. But corporate profits have little to do with the difference in return between U.S. and non-U.S. stocks. As the following chart shows, the relative performance of these markets depends largely on the strength or weakness of the U.S. dollar.

When the U.S. dollar is strong, U.S. stocks tend to outperform non-U.S. stocks. Non-U.S. stocks outperform when the U.S. dollar is weak. Our simple relative momentum strategy takes advantage of global macro-economic trends. Just as it does not make sense to be simultaneously long and short the U.S. dollar, so it not the best idea to be long U.S and non-U.S. stocks at the same time. It would be better to own U.S. stocks when the U.S. dollar is strong, and to own non-U.S. stocks when the U.S. dollar is weak. Relative momentum

automatically puts us on the right side of this macro-economic trend. There is no need to pay for global macro management.




**Two Types of Diversification**

There are two types of diversification in the world of investing. The usual method of vertical diversification stacks one asset up on top of others. It owns them all at the same time, which means some will underperform and create a drag on performance.

Momentum uses horizontal (or temporal) diversification that invests only in the strongest asset(s). As we saw in the chart above, this translates into higher returns as we move forward in time and rotate our exposure to the strongest asset. Momentum thus depends on persistence in performance. Momentum improves the performance of nearly every asset class from the year 1800 to the present [1].

The question then is should we use momentum in a macro manner as shown above, or apply it to individual stocks as done by most momentum and multi-factor funds? Multi-factor approaches are now becoming especially popular. (See our blog post, “Multi-Factor Investing.”)

**Macro Momentum versus Stock Momentum + Value**

Let us compare our macro momentum strategy to a multi-factor approach with individual stocks. We will use the two most popular factors: value and momentum. Value and momentum represent the two strongest anomalies. Others have also argued that they complement each other and perform well together.

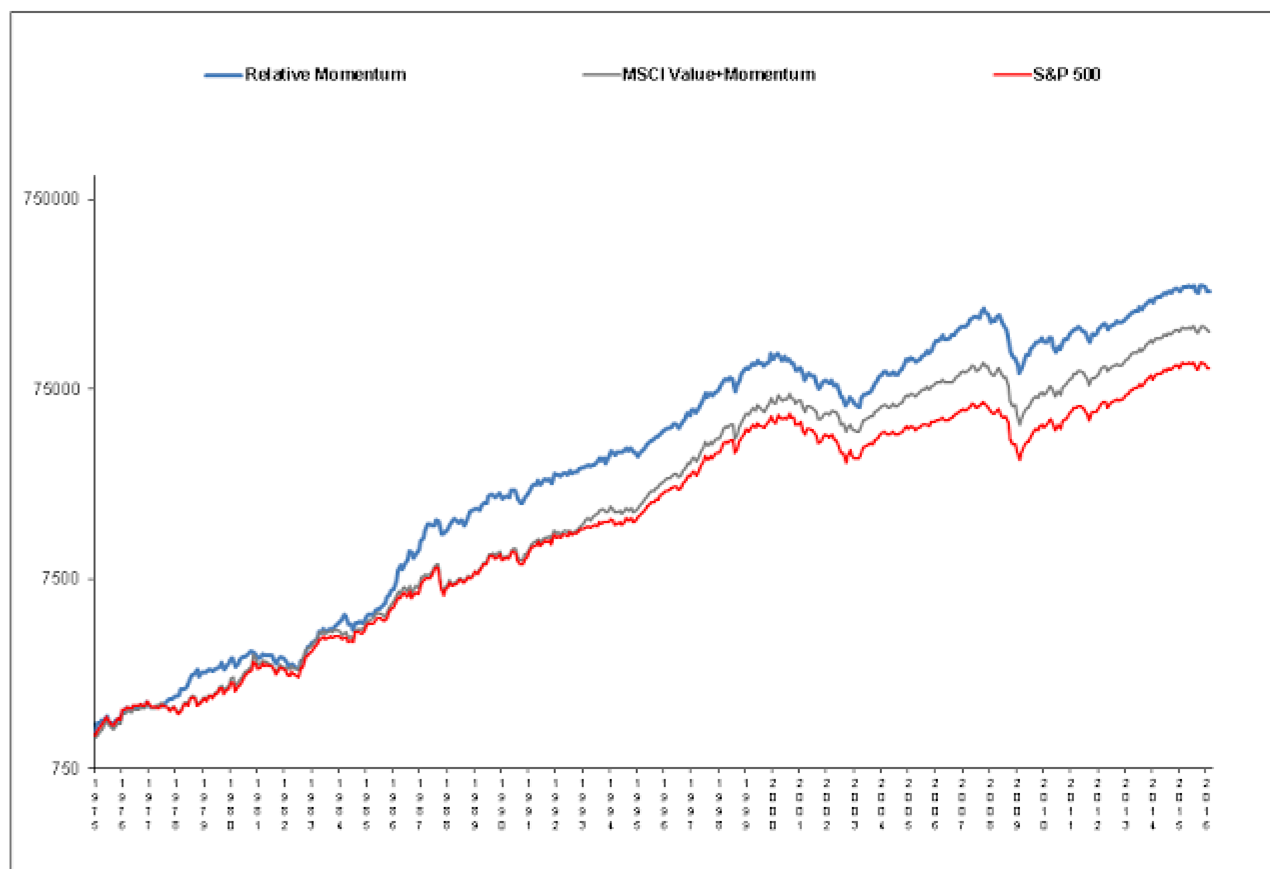
For value, we use the MSCI USA Value Index that selects the top half of large and mid-cap stocks on the basis of price-to-book, price-to-forward earnings, and dividend yield. This index currently holds 319 stocks and has a 17% annual turnover.

