



Combine factors the right way

By Mark Stacey And Bill DeRoche

Multi-factor portfolios that are built starting at the individual stock level can help target desired exposures more precisely and lead to better outcomes.

A portfolio that is diversified across more than one factor can lead to better risk-adjusted returns over time, but not all methods for combining factors are equally beneficial to future performance.

While it is common to diversify holdings with a differentiated mix of single-factor strategies or investment funds, a more optimal multi-factor approach begins at the individual security level and considers how various attributes of one stock should be blended with those of others.

In doing so, investors are able to strike a better balance between targeted factor exposures and fine tuning these exposures more readily in response to changing market conditions.

A single factor vs multi-factor approach

The advantages of combining different factors has been well researched over the years. This includes the work of Clarke, de Silva and Thorley¹ whose studies have shown single factor portfolios to be more volatile and less consistent over time than portfolios that blend multiple factors which demonstrate an ability to generate excess relative returns over the long term.

This stems from the difficulty of timing (and rebalancing) factor performance due to their inherent cyclicity. Although factors are anticipated to outperform over the longer term, there will be periods when they move in or out of favour. In this regard, momentum, quality and low volatility have been fairly

consistent factor leaders over the past several years, while value and size have tended to lag. This is in contrast to the early 2000's when, following the tech wreck, factor returns were notably marked by strong value outperformance and big losses for momentum. Moreover, a winning factor one year can quickly become a loser the next. Take momentum, for example. In 2015, it gained more than quality, size and value, but in 2016, it trailed the performance of all three of these factors. Value, meanwhile, did just the opposite – underperforming in 2015, while outperforming in 2016.

Although factors are anticipated to outperform over the longer term, there will be periods when they move in or out of favour.

The diversification benefits of these particular style factors are also related to their unique correlations to one another, as well as the overall market. Historically, momentum and value, have proven to be negatively correlated to each other, but both have low correlations to quality. Size, meanwhile, tends to be positively correlated to the overall market, while low volatility exhibits the opposite relationship with it.

Building a multi-factor strategy at the individual stock level

To combine these factors and realize the full potential of their interplay, many investors will allocate their holdings to a number of single-factor strategies or funds. This might be as simple as buying a value fund and combining it with a momentum fund, or it could be more involved to include

More multi-factor, please

A new survey of institutional investors in both Canada and the U.S. shows a growing appetite for quantitative factor-based strategies as part of a long-term, strategic allocation.

74%
of respondents

who have exposure to factor-based strategies said they prefer a strategic/ long term approach over a tactical or timing approach to factor allocation.

34%
of those polled

said they want to increase exposure to actively managed multifactor strategies.

14%
wanted to

beef up their emphasis towards an actively managed single-factor strategies.

The survey referenced was conducted by the Gandalf Group and was commissioned by AGF Investments Inc. Findings are based on telephone surveys with 88 institutional investors in the U.S. & Canada that took place in two waves: between March 26 and May 7, 2018; and June 13 and July 4, 2018.

¹Fundamentals of Efficient Factor Investing by Roger Clarke, Harinda de Silva, CFA, and Steven Thorley, CFA. Financial Analysts Journal, Volume 72 – Number 6; 2016 CFA Institute.

Trading places: Factor returns since 2008

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Size 42.05	Size 18.19	Volatility 8.04	Size 16.69	Value 32.66	Volatility 12.06	Volatility 5.82	Size 9.38	Momentum 32.59	Volatility -1.42
Value 41.87	Momentum 16.54	Momentum 4.79	Quality 15.44	Momentum 30.28	Quality 7.26	Momentum 4.54	Value 8.86	Size 23.92	Momentum -2.38
Quality 32.32	Quality 13.31	Quality -0.06	Value 15.01	Quality 26.56	Momentum 7.03	Quality 3.14	Volatility 8.18	Quality 23.83	Quality -6.70
Volatility 17.18	Volatility 12.76	Size -9.34	Momentum 14.79	Size 26.53	Value 4.56	Size -1.05	Quality 5.63	Value 22.88	Size -11.80
Momentum 14.76	Value 9.15	Value -11.05	Volatility 8.87	Volatility 19.41	Size 3.42	Value -2.73	Momentum 4.75	Volatility 18.04	Value -13.40

MSCI as of December 31st, 2018. MSCI index methodology resources available at www.msci.com. MSCI World Momentum Index denoted as Momentum; MSCI World Equal Weighted denoted as Size; MSCI World Enhanced Value Index denoted as Value; MSCI World Sector Neutral Quality Index denoted as Quality; MSCI World Minimum Volatility Index denoted as Volatility. Index returns are for illustrative purposes. Index performance returns do not reflect management fees, transaction costs or expenses. Source: Morningstar Direct as of December 31, 2018.

the purchase of several funds that each own stocks primarily defined by a particular factor.

