Responsible investing: factor friend or foe?

Can environmental, social and governance concerns (ESG) fit within a factor-based portfolio? In this article, we tackle two issues: the inconsistency in methodologies for ESG scoring, and ways to integrate ESG considerations into factor portfolios.

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As growing numbers of investors seek to adopt the principles of responsible investing, the world of factor-based strategies is far from an exception: 55% of European asset owners surveyed in 2018 stated they were looking to integrate ESG considerations within their factor portfolios[1].

But no clear picture has emerged so far about how best to achieve this goal, despite extensive research over recent years (albeit relying predominantly on back-tested data).

Most likely, we are on a long journey until there is sufficient clarity on what this feature of portfolio construction will do from a risk-and-return perspective. Should the 'responsible' portion of portfolios be managed separately or is it more effective to integrate ESG considerations at the factor level?

ESG SCORES: HOW DIFFERENT CAN THEY REALLY BE?

"If we have data, let's look at data. If all we have are opinions, let's go with mine." – Jim Barksdale

There are an almost overwhelming number of ways to characterise responsible investment strategies. At Legal & General Investment Management (LGIM), we support the consensus view that responsible investing aims to incorporate ESG considerations, in order to better manage risk and generate sustainable, long-term returns.

There are also numerous ways to score companies on ESG metrics. It is easy to see how inconsistencies between providers' scores could be manifold. There are approximately 300 raw metric indicators used today (e.g. reserves intensity, board diversity, CEO pay, etc.), but when it comes to single-company scoring, often only a subset of raw metrics are used. If we assume this contains around 30 indicators that are common across providers, with another five selected on provider preferences, and that ESG themes and 'pillars' are created under the same weighting scheme, there are about 11.5 billion possible scoring combinations for a single company.

1. FTSE Russell report

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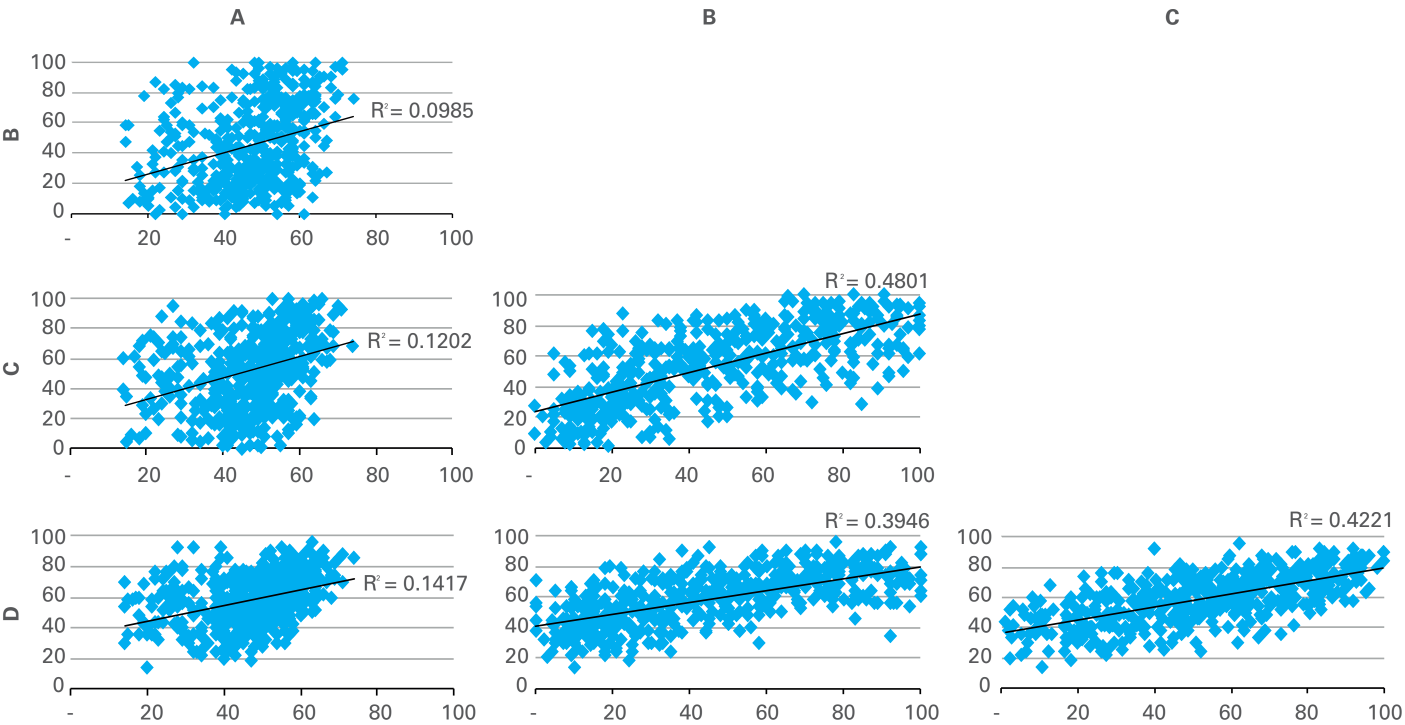
Correlations between different ESG providers' scores



