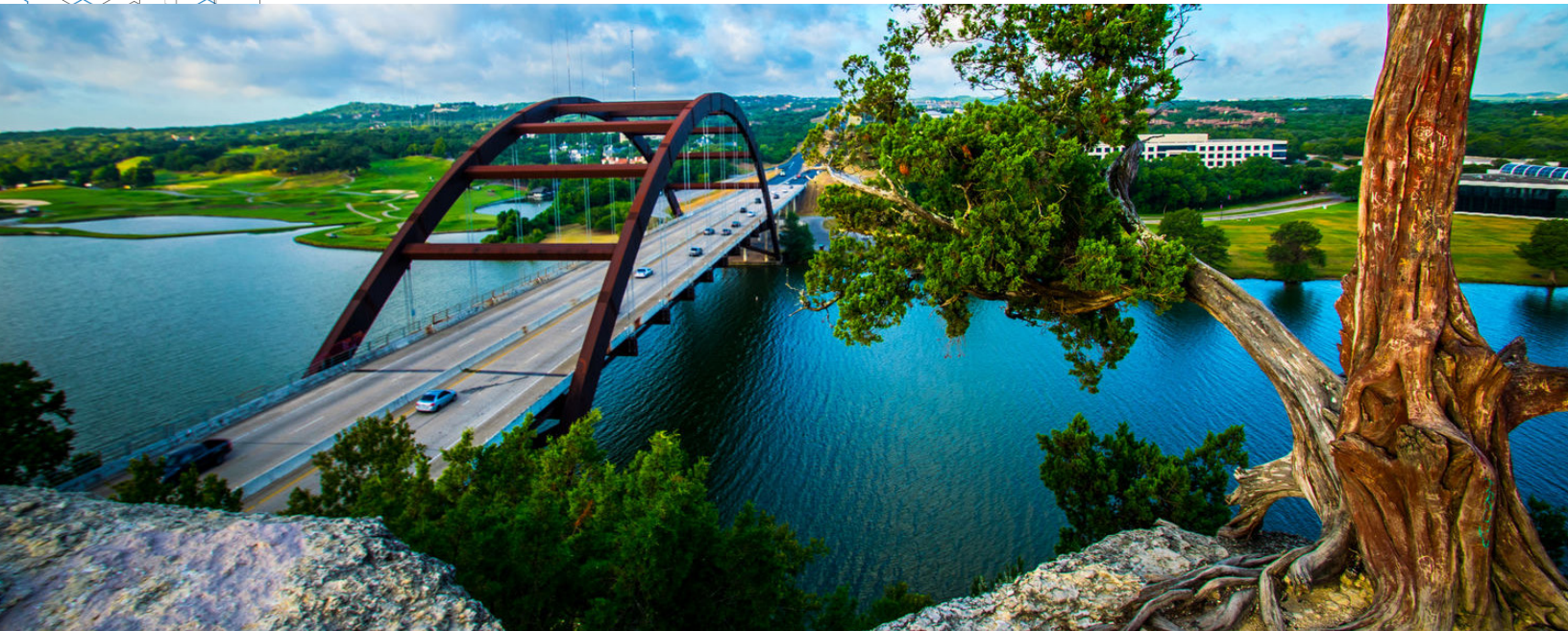




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Portfolio Expected Performance and ESG Characteristics

Janis Zvingelis, PhD, CFA

Brandon Thomas

Introduction

At \$2.77 trillion dollars¹ and counting, ESG strategies have become an important growth opportunity for the premier asset managers in the world as well as an important piece of the investment puzzle for large institutional investors. More telling, however, of the popularity of this approach is the fact that ESG investing is becoming increasingly popular with retail investors. The theory is that through ESG investing, investors can express their values through the securities they hold in their portfolio.

