Sustainable Investing Research Suggests No Performance Penalty

Executive Summary
Sustainable investing is rapidly becoming part of the global investment mainstream. Many large institutional asset owners have embraced it, as have, to varying degrees, most of the world’s largest asset managers. As of September 2016, 1,055 asset managers had signed the UN-backed Principles for Responsible Investment, committing themselves to incorporating sustainability issues into their investment processes.¹ Large numbers of investors, particularly two groups that are becoming more prominent—women and millennials—consistently indicate they are highly interested in sustainable investing.² It is estimated that these emerging investor groups could soon control upwards of $30 trillion in assets in the United States alone.³

For the high level of interest in sustainable investing among mainstream investors to translate into actual investments, financial intermediaries need to step in to help their clients incorporate sustainability into their portfolios. For advisors, planners, and retirement plan fiduciaries, one of the biggest obstacles to sustainable investing is the perception that it has a negative effect on investment performance.⁴

An impressive amount of academic research, however, suggests otherwise. Yet its sheer volume, variety, and lack of accessibility to mainstream investors means that the research’s single most significant finding—that sustainable investing does not have a negative effect on investment performance—is not as widely known as it should be.

This paper summarizes the findings of academic studies on sustainable investing, supplementing it in a couple of instances with performance data on sustainable and responsible funds and indexes. The key findings:

- Sustainable/responsible funds and indexes perform on par with comparable conventional funds and indexes, despite theory suggesting otherwise
- Companies with higher environmental, social, and governance scores and ratings can outperform comparable firms in both accounting terms and stock market terms
- A focus on company-level ESG factors rather than exclusionary screening can lead to better risk-adjusted performance at the portfolio level

From SRI to ESG
Before delving into the academic literature, it is important to reach a common understanding of several terms, as the evolution of the field over the past 20 years has resulted in a proliferation of current terms that reflect a field that today is more sophisticated and multidimensional. The field used to be called, simply, “socially responsible investing” or “SRI.” Traditional SRI was about aligning investments with the values of the SRI investor. To accomplish this, SRI portfolios excluded securities of certain firms because of their exposure to products or services that were deemed inconsistent with the values of the SRI investor.

While asset managers could easily implement a list of exclusions, they lacked a reliable basis for positive security selection, even though many SRI investors were also concerned about corporate social and environmental responsibility and, as active owners, often engaged companies around those issues. Demand arose for more information on how companies addressed the various environmental, social, and governance, or “ESG,” issues facing their businesses. To meet that demand, researchers began collecting and analyzing ESG data on companies, and this eventually became the basis for “ESG investing,” which is any investment process that incorporates ESG research. Companies that do well on ESG evaluations are often referred to as “sustainable”--as firms that, over the long run, are likely to contribute to a more sustainable environment and economy, while also sustaining themselves as businesses.

The terms “sustainable investing” and “ESG investing” are also often used to describe the overall field, along with the more traditional “responsible investing.” In this paper, we will use the term “sustainable/responsible,” or simply “S/R,” to refer to funds or indexes that use SRI exclusions or ESG-based security selection, which we will call “ESG inclusion,” or some combination of the two.

Do Sustainable/Responsible Funds Underperform?
Sustainable/responsible mutual funds have been around since at least 1971, when Pax World Fund became the first fund in the U.S. that based its portfolio on a series of exclusionary screens and described itself as a socially responsible fund. The emergence of more such funds in the mid-1990s raised concerns about whether they could perform as well as conventional funds given their use of exclusionary screening.

Modern Portfolio Theory suggests that limiting the investment universe, especially when it is done on a purely nonfinancial basis, forces an investor into a less-efficient portfolio that will have lower risk-adjusted performance than a more efficient portfolio selected from the broader universe. Investors, for example, wanting to keep traditional “sin stocks”—tobacco, alcohol, gambling—out of their portfolios are not making a claim about these being bad investments from a financial standpoint; they are saying these are bad investments from their own moral perspective. Because S/R funds have used SRI exclusions and most still do so today to some degree, the assumption of underperformance has persisted, despite considerable evidence to the contrary in the academic research that has accumulated over the years.
Academic Research Clearly Says No Performance Penalty

The weight of academic research on the performance of sustainable/responsible portfolios, mutual funds, and indexes suggests that there is no performance penalty associated with sustainable investing.

To be sure, the findings are varied, as researchers have studied different asset classes, regions, and time periods. Earlier studies often included only small numbers of S/R funds because only a few such funds existed at the time of the study. But when researchers have accumulated the evidence, as several have over the past decade, they come to the same conclusion.

