TRANSCRIPT

Single-Factor Portfolio Construction

*Featuring: **Abhishek Gupta**, Executive Director, MSCI Research*

Adam Bass:

This is MSCI perspectives. Your source for weekly research insights as investors respond to the COVID-19 pandemic. I'm your host Adam Bass. And today is July 30th, 2020. This week we talk a lot on this program about factors and the role they've played in driving performance. But what does it take to build a portfolio that aims to make the most of exposure to a single factor? Find out what the research says. We spoke with Abhishek Gupta executive director on the Index Solutions Research Team. Welcome to the program, Abhishek. We're really glad to have you here.

Abhishek Gupta:

Thank you. Glad to be here.

Adam Bass:

So before we jump in and start talking about constructing factor portfolios, I'd like to back up just a bit and have you talk about the role that factors play for investors. More around, what are some of the ways institutional investors specifically have put these types of portfolios to work?

Abhishek Gupta:

Sure. So factors play a very important part in an Institutional Investors Global Equity Program. Now investors exercise a vide array of choices in implementing factors. They could use single factor portfolios or multifactor portfolios to enhance their overall portfolio returns, or manage volatility, or target a higher level of yield in portfolios. Investors add factor portfolios strategically to their existing allocations to gain exposure to longterm risk premia, or to compliment their existing factor tails. So for instance, an investor who's already getting an exposure to the value factor from their active managers, they could consider complementing that with momentum exposure by adding a momentum factor portfolio. Investors could also use factors in a tactical play where they would rotate in and out of these factors to reflect their view of the macroeconomic environment or factor evaluation, or perhaps factor crowding.

Adam Bass:

And why is interest in factor investing increased so rapidly especially this year alone? Has it shown itself to be a resilience strategy during the crisis?

Abhishek Gupta:

I would say that the interest in factors has been rising for a long time now, but yes. In the context of the current economic environment particularly in relation to COVID-19, that interest has escalated further. What we've observed is that given how volatility has evolved during this period of crisis, managing factor exposures became far more critical than picking the right stocks. Just as in the past during the recent crisis, we have seen minimum volatility and quality factor strategies to be particularly resilient. The momentum factor has also done very well. Now with all this increasing popularity around factor portfolios has come increased focus on transparency. In the long only factor portfolio, there will always be incidental exposure to non-target factors. But do those exposures [inaudible 00:03:06] the target factor, or have they caused any unexpected influence on performance?

Adam Bass:

How so? What do you mean?

Abhishek Gupta:

So for instance, let's say an investor allocated to a low volatility strategy. If that portfolio had significant low size exposure, it may lower the efficacy of the portfolio in providing downside protection. That would result in questioning how the portfolio is behaving, or how it's performing.

Adam Bass:

And that leads us right to our focus for today about how factor portfolios can be constructed. Yeah, you've examined this from a number of different angles for each of the steps involved. Can you walk us through that?

Abhishek Gupta:

Sure. Our research has reviewed different steps in construction of simple non-optimized single factor portfolios. First, the starting universe of securities. Second, factor descriptors that should be used in order to target the factor. Third, security selection. And fourth, security weighting. Let's start with the first one which is the starting universe. Now should investors choose a starting universe of securities that target a fixed market cap coverage? Or a fixed number of securities? We saw that consistent market cap coverage approach for the investment universe, better match the evolution in the [inaudible 00:04:25] universe.

Abhishek Gupta:

The second step which is factor descriptives. Should investors use a single or multiple factor descriptors in order to target the factor? We found that a more improved and robust measure of a factor can be formed by combining descriptors. The third step in the construction process is security selection. Now should investors use a narrow or a broad subset of securities from the underlying universe? Narrowing the universe increased factor exposure for sure, but beyond a certain point it also resulted in higher concentration risks. And the last step is security weighting. So here we look at what are the different pros and cons of different portfolio weighting schemes? Some portfolio weighting schemes result in exposure to unintended factors and also lower invest ability.

