



Over-investment or risk mitigation?

Topic of the month March 2018

The rising interest for models, which integrate environmental, social, and corporate governance (ESG) aspects into firm valuation and portfolio models, raises questions regarding the influence of ESG factors on the distribution of stock returns. Whereas the relation between ESG and stock returns has already been broadly discussed, this study examines the relationship of ESG scores and both idiosyncratic risk as well as tail risk for an international sample. The results show, that firms with high ESG scores generally exhibit lower idiosyncratic risk in the markets of Europe, Japan, and the United States. Moreover, ESG has a mitigating effect on crash risk in Europe and the United States. In contrast, firms from the Asia-Pacific region display ESG over-investment followed by a higher crash risk.

Financial analysts and economists have attached great importance to stock market movements and stock price changes connected to new market-wide, industry-wide, and firm-specific information. Idiosyncratic risk and measures for crash risk are applied in order to review the relationship between the appearance of firm-specific information and stock price reactions. In perfectly diversified portfolios, idiosyncratic risk is unimportant. Nevertheless, equity portfolios of private investors are under-diversified and consequently idiosyncratic risk needs to be considered. Therefore, this study analyzes the ESG-effect on idiosyncratic and tail risk for cross-sections of publicly traded firms from the four major developed markets: Asia-Pacific, Europe, Japan, and the United States.

High ESG scores are a possible indicator to please investors' claims for solving agency problems. Initiatives such as the Principles for Responsible Investments amount to more than \$59 trillion AUM worldwide and their signatories commit themselves to being active owners and to incorporating ESG issues into their ownership policies and practices. An important pillar of active ownership is shareholder engagement, which is a fast-growing trend of shareholders' monitoring with respect to ESG aspects. Therefore, one main hypothesis states that high ESG scores are a proxy for limiting managers' concealment of firm-specific information and thus increase the correlation of a firm's stock price with the stock market. In particular, strong ESG is an instrument employed to restrain managers' extraction of private benefits and to increase firm transparency. A discussion on whether lower opacity leads to higher idiosyncratic risk prevails. Nevertheless, a higher level of transparency driven by ESG results in more predictable cash flows as unexpected firm-specific information is improbable. Therefore, firms with high ESG scores are less prone to deviating from the market. Through implication, firms with low ESG are exposed to lax monitoring of stakeholders and therefore tend to be less predictable.

Along with the rise of ESG campaigns, several derogatory opinions and reluctance regarding the benefits of ESG have emerged. From an economic point of view, shareholders' expectations in managers primarily concern the maximization of long-term returns while the distribution of investment dollars to ESG projects is not efficient. In particular, since firms' financial resources are limited, costly ESG programs also compete with other critical marketing instruments such as advertising or research and development. Critics claim that ESG does not maximize the firm's long-term stock wealth (over-investment view).



In contrast to this over-investment view, recent literature reports upon a risk mitigation effect of ESG on credit risk. This study analyzes this risk mitigating effect by the influence of ESG on crash risk. In general, stock price crashes occur when accumulated negative firm-specific information suddenly becomes publicly available. If, for instance, investors' expectations of cash flows are higher than the actual cash flows itself, managers conceal the bad news to protect their jobs. When the accumulated negative information finally crosses a tipping point, managers cease trying to hide the information and all bad news is released at once, consequently resulting in a stock price crash. In an investor's portfolio which lacks a certain extent of diversification, a crashing stock destroys a sizeable proportion of wealth all at once. Since a sustainable business approach and monitoring by sustainable investors attenuate bad-news hoarding, a negative relationship between ESG and stock price crash risk is expected. The results of the study show a negative relationship between ESG and crash risk in the U.S. and the European sample. In Japan, virtually no relationship can be found. The Asia-Pacific sample displays a positive relationship.

In summary, measures of ESG credibly forecast both stock price synchronicity and crash risk. The results for the European and the U.S. sample support the risk mitigation view, i.e. high ESG scores are associated with a decrease in the risk of stock price crashes. Since ESG and crash risk are positively associated in Asia-Pacific, the findings support the over-investment hypothesis. This is consistent with the globalization forces-explanation for firms from Asia-Pacific adopting to western ESG scores.

The implications of these results are significant for several reasons: First, they add insights of the process through which information is disclosed to the marketplace. Several studies show that stock prices are more prone to large downward movements than to upward ones and that this asymmetry is not entirely due to exogenous stochastic process generating information. The findings of this study indicate that this asymmetry results, to a certain extent, from the way in which firms are managed with respect to ESG. High ESG mitigates managers' tendencies to hide negative information from investors until its accumulation reaches a tipping point, which suffices to result in a stock price crash in the U.S. and Europe. Second, portfolio and risk management applications can benefit from understanding firm-specific characteristics that can predict tail events. Skewness and crash risk are also important for option pricing. Smirk curves have characterized the implied volatility of individual stock options as well as index options, and they are widely considered to reflect the risk of future crashes. A detailed knowledge of the cross-sectional variation affecting factors in such tail risk is of particular importance to market participants and allows for sharper option pricing.

Access to the full study: <http://onlinelibrary.wiley.com/doi/10.1016/j.rfe.2017.10.001/abstract>



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Sebastian Utz is an Assistant Professor at the School of Finance of the University of St. Gallen. He holds a master's degree in mathematics from the University of Augsburg, he obtains his Ph.D. in business administration from the University of Regensburg, and he was a visiting research scholar at the Department of Banking and Finance at the Terry School of Business at the University of Georgia. His focus research areas are impact investing, sustainable finance, and multi-criteria decision making. His research has been published in international journals such as the Operations Research, the European Journal of Operational Research, and the Review of Financial Economics. Currently, he is working on projects regarding the measurability of the impact of sustainable investments and the reliability of current voluntary sustainability reporting standards. Since 2012, he is a member of the academic committee CRIC TANK of the society to support ethics and sustainability in investments.