For momentum, we use the MSCI USA Momentum Index that selects the top 30% of large and mid-cap stocks based on a combination of 6 and 12-month momentum adjusted for volatility. This index currently holds 122 stocks and has an annual turnover of 137%.

Both MSCI indices rebalance semi-annually and began in January 1975. None of the indices accounts for transaction costs. Here is our macro momentum strategy compared to the 50/50 split between these two MSCI indices from January 1975 through February 2016.

| | **Momentum** | **MSCI 50/50** | **S&P 500** |
|---|---|---|---|
| Annual Return | 15.7 | 14.2 | 13.0 |
| Standard Deviation | 15.6 | 15.0 | 15.1 |
| Sharpe Ratio | 0.39 | 0.32 | 0.25 |
| Worst Drawdown | -54.6 | -52.5 | -51.0 |

Our macro momentum approach had the highest Sharpe ratio. It returned an average annual 150 basis points above the combined stock momentum plus value portfolio. It also had a strong 270 basis point annual return advantage over the S&P 500.



**Scalability and Trading Costs**

But that is not the whole story. We should also consider scalability issues and transaction costs. Holding fewer stocks and rebalancing more frequently leads to higher returns. The following table (*courtesy of AlphaArchitect)* shows compound annual growth rates (CAGRs) of value-weighted portfolios using a universe of the largest 500 U.S. stocks.

The ideal stock momentum portfolio is highly concentrated and rebalances monthly. Momentum fund managers know this, and nearly all of them limit the size of their momentum portfolios to 150 or fewer stocks. Ten of the twelve momentum funds also rebalance their portfolios at least quarterly.

The MSCI momentum index that rebalances semi-annually rather than quarterly has an annual turnover of 137%. Passive indices like the S&P 500 or the ACWI ex-U.S. have an annual turnover of only around 3%.

In 2006, there were no publicly available momentum funds. Today there are a dozen funds dedicated to U.S. stock momentum. There are also more than a dozen multi-factor funds using momentum (see "Multi-Factor Investing"). Every month our friends at AlphaArchitect post the top 100 momentum stocks. So momentum investing with individual stocks is no longer a neglected strategy.

In their paper, "Are Momentum Profits Robust to Trading Costs?" Korajczyk and Sadka (2004) show that momentum profits drop to zero once the amount of momentum assets reaches $2 to $5 billion. We are already well past that level. Imagine what will happen when hundreds of billions of dollars tries to trade the same small number of momentum stocks each quarter.