A 2007 joint report authored by Mercer and the UNEP Finance Initiative summarized 20 academic studies, concluding:

“While the results vary depending on the factor being studied, the region and the sample period, the evidence suggests that there does not appear to be a performance penalty from taking ESG factors into account in the portfolio management process.”5

Two subsequent reports produced by the Swedish pension manager AP7 and RBC Global Asset Management updated the Mercer report by including more-recently published research, and they reached similar conclusions.6 Together, the three reports covered 51 studies published in peer-reviewed academic journals; 33 reached neutral or mixed conclusions, with twice as many reporting positive (12) than negative conclusions (6).

In a 2013 meta-analysis that included 25 primary studies of S/R fund performance, Rathner found that:

“Almost 75% of the performance comparisons (SRI with conventional funds) do not find any significant performance difference… and significant out- and underperformance is virtually found to the same degree.” 7

While these studies collectively covered global markets, Rathner found the most positive results in studies of U.S.-based sustainable/responsible funds.

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In a more extensive meta-analysis of 85 primary studies published in 2015, Revelli and Viviani also found no significant relationship between SRI and performance:

“We can assert that there is no significant relationship between SRI and performance. Thus, the adoption of ESG standards does not generate notable costs or benefits for an investor with a global perspective, challenging the theory of SRI inefficiency, which implies poorer performance due to a limited investment universe.”

Friede et al. published an even broader meta-analysis on sustainable investing research in 2015 that included an assessment of the literature on fund performance studies.

Exhibit 1 Sustainable/Responsible Fund Performance Study Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>15.5</td>
</tr>
<tr>
<td>Neutral</td>
<td>36.1</td>
</tr>
<tr>
<td>Negative</td>
<td>11</td>
</tr>
<tr>
<td>Mixed</td>
<td>37.4</td>
</tr>
</tbody>
</table>


Taking account of duplications, Friede et al. concluded that more than 70% of the studies reported mixed or neutral results.

**SRI Indexes Perform in Line With Conventional Indexes**

The performance of sustainable/responsible indexes has also been found to be generally in line with that of conventional indexes.\(^9\) The oldest such index, created in 1990 as an SRI-screened alternative to the S&P 500, the MSCI KLD 400 Index (originally called the Domini 400 Social Index) has, in fact, slightly outperformed the S&P 500 over time, as seen in Exhibit 2. During the 1990s, the MSCI KLD 400 Index outperformed the S&P 500 by a wide margin, largely because of its overweighting to growth and technology stocks during the dot-com boom.\(^10\) During the dot-com bust beginning in 2000, the MSCI KLD 400 Index underperformed through the prefinancial market peak in 2007. But in a turnaround from the 2000 to 2001 bear market, it lost less than the S&P 500 during the financial-crisis bear market, and has kept pace with the S&P 500 during the recovery years since then. After more than a quarter-century, the performance of the MSCI KLD 400 Index relative to the S&P 500 makes a strong case that S/R investments do not lead to inferior returns and, in fact, are capable of producing better returns than those of conventional investments.

**Exhibit 2** MSCI KLD 400 Index vs. S&P 500

<table>
<thead>
<tr>
<th>Period</th>
<th>MSCI KLD 400 %</th>
<th>S&amp;P 500 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Since inception</td>
<td>4/30/1990-9/30/2016</td>
<td>8.21</td>
</tr>
<tr>
<td>The 1990s</td>
<td>4/30/1990-12/31/1999</td>
<td>19.62</td>
</tr>
<tr>
<td>The 2000s</td>
<td>1/1/2000-12/31/2009</td>
<td>-2.76</td>
</tr>
<tr>
<td>The 2010s</td>
<td>1/1/2010-9/30/2016</td>
<td>9.62</td>
</tr>
<tr>
<td>Inception to 2007 peak</td>
<td>4/30/1990-9/30/2007</td>
<td>10.18</td>
</tr>
<tr>
<td>2007 peak to present</td>
<td>10/1/2007-9/30/2016</td>
<td>4.50</td>
</tr>
<tr>
<td>Mkt recovery to present</td>
<td>3/1/2009-9/30/2016</td>
<td>15.34</td>
</tr>
<tr>
<td>Trailing 10 years</td>
<td>10/1/2006-9/30/2016</td>
<td>5.23</td>
</tr>
</tbody>
</table>

Source: Morningstar Direct. Data as of 9/30/16.