As the amount of assets invested in ESG strategies has grown and the awareness of these strategies has gone mainstream, the phrase “Do well while doing good” is often used to support investment in ESG strategies. The goal for these ESG investors is to invest in a strategy that has solid financial performance (“does well”) and at the same time makes a meaningful positive impact on, say, the environment (“does good”). Some go even further, believing that not only can an ESG portfolio “do good,” but it can also be expected to beat the market while doing so.

One of the drivers of the expectation that ESG strategies can achieve superior benchmark-relative performance is the fact that ESG investing is no longer limited to applying exclusionary screens to the investable universe. In the past, investors in SRI, or “socially responsible investments,” could apply their preferences only through excluding certain industries or securities – so-called “sin stocks” – from the universe of names in which they would invest. In terms of investment performance, limiting one’s investable universe generally tends to produce less-than-optimal results. Over the years, however, SRI has transitioned to ESG investing as a host of research firms providing ESG ratings on publically-traded companies has enabled investors to not only apply exclusionary screens, but also to overweight companies having relatively high ESG exposures. Many investment strategies applying such “ESG integration” approaches have performed well in recent years, leading some investors to believe there is an “ESG premium.”

As ESG investing has become more mainstream over the past few years, a growing body of research has been produced focusing on questions concerning the performance of ESG strategies. What type of performance should investors expect to achieve through their ESG portfolio? Can investors truly “do well by doing good”? Should ESG investors expect that their strategy is likely to outperform the benchmark?

In this whitepaper we review a list of recent research papers that focus specifically on the issue of expected performance of ESG strategies. The objective of this analysis is to clarify our understanding of the potential sources of ESG-related return by separating them into systematic and idiosyncratic categories of risk and return.

In what follows, we first review the academic underpinnings of the decomposition of an expected return into the systematic (risk-related) and idiosyncratic (manager alpha) related components. We then review the latest literature that examines the relationship between ESG investing and the systematic component of the expected return. Next, we highlight the latest research on so-called “ESG alpha” -- the idiosyncratic component of the expected return. Finally, we briefly mention two papers that focus on the relationship between ESG investing and risk.

¹ “Global Sustainable Fund Flows: Q1/2022 in Review,” Morningstar

Components of Expected Performance

In terms of understanding the composition of portfolio returns, Lo (2008) demonstrates how the performance of a portfolio can be broken down into three components: passive risk premia, security selection and risk factor timing.² The passive risk premia depend on the portfolio's exposures to various risk factors – such as the well-known Value, Momentum and Quality/Profitability factors – as well as the risk premia of those individual risk factors. In turn, the size of the risk premia of individual risk factors can change through time to reflect investors' changing attitude towards risk. Security selection and risk factor timing³ depend on the manager's skill, or "alpha."⁴

Thus, to the degree that ESG characteristics contribute (positively or negatively) to the expected performance of the portfolio, this performance must be classified in one of two ways: either as risk premia for the exposure to risk factors or through the manager's "alpha."⁵

We next review the latest literature on the following two topics: First, whether ESG investing induces the rise of systematic risk factors that are not subsumed by the existing factors, and, second, whether ESG investing produces manager "alpha."

ESG Investing and Systematic Risk Factors

The short answer, as concluded by the latest research, on whether ESG investing induces a systematic risk factor (let's call this the "ESG factor" for short) similar to the Value, Momentum and Quality/Profitability factors, which is not subsumed by these existing factors, is "no." In other words, the research indicates that, contrary to the results obtained with the traditional risk factors, investors should not expect to obtain a risk premium for systematically going long (overweighting) securities with high ESG ratings while shorting (underweighting) securities with low ESG ratings. However, there are (at least) three different routes that are used by researchers to arrive at this conclusion.

First, as noted by Ang (2013) and Hsu, Kalesnik, and Viswanathan (2015), risk factors should satisfy certain criteria. In particular, factors should have solid academic rationale for the existence of their risk premium; there should be extensive historical as well as cross-country evidence backing up the existence of this risk premium; there should be a commonly accepted definition of the factor, and slight perturbations to this definition should not impact the performance of the factor; and finally, the correlation across the set of all risk factors should be low. Ang (2020) and West and Polychronopoulos (2020) argue that the ESG factor does not satisfy most of these criteria, and therefore cannot be viewed as a risk-factor in a traditional academic sense.

