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IS ESG A FACTOR?

ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) CAN LOOK AND FEEL LIKE AN EQUITY FACTOR. WE TOOK A DEEPER LOOK TO FIND OUT.

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Systematic factors such as quality, value, momentum, volatility and size have established a historical track record of outperformance. We consider whether ESG can be part of this esteemed group.

At a high level, a factor is any characteristic of a stock — or any other group of assets — where we know exposure to that characteristic at the start of the analysis. Some of these characteristics have been demonstrated to explain the cross-section of risk and return and these can be thought of as systematic. In addition to the equity risk premium, this list includes size, value, momentum, quality, sector and country. Is ESG such a factor?

THE FACTOR CHALLENGE: HOW TO MEASURE IT

Importantly, there is a difference between a factor — which is strictly unobservable — and a characteristic which serves as a proxy for that factor. For example, we often speak of the value factor which is universally recognized as identifying cheap stocks. However, what measure do I use to define "cheap?" Do I use book-to-price? Do I use other measures such as cash flow or sales?

Each of these measures identifies some dimension of value, but will produce different empirical results. In exploring the original question posed — can ESG be a factor — it is helpful to keep the distinction between factor and factor proxy in mind. In other words, ESG, like value or quality, is strictly unobservable and the best we can hope for is to proxy it using a combination of metrics.

ESG SCORES: USEFUL FACTOR PROXIES

What makes ESG unique is the degree of disagreement regarding what should go into an ESG score and how those metrics should be weighted. Further, there are no simple ESG definitions, no book-to-price equivalent of ESG that can be applied universally.

We are further limited by lack of history and standardized data. To quantify ESG, we need comparable data across a wide universe of stocks so that we can rank companies consistently. The good news is that in addition to third party scoring systems, which we will discuss presently, efforts are underway at organizations such as the Sustainability Accounting Standards Board (SASB) to create standardized reporting, but even with standardized data metrics, subjective judgment will always be a part of ESG definitions.

There are several organizations that have ESG models whose output can be thought of as ESG factor proxies. For example, MSCI has their ESG Ratings, S&P Dow Jones has DJSI scores and FTSE Russell has their FTSE4GOOD scores, to name a few. Each of these has different universe coverage and history; MSCI has fairly broad coverage going back 10 years for example. Looking at these datasets, we can better understand the risk and return dynamics of ESG, definitional differences notwithstanding.

THE LINKS BETWEEN ESG AND FACTORS

Getting to the heart of the matter, can ESG be a factor? With some caveats, we feel that ESG can indeed be utilized as a factor in portfolio construction. We hypothesize that ESG is unlikely to be a distinct systematic factor in the same way as, say, value or quality, because of its relationship to other factors. In Exhibit 1, we look at the MSCI World index to look at selected style factor exposures of companies that have high ESG ratings (“Leaders”) and those that have low ESG ratings (“Laggards”). This snapshot shows that ESG is related to high profitability, large size, negative book-to-price (that is, expensive), higher beta, and low residual volatility. These exposures are somewhat steady through time.

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EXHIBIT 1:ESG FACTOR EXPOSURE ANALYSIS

This factor exposure snapshot of ESG leaders and laggards based on ESG scores in the MSCI World Index shows ESG is related to high profitability, large size, negative book-to-price, higher beta, and low residual volatility

ESG Group	Beta	Book-to-Price	Dividend Yield	Profitability	Residual Volatility	Size
Leaders	0.07	-0.17	0.14	0.12	-0.34	0.35
Laggards	-0.16	0.19	0.10	-0.19	0.01	0.18
Leaders minus Laggards	0.23	-0.36	0.05	0.31	-0.35	0.17

SOURCE: Northern Trust, MSCI, Barra GEMLT Risk Model. Leaders represent cap-weighted portfolios of companies with MSCI ESG ratings of AAA or AA and Laggards represent cap-weighted portfolios of companies with MSCI ESG ratings of CCC or B. As of December 31, 2017. For illustrative purposes only. It is not possible to invest directly in any index.

> *Using ESG ratings as a factor proxy is a powerful tool to measure exposures to risks and opportunities not picked up in traditional financial analysis.*

Using ESG ratings as a factor proxy is a powerful tool to measure exposures to risks and opportunities not picked up in traditional financial analysis. When building a quantitative, factor-based portfolio, we feel that these ESG ratings are best used when integrated with certain other financial factors. Specifically — as detailed in Exhibit 2— we find that ESG and quality make a particularly potent factor combination as each factor captures a different dimension of sustainability — non-financial and financial.

EXHIBIT 2: QUALITY AND ESG: A MORE HOLISTIC VIEW OF SUSTAINABILITY

Sustainable companies score higher than their peers in both quality and ESG dimensions, including:

Quality	ESG
High profitability	Climate change
Conservative balance sheet	Carbon emissions and stranded assets
Cash flow generation	Corporate governance
Solvency	Privacy and data security
Prudent capital expenditure programs	Diversity

SOURCE: Northern Trust Asset Management

MAYBE NOT A COMPENSATED FACTOR BUT . . .

The jury is still out on whether ESG is a compensated risk factor. However, most academic studies on the topic suggest that at worst the relationship between ESG and corporate financial performance is at least non-negative.[1] Regardless of whether ESG is a *compensated* risk factor, it is most certainly a risk factor. Take climate change risk as an example. For investors that take steps in their portfolios to mitigate this risk –for example by reducing the carbon footprint of their portfolio - there are no guarantees that these steps will pay off in terms of portfolio returns. However, the portfolio's exposure to climate change *risk* has generally been reduced regardless of the return implications.

Using ESG as a factor allows investors a great deal of flexibility to achieve both their investing and ESG goals — including return enhancement as well as risk reduction. Yet investors need to understand the various interactions of ESG with other financial factors to successfully construct a risk-controlled portfolio where ESG is a key element.

[1] Friede, Gunnar, Timo Busch, and Alexander Bassen. "ESG and financial performance: aggregated evidence from more than 2000 empirical studies." *Journal of Sustainable Finance & Investment* 5.4 (2015): 210-233.

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