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10 Statman, “Socially Responsible Indexes”; Kurtz and diBartolomeo, “Long-Term Performance.”
Morningstar Ratings of Sustainable/Responsible Funds Skew Positive

Morningstar Ratings of sustainable/responsible funds lend additional support to the conclusion that such funds perform on par with conventional funds. The Morningstar Rating (or the “star rating”) measures a fund’s risk-adjusted performance, including up to 10 years of a fund’s history, relative to its Morningstar Category. The Morningstar Rating is distributed normally within each category. Because S/R funds are not a category unto themselves but rather are assigned to a Morningstar Category based on their underlying portfolio characteristics (that is, style, size, country, duration, credit quality), they sit alongside conventional funds in their Morningstar Categories. If we observe that the overall star rating distribution of S/R funds is on par with that of the universe as a whole (that is, normally distributed), then we would have additional evidence that there is no performance penalty associated with sustainable funds.

Since the mid-1990s, Morningstar has classified such funds as “socially conscious.” We examined the Morningstar Rating of these funds going back to 2002, the year we began assigning the rating relative to category rather than asset class. We looked at the year-end star rating of every share class classified as “socially conscious” in our global fund database for every year from 2002 through September 2016. We include funds that have since been liquidated or merged away to avoid biasing the data in favor of surviving—and likely more successful—funds. That gives us more than 25,000 observations over a 16-year period.

Exhibit 3  Socially Conscious Funds vs. Fund Universe—Cumulative Morningstar Ratings, 2002-2016

<table>
<thead>
<tr>
<th></th>
<th>Socially Conscious Funds</th>
<th>Global Fund Universe</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>8.40%</td>
<td>10%</td>
</tr>
<tr>
<td>4</td>
<td>25.10%</td>
<td>22.50%</td>
</tr>
<tr>
<td>3</td>
<td>37.70%</td>
<td>35%</td>
</tr>
<tr>
<td>2</td>
<td>21.60%</td>
<td>22.50%</td>
</tr>
<tr>
<td>1</td>
<td>7.10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: Morningstar Direct. Data as of 9/30/16.

During that time span, we observe a distribution of Morningstar Ratings among socially conscious mutual funds that is indeed similar to that of the overall fund universe. The socially conscious funds cluster slightly more toward the middle (2, 3, and 4 stars) than does the overall universe. This is consistent with a recent Envestnet study that found S/R funds exhibited less-extreme performance than conventional funds.11 It is worth noting, also, the slight positive skew to the star rating distribution of socially conscious funds: more 5-star (8.4%) than 1-star funds (7.1%) and more 4-star (25.1%) than 2-star (21.6%) funds. Thus, our findings are consistent with the research literature: Socially conscious funds have similar risk-adjusted performance that, if anything, skews positive relative to conventional funds.

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SRI Exclusions vs. ESG Inclusions

While sustainable/responsible funds and indexes historically relied mainly on SRI exclusions, many of them have also employed ESG inclusion techniques for some time. Today, virtually all S/R funds use a combination of SRI exclusions and ESG inclusion, with more emphasis on the latter than ever before, owing to the quantity and quality of ESG data and research now available.

Researchers have begun trying to sort out the relative effects of SRI exclusions and ESG inclusions on S/R fund performance. The findings suggest a more robust explanation for why S/R funds perform on par with conventional funds. SRI exclusions may indeed be a drag on performance, as theory suggests, but ESG inclusion may have a positive effect. The two factors more or less offset each other, resulting in overall S/R performance about on par with conventional funds.

Adler and Kritzman argue there is a cost associated with SRI exclusions. Using Monte Carlo simulations, the cost of SRI exclusions is measured by higher returns of portfolios randomly selected from an unrestricted universe than those of portfolios randomly selected from a restricted universe. Their research caused much consternation because of the authors’ insistence on defining “socially responsible investing” solely in terms of SRI exclusions and in their assumption that all SRI exclusions are purely values-based. Some exclusions today, fossil fuels, for example, also have a financial value component.

Other studies focused on the effects of exclusionary screens, particularly sin stocks, also draw negative conclusions. Hong and Kacperczyk find that sin stocks have higher expected returns than otherwise comparable stocks and suggest the reason is they are neglected by norm-constrained investors. Trinks and Scholtens also found that investing in stocks often excluded by responsible investors in many cases results in additional risk-adjusted returns.