This approach may provide some level of exposure to a predetermined set of desired factors however this may not be the case if the factors being combined have negative correlations to one another. Consider an investor who owns both value and momentum funds. They may actually find their intended factor exposures have been reduced or cancelled out.

A better multi-factor approach is to build a portfolio using quantitative analysis that starts at the individual security level.

There is also little recognition when combining single-factor strategies to the fact that individual stocks will generally provide exposure to more than just one factor so are therefore represented in multiple single-factor strategies.

This could result in an over-concentration to a particular security, sector or geography. A stock with value characteristics,

for instance, may also be a quality stock, or be characterized by its size thus resulting in exposure to this security across multiple single-factor strategies.

As well, these attributes are constantly changing over time. By not accounting for this, investors run the risk of being more exposed to one or more factors than intended and may potentially undermine the benefit of combining them in a portfolio in the first place, leading to significant unintended risks. A better multi-factor approach, therefore, is to build a portfolio using quantitative analysis that starts at the individual security level.

This provides the opportunity to select from a larger universe of stocks versus just a few single-factor portfolios and considers the combined outcome of blending individual stocks with differing attributes to ensure alignment with the desired factors while minimizing unintended exposures.

An important step in this process is the development of a forecasting model that ranks performance of each stock in a chosen universe from most attractive to least attractive on a multifactor scorecard.

Such a model can be customized to take into consideration the specific exposures being sought, incorporating various controls and constraints such as security, sector and geographic weights to target the intended sources and magnitude of risk in the portfolio.

Lastly the process needs to be implemented efficiently and constantly monitored and rebalanced as necessary to ensure the desired exposures are still being achieved regardless of the changing market environment. Building a multi-factor portfolio in this way requires a high level of expertise, resourcing and oversight, not commonly found in many of the inefficient approaches such as those that combine single factor strategies. Without proper implementation throughout the process, the expected outcomes can be reduced or even eliminated.

Done right, a multi-factor approach built from the stock level can help target desired factor exposures with far more precision, leading to greater accuracy and flexibility and better outcomes for investors.



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Mark joined Highstreet Asset Management Inc. (Highstreet) in 2011 and today leads the firm's investment management functions. He is also responsible for portfolio management of the Highstreet Canadian small cap and Canadian equity mandates. Mark has 14 years of investment experience applying quantitative and qualitative management techniques to the portfolio management process.

Prior to joining Highstreet, Mark was Vice-President, Equities at London Capital Management for six years where he managed a variety of core, value and growth-oriented Canadian and U.S. portfolios.

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Bill is co-founder of AGF Investments LLC, a Boston-based investor advisory firm founded in 2009 and subsidiary of AGF Management Limited. He is a leader of AGF's quantitative investment platform, known as AGFiQ. AGFiQ's team approach is grounded in the belief that investment outcomes can be improved by assessing and targeting the factors that drive market returns. Bill has long-tenured expertise employing quantitative factor-based strategies and alternative approaches to achieve a spectrum of investment objectives.

Previously, Bill was a Vice-President at State Street Global Advisors (SSgA), serving as head of the firm's U.S. Enhanced Equities team. His focus was on managing long-only and 130/30 U.S. strategies, as well as providing research on SSgA's stock-ranking models and portfolio construction techniques. Prior to joining SSgA in 2003, Bill was a Quantitative Analyst and Portfolio Manager at Putnam Investments. Bill has been working in the investment management field since 1995. Prior to 1995, Bill was a Naval Aviator flying the Grumman A-6 Intruder as a member of Attack Squadron Eighty-Five aboard the USS America (CV-66).

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* An investment professional with AGF Investments LLC (formerly FFCM LLC), a U.S.-registered investment advisor firm and affiliate of AGF Investments Inc.

For more information on the full lineup of AGFiQ ETFs, visit AGFiQ.com.

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