Second, various studies (e.g., Ang (2020), Breedt et al (2018), Bruno et al (2021), Madhaven, Sobczyk and Ang (2021)) show that any potential benefit of an ESG factor is captured by the existing factors, usually the Quality/Profitability and Low Volatility/Low Beta factors. That is, once we account for contributions to the portfolio returns that come from the established factors, such as Size, Value, Momentum, Quality/Profitability, and Low Volatility, there is no statistical difference between the excess returns of ESG-sorted portfolios.

Finally, intuitive and cogent arguments posit that, if anything, systematic exposure to ESG should command a lower, not higher, return. For example, Asness (2017) develops an argument that can be summarized as follows: marginal shifts of investor funds away from non-ESG and towards ESG firms

² The author is making an assumption that returns are linear in risk factors, which is also implied by Arbitrage Pricing Theory (APT) of Ross (1976). This is the most widely used approach to risk factors in finance.

³ Note that passive exposures to risk factors do not mean constant exposures to risk factors. As outlined in Lo (2008), a passive portfolio is any portfolio, where the portfolio weights (and therefore the factor exposures), set at the beginning of day t , are uncorrelated with the return for that day. In other words, weights of the portfolio are not timing the return. This explains why risk factor timing is considered part of manager alpha.

⁴ Importantly, as we will discuss later on, this alpha can arise from the manager's focus on ESG considerations (see, for example, Madhaven, Sobczyk, and Ang (2021)).

⁵ This attribution of the return applies to any portfolio, so long as we subscribe to the notion that the expected return is driven by a linear factor model.

would result in lower/higher stock prices and, therefore, higher/lower expected returns, respectively.⁶ Since expected return can also be viewed as cost of capital, this change in the expected return is, in fact, a welcome development, because, presumably, the end-goal of impact investing is to reduce non-ESG projects. Also, Cornell (2020) argues that “if there is an ESG related risk factor, it also points toward lower expected returns for investments in highly rated ESG companies because those companies provide a hedge against ESG related risk.” In other words, if a company scores highly on ESG, this is a positive and welcome development in that it reduces its exposure to ESG risk. Consequently, if the investor is taking on lower (ESG) risk, the expected rewards should also be lower.

If, as argued above, tilting towards ESG is not rewarded by higher systematic expected return, can managers use ESG-related information to generate idiosyncratic excess return, i.e., “alpha,” either through stock selection or factor timing? As we will see next, the jury on this is still out.

ESG Investing as Alpha Source

Madhavan, Sobczyk and Ang (2021) partition the ESG scores of various managers into components that are related to existing factors (“factor ESG component”) and idiosyncratic components. They show that the factor ESG components are strongly related to fund alphas. Thus, their analysis suggests that the source of manager alphas can be ESG related signals. On the other hand, Bruno, Esakia, and Goltz (2021) note that ESG strategies generate no positive risk-adjusted performance. In other words, after adjusting for the common risk factors, the remaining excess return is not statistically different from zero. They further elaborate on the lack of alpha by noting that “...our findings suggest that rising [investor] attention to ESG has inflated returns over part of our sample period.”

While the research reviewed in the previous two sections suggests there might be only a very tenuous relationship between ESG ratings and returns, and one which may prove to be more robust in time, in the next section we review research that highlights a seemingly much more promising relationship between ESG ratings and risk.