Source: LGIM data.

Thankfully, the real picture is more unified than these numbers imply – but still disparate. The charts above show the correlation between ESG scores for around 500 of the largest listed companies in the US from four anonymised providers including LGIM (A,B,C and D). On the x-axis are the first provider's ESG scores, and on the y-axis are the second provider's score for the same stock. The 'line-of-best-fit' in black shows approximately what the relationship is between the scores. As all the lines have a positive slope, there is some agreement on which companies should score well or poorly. However, R^2, the metric which shows us how accurate the line is at approximating the relationship between scores, is fairly low for many of the charts. The lower R^2 is, the worse the approximation is, indicating that there is disagreement. Overall, this indicates significant inconsistency between providers' scores.

WHAT DOES THIS MEAN FOR INVESTORS?

#1: ESG scores are not necessarily bad because they are inconsistent

Rather than differing scores demonstrating providers' abilities to perform analyses, they show the different levels of prioritisation about ESG considerations. The differences in ESG scores can be attributed to providers' various ways of viewing responsible investing. This means investors can align their beliefs with a provider's. The score provider should be as transparent as possible about the methodology; and investors should spend some time understanding the impacts of certain provider decisions.

#2: Focus on objectives and raw metrics

What is the purpose of integrating ESG considerations into a portfolio? Asking this will help determine the suitability of any alternatively weighted portfolio. At LGIM, we look at the underlying metrics rather than just the final ESG score (e.g. carbon footprint reduction percentage), factors in scope (single versus multi); whether it is a regional or global portfolio, constrained by tracking error and the level of concentration, versus diversification.

#3: Understand the back-test, but don't rely on it

Creating a set of rules or a methodology can form the basis of a back-test, giving an idea of how a portfolio will perform given all possible comparators. For example, an ESG-integrated portfolio where a score heavily penalises the energy sector will likely perform well when oil prices decline rapidly. A portfolio with low volatility will likely perform well relative to a standard benchmark in risk-off environments. For ESG-integrated portfolios, data histories are typically not very long. It is hard to rely on a five to 10-year period of historical performance, unless the portfolio displays attributes with longer histories, like factors, more prominently.

#4: Factors are cyclical, ESG scores are not

It is important to consider which factors are more cyclical, and draw logical conclusions about how ESG considerations may overlap and move through time. For example, a misstep in early ESG integration and factor combination analysis was the conclusion that the value factor[2] was very negatively correlated to ESG scores. This conclusion was drawn during a period of significant oil price decline (2014 - 2017), when many energy companies scored poorly on responsible investing metrics because of high emissions intensity and significant reserves. As the oil price dropped, energy stocks were sold *en masse*, becoming a favourite in value indices, but scoring poorly on responsible investing metrics.

The stable risk factors tend to be quality and low volatility. Value, momentum, and size can move across industries and impact a portfolio's interaction effect with ESG considerations. So, one cannot easily draw conclusions about a given factor's absolute relationship to responsible investing. It is more useful to assess which factor bucket a given sector or stock sits in than the factors themselves, whose compositions change over time.

Having found a provider aligned to the investor's current ESG considerations, the next step is to integrate them into the factor portfolio.