Related to scalability is the issue of transaction costs. In "The Illusory Nature of Momentum Profits," Lesmond, Schill, and Zhou (2002), use a conservative procedure to estimate annual stock momentum trading costs at

Table 5.5 Momentum Portfolio Returns: Varying Holding Period and Number of Firms in the Portfolio (1927 to 2014)

| | 50 Stock Portfolio | 100 Stock Portfolio | 150 Stock Portfolio | 200 Stock Portfolio | 250 Stock Portfolio | 300 Stock Portfolio | Universe (500 Firms) |
|---|---|---|---|---|---|---|---|
| 1-month hold | 17.02% | 14.40% | 13.55% | 12.69% | 12.07% | 11.50% | 9.77% |
| 2-month hold | 16.05% | 14.17% | 13.23% | 12.59% | 11.98% | 11.43% | 9.77% |
| 3-month hold | 15.15% | 13.81% | 12.93% | 12.25% | 11.74% | 11.23% | 9.77% |
| 4-month hold | 14.54% | 13.53% | 12.78% | 12.11% | 11.63% | 11.21% | 9.77% |
| 5-month hold | 14.37% | 13.31% | 12.62% | 12.04% | 11.57% | 11.17% | 9.77% |
| 6-month hold | 13.93% | 13.05% | 12.37% | 11.88% | 11.46% | 11.10% | 9.77% |
| 7-month hold | 13.68% | 12.80% | 12.11% | 11.66% | 11.33% | 10.99% | 9.77% |
| 8-month hold | 13.38% | 12.58% | 11.89% | 11.48% | 11.19% | 10.90% | 9.77% |
| 9-month hold | 12.94% | 12.24% | 11.60% | 11.23% | 11.01% | 10.77% | 9.77% |
| 10-month hold | 12.62% | 11.93% | 11.37% | 11.03% | 10.85% | 10.66% | 9.77% |
| 11-month hold | 12.21% | 11.61% | 11.12% | 10.81% | 10.68% | 10.52% | 9.77% |
| 12-month hold | 11.78% | 11.27% | 10.83% | 10.58% | 10.48% | 10.36% | 9.77% |

nearly 7%. This reduces stock momentum profits down to near zero. Momentum is not only a high turnover strategy, but momentum stocks are often more volatile and have higher bid ask spreads.

Frazzini, Israel, and Moskowitz (2012) of AQR show that momentum trading costs are manageable based on AQR's own 12 years of proprietary transaction data. But in the latest published research, Fisher, Shah, and Titman (2015) use observed bid-ask spreads and say, "*Our estimates of trading costs are generally much larger than those reported in Frazzini, Israel and Moskowitz (2012), and somewhat smaller than those described in Lesmond, Schill and Zhou (2004) and Korajczyk and Sadka (2004)*." Also, Jason Hsu PhD, co-founder of Research Affiliates, has a forthcoming report showing large-cap stock momentum returns with quarterly rebalancing being less than the large-cap market return due to trading costs.

Since our relative momentum strategy uses stock indices, scalability is not an issue. We can trade almost unlimited amounts of capital in broad-based U.S. and non-U.S. stock index funds with hardly any impact on trade executions. Transaction costs are also a moot point. There is less than one trade per year with this approach.

The simple momentum strategy presented above can help buy-and-hold investors meet their investment goals without the uncertainties associated with high transaction costs, scalability, or other similar factors. Even without adjustments for those factors, our simple momentum strategy showed an annual 150 basis point advantage over stock momentum combined with value, and a 270 basis point advantage over the S&P 500 index.

[1] See Geczy and Samonov (2015), "215 Years of Global Multi-Asset Momentum: 1800-2014 (Equities, Sectors, Currencies, Bonds, Commodities and Stocks)". They show that momentum is consistent and robust. It works with and across different asset classes. It works best, however, with stock indices.