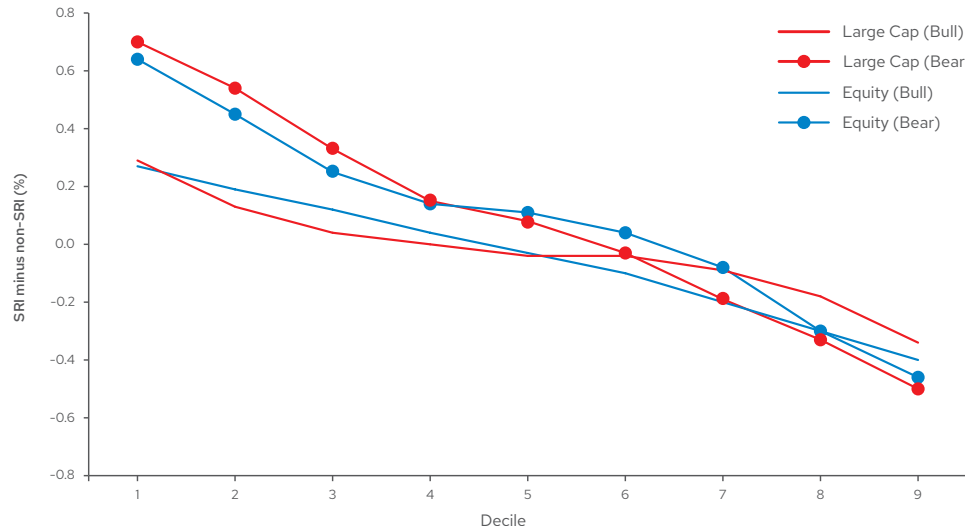
ESG Investing and Risk

Du, Thomas, and Zvingelis (2015) investigate the differences in return distributions for the funds categorized as SRI versus those that are not.⁷ By analyzing various quantiles of return distributions, they conclude that from a performance perspective investors are not harmed by investing in SRI strategies as opposed to unconstrained non-SRI investments. A perhaps more important insight is that they find that the return distributions of SRI funds are much narrower, and this effect is more pronounced during market downturns. This result applies both to the total return as well as risk-adjusted return, or alpha. This suggests much more favorable risk properties for the stocks in SRI funds, which is intuitive, given that unlike non-SRI stocks, SRI stocks, as a group, would be exposed to fewer controversies (e.g., environmental or social) that might be detrimental to the core business.

⁶ The higher expected return for the non-ESG firms is called the “sin premium.” While theoretically predicted by arguments similar to Asness (2017), a large volume of research exists to demonstrate empirically that non-ESG stocks do not seem to outperform ESG stocks, as both groups of stocks have had very comparable performance over time. It should also be pointed out that a similar argument could be applied to the Quality factor. In other words, one would expect that demand for more highly profitable stocks that are safer and less volatile would result in a lower expected return than stocks of lower quality, but a significant volume of literature over the past two decades shows that in the cross-section such quality stocks in fact generate a risk premium.

⁷ The field of sustainable investing can be separated into those strategies that exclude certain securities or even sectors and those that go a step further and emphasize positive security selection (see, for example, Hale 2016 and Bates (2020) for more details on this classification). The former approach is referred to as SRI (Socially Responsible Investing) and has been popularized in the investment industry over the last 25 years. The latter is variously referred to as ESG (Environment, Social, and Governance) investing or “sustainable investing” and has grown to become the primary approach to impact investing.

Cross-Sectional SRI/Non-SRI Differences



In a similar vein, Dunn, Fitzgibbons, and Pomorski (2018) demonstrate that there might be a relationship between a company's ESG risk score and risk characteristics. In particular, they show that there are significant differences between the volatility and betas for stocks with the best and worst ESG exposures.

Conclusions

So, what can be concluded about whether an investor can “do well while doing good”? It seems the answer depends on how one defines “doing well.” While the current research does not support a definition of “doing well” as being the expectation of achieving systematically superior benchmark-relative performance resulting from the portfolio’s ESG focus, it does conclude that ESG investors are certainly able to expect performance that does not suffer as a result of the portfolio’s ESG exposures. In addition, investors can potentially benefit from ESG investments’ more favorable risk characteristics. Under this definition, ESG investors can expect to “do well while doing good.”

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