Studies focused on evaluating the impact of ESG inclusion on performance, on the other hand, have reported positive results. Focusing on ESG inclusion, De and Clayman found that portfolios constructed with securities from companies that perform well on ESG factors display characteristics that may improve risk-adjusted returns. Stocks with the strongest returns always had better ESG profiles, and there was a strong negative correlation between ESG ratings and stock volatility. Using this information, the authors constructed random portfolios by eliminating the stocks with the worst ESG profiles. They demonstrate that portfolios constructed randomly from the restricted universe had higher maximum and average returns than the unrestricted universe in 75% of cases. The risk-adjusted returns of the restricted universe showed similar average risk-adjusted returns, but the maximum was

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consistently higher. This implied that selecting securities from the restricted universe imposed no opportunity cost to investors and likely would lead to better results.16

In another recent study, Verheyden et. al. constructed portfolios using company ESG scores and assessed their performance from 2010 through 2015. They found their ESG-tilted portfolios outperformed their respective global and global developed-markets indexes by about 0.16% annualized. The ESG-tilted portfolio also exhibited lower risk, measured by volatility, drawdowns, and conditional value at risk.17

Statman and Glushkov studied the effects of both SRI exclusion and ESG inclusion. Analyzing stock returns from 1992 through 2007, the authors found that tilting a portfolio toward stocks with best-in-sector ESG characteristics provided an advantage over conventional portfolios, while a portfolio focused on shunning stocks associated with tobacco, alcohol, gambling, firearms, military, or nuclear power resulted in a disadvantage relative to conventional portfolios.18 In 2016, the same authors constructed a six-factor model using the standard market, size, style, and momentum factors plus an SRI exclusion factor and an ESG inclusion factor. Assessing fund performance from 1992 through 2012, they found that funds with a high ESG inclusion factor received an annualized and statistically significant increment to alpha of 0.55% relative to funds with a low ESG inclusion factor. On the other hand, funds with a high SRI exclusion factor received an annualized negative 0.36% increment to alpha relative to funds with a low SRI exclusion factor.19

The overall research on sustainable/responsible fund performance is clear. There is no performance penalty associated with investing in sustainable/responsible funds. Research does suggest, however, that SRI exclusions that are used to limit investments solely for values-based and nonmaterial reasons can be a drag on performance. Few S/R funds, however, limit themselves to the use of such screens. Most funds also use ESG inclusion—the evaluation of company sustainability performance based on ESG factors either through positive screening or integration of ESG considerations into the stock-selection process. A growing body of research suggests that ESG inclusion can lead to positive performance outcomes. Thus, with most existing S/R funds, the potentially negative effects from SRI exclusions can be offset by the potentially positive effects from using ESG inclusion to select stocks. This line of reasoning suggests that funds that eschew exclusionary screening altogether and rely instead solely on ESG factors may have the most potential to outperform.

Does Company Sustainability Affect Financial Performance?

That brings us to the research on company sustainability and its connection to financial performance. As the field of sustainable investing has evolved from an emphasis on SRI exclusions to a focus on ESG inclusion, research examining the relationship between corporate sustainability and financial performance has become especially relevant. This research, enhanced by the availability of more and higher-quality company-level ESG data, suggests that firms that effectively address the key ESG risks and opportunities they face in their businesses tend to be stronger financial performers over the long run.

A 2015 report from Arabesque Partners and Oxford University reviewed more than 200 studies on the relationship between corporate sustainability practices and financial performance. More than 80% of the studies they reviewed indicated a connection between better company sustainability practices and lower cost of capital, better operational performance, and better stock-price returns.20

Studies have shown that companies with superior overall sustainability performance have better credit ratings,21 that firms with environmental management systems have lower credit spreads, and that firms with significant environmental challenges have higher credit spreads.22 Another study demonstrated that companies that handle environmental issues better than their peers have significantly lower cost of equity.23

In research published in 2014, Eccles et al. found that “high sustainability” companies significantly outperformed “low sustainability” companies over the long term in both accounting and stock-price terms. The authors matched U.S. companies that had adopted key sustainability policies by 1993 with those in the same industry that had adopted almost no key sustainability policies, and tracked performance through 2010. Over that time, $1 invested in the stock of high sustainability firms grew to $22.6 on a value-weighted basis, compared with $15.4 for low sustainability firms. The annualized abnormal returns generated from a four-factor model controlling for market, size, style, and momentum were higher for the high sustainability firms by 4.8%. In accounting terms, the high sustainability firms outperformed the low sustainability firms as measured by growth in book value of equity and return on assets.24

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Company-level data typically includes many indicators of ESG performance, some of which are more relevant and material than others, depending on the sector or industry. Environmental indicators, for example, may be more material to companies in the energy, utility, and transportation industries, while social indicators like supply chain management, product safety, and fair marketing practices may be more material in the consumer products and healthcare industries. Corporate governance is generally considered material across all industries.

