

ESG features explain one bit of idiosyncratic price returns

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Summary of the Paper

Research Motivation

- Investors are more and more interested in the environmental, social and governance (ESG) performance of firms.
- The evidence on the relation between ESG features and corporate financial performance is mixed.
- ESG data present specific challenges:
 1. they are quite sparse before 2015
 2. they are usually updated yearly
 3. the way they are computed often changes as a function of time and may depend on the way companies disclose data
 4. human subjectivity may be involved to a large extent in the computation of the scores.

Contribution to the literature

- The authors propose a machine learning approach to investigate the use of ESG features to explain the sign of the idiosyncratic part of price returns.
- ESG data are not only non-stationary, but their reliability and quality increase over time. The authors propose to use K-fold company-wise cross-validation where 75% of companies are randomly assigned to the train and the remaining 25% ones to the validation set, rather than the usual strategy of a single data split into causal consecutive train, validation and test data sets.

- ESG features can marginally explain idiosyncratic price returns.
- The effect of ESG features on price returns depends on the firm sector, market capitalization and the specific feature studied.
 - The relationship between controversies and price return is the most robust one.
 - Most of the statistically significantly influential ESG scores weigh negatively on price returns of small or mid-size companies. Large-capitalization companies on the other hand have significantly advantageous ESG score types.

Comments

- I find the topic very interesting and I enjoyed reading the paper.
- Results are relevant, however I believe that more tests should be performed to assess their robustness.

- Why results are weaker with the Fama-French three factors model?
- Are ESG features associated with known risk factors such size, value, momentum, profitability and investment? If this is the case you may be capturing the effect of risk factors not included in the CAPM model. Hence, when you consider models such as the Fama-French three or five factors models or the Carhart factors model the importance of ESG features may reduce.
- Are ESG features capturing idiosyncratic or systematic risk? The definition of idiosyncratic returns is model-dependent. ESG performance may be a new risk factor. Firms with lower ESG performance can be more vulnerable to the introduction of new regulations, and natural events.

- Are your results robust to ESG ratings by different data providers? ESG ratings produced by different data providers are often not consistent (Friede, 2019; Avetisyan and Hockerts, 2017; Semenova and Hassel, 2015). Avramov et al. (2021) show that the ESG-alpha relation holds only among stocks with low ESG rating uncertainty.
- Berg et al. (2021) document widespread changes to the historical ESG ratings provided by Refinitiv ESG (formerly ASSSET4). Can you assess whether the company-wise 5-fold cross-validation is more robust to ESG rating updates than the standard temporal split?
- Since the time series for ESG features is quite short I believe it is worth replicating the analysis using the complete data for 2020 and 2021.

References

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Thank you!