*While these findings weren't surprising, in that we are and you, by now, should be aware that Momentum and Value are both Factors that can enhance returns over time, they did result in some obvious questions. First, if 12 month relative Momentum works for Domestic vs. International stocks, what about Domestic Value vs. International Value stocks? For the answer we turned to AlphaArchitect's Jack Vogel, Ph. D. His response,* "It looks like it worked in the past using Ken French's data (before any fees) when switching based on who had the best past 12-months momentum."

| Summary Statistics* | VAL 10 or IVAL 5 | VAL_10 | IVAL_5 | RF |
|---|---|---|---|---|
| CAGR | 12.59% | 11.48% | 8.83% | 2.61% |
| Standard Deviation | 18.16% | 20.75% | 18.16% | 0.62% |
| Downside Deviation (MAR=5%) | 14.11% | 15.81% | 13.11% | 0.53% |
| Sharpe Ratio | 0.61 | 0.51 | 0.42 | 0.00 |
| Sortino Ratio (MAR=5%) | 0.61 | 0.51 | 0.39 | -4.60 |
| Worst Drawdown | -61.28% | -64.47% | -58.98% | -0.02% |

*Now this was for a different time period, 1993-2015, when the top 10% of U.S. Value stocks (+11.48% per year) significantly outperformed International Value stocks (+8.83%). In this study, 12 month Relative Momentum gained an additional 2.435% a year over a 50/50 allocation of U.S. to International Value Stocks. As we have previously shared from Alpha Architects, screening stocks for EBIT/TEV, rather than the B/M that Ken French's data uses or a slew of other Valuation Metrics, results in higher returns, but the potential gain*

*from 12 month Relative Momentum between Domestic and International Value stocks was the question. As can be seen below, the relative performance of 2 of the largest Value ETFs (IWD for Domestic and EFV for International) indicates that outperformance tends to trend, resulting in few switches, as noted in Antonacci's study.*

*So if Value works, what about Momentum? Back to Jack we went,* "Here you go, again no fees taken off of the Ken French return streams (which you definitely need to in momentum portfolios so these need to be taken with a grain of salt), results from 1993-2015. ..."

| Summary Statistics* | Intl MOM or US MOM | MOM_10 | IMOM_5 | RF |
|---|---|---|---|---|
| CAGR | 13.70% | 13.48% | 11.09% | 2.61% |
| Standard Deviation | 20.00% | 21.33% | 17.48% | 0.62% |
| Downside Deviation (MAR=5%) | 15.23% | 15.25% | 13.07% | 0.53% |
| Sharpe Ratio | 0.62 | 0.58 | 0.55 | 0.00 |
| Sortino Ratio (MAR=5%) | 0.65 | 0.66 | 0.54 | -4.60 |
| Worst Drawdown | -53.12% | -51.25% | -52.86% | -0.02% |

*The 1.415% potential annual gain before transaction costs isn't sufficient.*

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| Last Price | Day Change |
|---|---|
| $42.99 | -1.12 \| -2.54% |

As of Tue 04/05/2016 4:00 PM EST |USD

Intraday Indicative Value
$43.13 -0.94 | -2.13%

As of Tue 04/05/2016 6:59 PM EST |USD

| NAV | Open Price | Day Range | 52-Week Range | 12-Mo. Yield | Total Assets | Expenses |
|---|---|---|---|---|---|---|
| 43.06 USD | 43.21 | 42.99-43.21 | 39.47-56.93 | 3.72% | 2.53 bil USD | 0.40% |

| Prem/Discount | Volume | Avg Vol. | SEC Yield% | Bid/Ask/Spread | Category |
|---|---|---|---|---|---|
| -0.32% | 193918 | 339,543 | 3.40 | 41.94/ 47.71/ 12.87% | Foreign Large Value |

Benchmark ▾ Event ▾ ARCX:IWD Simple Moving Avg Reset

08/01/2005 - 04/05/2016 Zoom: 1D 5D 1M 3M YTD 1Y 3Y 5Y 10Y Maximum Custom

ARCX:EFV:-8.01|-15.71% ARCX:IWD:+28.95|+42.14%

**Concluding thoughts**

Depending on their Risk Profile, our goal for clients focused on Capital Appreciation or Income is for 40% of the portfolio to be invested in IVE System picks and Insider Buying Themes, typically at a 2% allocation per stock for 20 positions. Moving out of those positions to reallocate the portfolio to International Funds would be counterproductive given the historically higher returns for IVE System stocks (as shown in our White Paper). However, while many portfolio managers rebalance, typically annually, we do take Trend into account for that purpose.