In their 2016 research, Khan et al. distinguish between material ESG issues and immaterial ESG issues. The authors use industry-specific material ESG factors developed by the Sustainable Accounting Standards Board and compare their impact on performance to other ESG factors that are deemed immaterial for a particular industry. Then, for a sample of 2,000 U.S. firms between 1993 and 2013, the authors found that companies that addressed material ESG issues better than their industry peers had higher growth in profit margins and higher risk-adjusted stock returns. Companies that addressed immaterial ESG issues, on the other hand, had average and, in some cases, inferior performance.25

In Friede et al.’s 2016 review of more than 2,000 company-focused primary studies on the relationship between company sustainability and financial performance, the authors found positive outcomes in 56.7% of primary studies and negative outcomes in only 5.8%, with the remainder being mixed or neutral outcomes.26

<table>
<thead>
<tr>
<th>%</th>
<th></th>
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<tbody>
<tr>
<td>Positive</td>
<td>56.7</td>
</tr>
<tr>
<td>Neutral</td>
<td>18.8</td>
</tr>
<tr>
<td>Negative</td>
<td>5.8</td>
</tr>
<tr>
<td>Mixed</td>
<td>18.7</td>
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Positive results were found when isolating the impact of environmental, social, and governance factors, as well as when various combinations of the three were tested. Positive outcomes were also found in primary studies evaluating the impact of company sustainability on stock, bond, and real estate performance and in studies across all regions globally.

Based on their exhaustive review, the authors concluded:

“[T]he orientation toward long-term responsible investing should be important for all kinds of rational investors in order to fulfill their fiduciary duties and may better align investors’ interests with the broader objectives of society. This requires a detailed and profound understanding of how to integrate ESG criteria into investment processes in order to harvest the full potential of value-enhancing ESG factors.”

Fulton et al. make a compelling case in favor of ESG evaluation in the selection of securities. Their conclusion suggests that “there are superior risk-adjusted returns for investors” and ESG factors are “a key issue for any CFO, not just the CEO and Sustainability Officer” because strong ESG performance is directly linked to an overall lower cost of capital for each company. Their work included the review of more than 100 academic studies, all of which concluded that high company-level ESG and corporate social responsibility ratings lead to lower cost of capital, and 89% of those studies indicated that companies with high ratings for ESG factors exhibit market-based outperformance.

**Conclusion**

The idea that sustainable investing is a recipe for underperformance is a myth. Like most myths, there is a kernel of truth to it—that exclusionary screening for nonfinancial reasons can limit portfolio performance. We found evidence in the research that exclusionary screening can have a negative effect. But the research also finds intriguing evidence of a positive ESG inclusion effect, which is bolstered by company-focused research suggesting that firm-level sustainability performance is associated with better financial outcomes.

This suggests an explanation for why the vast majority of studies find no significant performance differences between sustainable/responsible funds and conventional funds. Few S/R funds use exclusionary screening so extensively that it severely delimits the universe, nor do they use exclusionary screening exclusively. Instead, most S/R funds combine SRI exclusions and ESG inclusion. In real-world S/R portfolios, the possible negative effects of SRI exclusions appear to be offset by the positive effects of ESG inclusion. As S/R funds focus more on the latter, their performance could improve. This may already be happening, as there is more evidence of S/R outperformance than underperformance in the research.

For investors interested in sustainable investing, the research implies they can receive competitive performance while also addressing their sustainability concerns. When investors incorporate sustainability, they provide more-sustainable companies greater access to capital, which reduces the cost of equity and supports higher stock prices. That, in turn, can encourage other companies to improve their sustainability performance.

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There remain challenges to S/R investing. The number of S/R funds remains small compared with the overall universe (1% to 2% globally), making it difficult to find funds to fill out a client’s portfolio. And even though S/R funds perform on par, if not a little better, than conventional funds, there is a range of manager skill and fund quality that advisors must still discern when selecting funds, just as they have to do when they are working with the much-larger conventional universe. But there is no reason, based on the academic research on performance, to steer clients away from making sustainability a part of their investments.
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