Adam Bass:

Now a couple of those steps stand out to me while you're talking. Let's start with digging in a little bit more about descriptors. About using multiple descriptors versus just one. Did you find there was a right set to use?

Abhishek Gupta:

So academic research has shown that different descriptors can be used to target a factor, but an improved and more robust measure can be formed by combining descriptors. Let's take the example of the value factor. The MSCI enhanced value index combines three valuation descriptors. Book to price, forward earning surprise, and operating cash flow to enterprise value. The idea behind this blended choice is that it reflects three different perspectives. Book to price is an asset based measure. Forward earning surprise is an income statement measure, and operating cash flow to enterprise value, is a whole from based measure. Now each one of these descriptors historically had risk premia associated with them. But we also found that each one of these pairs had a different fundamental driver of return, and dessert it's place in the value factor definition as it seemed to capture a different slice of the value factor.

Abhishek Gupta:

We also found that any single descriptor can have its own flaws and combining them can provide a potential hedge. So for instance, book to price is backward looking in nature, and earnings yield is forward looking in nature. So by combining them you are essentially able to balance that out. The merit of combining descriptors go a little further. So imagine if you were doing security selection based on book-to-price standalone. That could result in inclusion of companies with poor earnings outlook which are really potential value traps. Likewise, if you were doing security selection based on earnings yield alone without paying any attention to book value, that could result in inclusion of companies with potentially inflated expectations.

Adam Bass:

So the other step you mentioned was weighting schemes. What did you learn in terms of advantages and disadvantages of the different options?

Abhishek Gupta:

Once the securities have been selected based on factor exposure, there are many different ways one could weight them. And investor could weight securities by either market capitalization or inverse of security volatility, or just simply weight them equally. None of these approaches use factor exposures in the weighting scheme. The alternative set of approach is to use factor exposure to inform security weighting such as, weighting securities by factor exposures directly, or using factor scores as multipliers to the market cap weight in order to tilt the portfolio towards securities with higher factor exposure.

Adam Bass:

And what were the results?

Abhishek Gupta:

We found that equal an inverse volatility weighting schemes can result in exposure to size, and volatility factors regardless of the factor that was being targeted in the portfolio construction.

Adam Bass:

Can you give us an example?

Abhishek Gupta:

For instance, in value or momentum portfolios, inverse volatility weighting could introduce low size and low volatility exposures. For investors who use single factor portfolios to take advantage of factor cyclicality, having exposure to unintended factors may not be desirable. And that can explain to some extent why portfolio behavior or performance can be counter intuitive. Now while factor score weighting provided the highest target factor exposure, they also picked up unintended factor exposures. And all of these weighting schemes be it equal weighting, inverse volatility weighting, or factor weighting. They've all resulted in lower invest ability. The factor tilt weighting scheme which as I mentioned, uses factor scores as a multiplier to the market can't weight. They seem to strike a balance at least historically with high target factor exposure, small or negligible non-target factor exposures given its alignment with the market cap rates. We also found that they had higher portfolio capacity and invest ability,

Adam Bass:

But definitely a very interesting subject. One final question before we go, Abhishek. So it's almost August, vacation time for a lot in the industry. Given all the restrictions in place, any summer plans?

Abhishek Gupta:

I think I would try and save the world this summer. And when I say that, what I mean is that applying to stick to my couch, watch TV, have popcorn and maintain social distancing. And that's how I'll save the world.

Adam Bass:

Sounds like a great plan. Thanks again for joining us, Abhishek. That's all for this week. Thanks to Abhishek and to all of you for joining us. Join us next week when we welcome back Andy Sparks and he'll bring us the latest on the role that bonds have played throughout the crisis. Subscribing to the podcast doesn't take long. And while you're at it, why not leave a comment, or share an episode with a friend or colleague. For more from MSCI, check out ESG now each Friday. Until next week I'm your host, Adam Bass. And this is MSCI perspectives. Stay safe everyone.

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