Single-Factor Portfolio Construction

*Featuring: **Abhishek Gupta**, Executive Director, Equity Solutions Research*

Jenna:

Factor based ETFs have gained significant use by advisors to help build better portfolios for their clients. Joining us today is Abhishek Gupta, Executive Director Equity Solutions Research at MSCI. He'll discuss how investors are targeting specific risk and return drivers factors to drive portfolios. Abhishek, what are factors and how have they become an integral part of the investment process for institutional investors?

Abhishek Gupta:

So, factors are key drivers of risk and return in equity portfolios and they form an important part of an institutional investors' global equity program. Typically investors will target these factors to enhance returns, or manage volatility, or target a higher level of [inaudible] in portfolios. We have seen investors add factors strategically to their existing allocations in order to gain exposure to long-term risk premium or to complement existing factors. But we've also seen investors implement tactical factor plays where they rotate in and out these factors depending upon their view of the macroeconomic environment, or factor evaluation, or perhaps factor clouding.

Jenna:

And in your latest research you share how investors make and front a range of portfolio design choices while constructing a single factor portfolio. How do these choices impact a portfolio.

Abhishek:

Research has revealed different steps in construction of non-optimized, single factor portfolios. So let's start with the first step which is the starting universe. So, should investors choose a starting universe of securities that target a fixed market top coverage or a fixed number of securities? We saw that a consistent market cap coverage approach, it better aligned with the evolution in the underlying stock universe. The second step is factor descriptors. So, should investors us single or multiple descriptors in order to target a factor? We found that an improved and more robust measure of a factor can be found by combining descriptors. The third step is security selection. So, should investors us a narrow or a broad subset of securities when building up their portfolios? We found that by narrowing the universe, it definitely helped in increasing factor exposure but that came at the cost of high concentration risk. And then the last step is security weighting. There are different ways investors could implement security weighting and there are pros and cons to each one of those. We found that some portfolio weighting schemes were less efficient because they resulted in high exposure to unintended factors and also lowered portfolio investability. With increased popularity in factor investing has come increased focus on transparency. How much of an incidental exposure do these factor portfolios have because many times that can result in unexpected portfolio performance. Now, in our research we are essentially trying to bring transparency on the impact that these design choices can have on portfolio behavior or performance.

Jenna:

Now Abhishek, let's get into the specifics of using multiple factor descriptors. How does using multiple factor descriptors influence portfolio construction?

Abhishek:

So, academic research has shown that different descriptors can be used to target a factor, but an improved and a more robust measure can be found by combining descriptors. We found that this is particularly true for value and quality factors because of their multi-dimensional nature. Different descriptors essentially provide a few perspectives and we also found many times that these descriptors can have local relation amongst each other, implying that each measure captures a different slice of the factor, and together they provide a more comprehensive definition. They also found that any single descriptor can have flaws and combining them can provide a potential hedge.

Jenna:

What are some of the most common weighting schemes and what are a few of the merits and limitations of applying these different weighting methods to factors?

Abhishek:

So, when securities have been selected based on factor exposures, an investor can weight them in different weights, such as weight them equally, or by in worth of security volatility, or their EBA factor exposures. Now, these approaches, they have historically resulted in significant exposure to unintended factors. For instance, inverse volatility weighting resulted in exposure to low volatility and low size factors, regardless of the fact that that was being targeted in portfolio construction. For investors who use single factor portfolios to take advantage of factor cyclicality, having exposure to unintended factors may not be desirable and can many times explain why portfolio behavior or performance may be counterintuitive. The alternative approach is to use factor scores as multipliers to the market cap weight in order to take the portfolio towards securities with high factor exposure.

Jenna:

Finally Abhishek, should the framework for the construction of factor portfolios be homogenous?

Abhishek:

The approach to having a broad and investable investment universe, reviewing multiple factor descriptors, selecting a subset of the universe and reevaluating these securities, these four steps may be commonly applied to the construction of many single factor portfolios. However, there are some other design concentrations that can be more nuanced and specific. So for instance, value and quality are slow moving signals whereas momentum is a very fast and a dynamic signal. So while semiannual rebalancing may be adequate for value and quality factor portfolios, it may not be sufficient for momentum. So, it's based on some of these nuances that one could consider taking slight deviations within this otherwise broadly homogeneous factor portfolio construction framework.

Jenna:

Well Abhishek, thank you so much for your time and your insights.

Abhishek:

Thanks Jenna, glad to be here.

Jenna:

And thank you for watching. That was Abhishek Gupta, Executive Director Equity Solutions Research at MSCI.

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