PORTFOLIO CONSTRUCTION: OPTIONS FOR INTEGRATING ESG CONSIDERATIONS

"You can get in way more trouble with a good idea than a bad idea, because you forget that the good idea has limits" – Benjamin Graham

Option 1: Bottom up with ESG as another 'factor'

The bottom-up approach creates portfolios with strong factor exposures by assigning a multi-factor score to each security, which is then reconciled with the investment's ESG score. This ensures that there is less dilution of target exposures, which a top-down approach may risk. It generally relies on a market capitalisation error or tracking error constraints to minimise tracking error and concentration risk.

In a 'tilting' approach, every security is assessed on a set of characteristics that will form the basis of the 'tilt'. These characteristics will include both ESG and multiple factor scores depending on an investor's objectives. A relatively simplistic 'tilt' is executed by multiplying the individual characteristic scores by the market capitalisation weight. The result is an increased allocation to companies that score well on the ESG and chosen factor scores and a reduction in weight of those that do not.

A second approach seeks the optimal way to combine ESG scores with factors. Usually, a target objective is set. Providers aim to achieve this objective by using an optimisation model. This is typically achieved through a composite score which measures all the desired portfolio attributes (e.g. ESG scores and factor scores) where the company with the highest aggregate score across all attributes will receive the largest weight, subject to constraints.

A drawback to these approaches is the difficulty of disaggregating the final portfolio, i.e., of decomposing security weights based on individual factor exposures to get meaningful attribution. Also, as increasing numbers of factors are added to a bottom-up approach, the universe is narrowed down, increasing concentration, or sacrificing factor exposure. This is because it becomes increasingly difficult to find stocks that perform well on all of the chosen factors as well as the chosen ESG metrics. As a result, we believe some time should be spent on determining the relative weight, or importance, the ESG factor has with respect to the other factors considered.

Option 2: Exclude the bad, and then run the factor portfolio as normal

This option can be applied to a bottom-up or top-down factor portfolio construction process. The big difference here, from the methods outlined above, is that we are not giving any credit, or additional weight, to companies with strong ESG scores. Instead, the laggards are removed, set at a pre-determined threshold. An important benefit of this approach is in its simplicity. A fairly easy comparison can be made between pure factor and ESG-excluded portfolios.

2. Cheap stocks as defined by a metric like price-to-book value

An immediate concern with this approach is that it is difficult to engage with companies that have been excluded from an index in order to encourage them to improve their behaviour. However, the tilting or optimisation approach will eliminate a significant number of poorly rated companies, owing to their attempts to identify and allocate to factor ESG champions. The key problem to solve with this option is how to best identify the level of the exclusion. Should it be a fixed quantity or a percentage, by region or sector? Again, this will all depend on the portfolio's objectives and desired levels of ESG impact and factor exposure.

Option 3: Top down: tilt at the end or combine two portfolios

This method keeps ESG considerations and factor scores separate until the final stage of the portfolio construction process. A factor portfolio is created, then the factor weighting of each stock is adjusted according to the corresponding ESG score. The second option is to create an independent ESG-integrated portfolio as part of the overall investment and to combine this with the factor-level portfolio via two separate allocations.

Gaining attribution for the pure factor portfolio is possible in both, but extremely easy in the top-down combination of two portfolios. The latter approach has the additional benefit of being able to control the exposure to factors and ESG considerations independent of each other simply by using an allocation of capital. The downside of this approach is it likely results in the most dilution (i.e. has the highest cancellation effect) between the factors chosen, as the two portfolio segments are managed separately. This will result in inconsistent exposures over time as the factor portfolio rebalances will not consider whether or not they are allocating to strong or weak ESG-scoring companies – and vice versa.

A FAIR-WEATHER FRIEND?

Although the development of portfolios which integrate responsible investment considerations with factors remains in a nascent stage, we may never reach a point where ESG scores across providers are standardised or uniform. This reflects providers' differing commitments and prioritisation, although a degree of standardisation would be welcomed. Compounding this issue is the fact that ESG scores will have varying impact on a pure factor portfolio, as factors may move across sectors over time. Investors are faced with a number of choices: if embracing the drawbacks of competing investments is worth the simplicity (as in the case of managing a separate ESG-integrated portfolio); if excluding poor performers (and holding on to the purity of a factor construction) compensates the work required to establish what constitutes a 'laggard', or if the bottom-up approach is worth the potential concentration risk. If the current trends are any indication, we can expect to see a lot of all three.

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