The performance of socially responsible investment

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Foreword

An efficient financial market requires that investors have access and take into account all relevant information. They also need to be able to act freely without any other considerations or limitations for mispricing not to occur.

For this reason there has long been skepticism among many traditional investors towards extra financial considerations and SRI strategies. If the information is relevant from a financial perspective, it will affect the investment decision. Otherwise, it should not. If the investment universe is restricted, for example by excluding controversial industries, specific factor risk is created and risk diversification in general deteriorates – things that investors want to avoid.

From a theoretical perspective, these concerns are legitimate. The question is what significance they have in practice.

To clarify this issue, AP7 has for the second time mapped out the overall position of academia on the matter. The results from AP7's studies are conclusive and in line with a vast number of other studies: there is no distinct correlation between responsibility and return. In other words, there is no empirical evidence that sustainable and responsible investments generally have a negative impact on risk-adjusted returns.

There are still undoubtedly individual examples of SRI strategies that damage risk diversification and returns, but in general the theoretical doubts find no support. Similarly, there may be individual investors who claim to show SRI-related excess returns, but there are no general correlations of that kind.

In short, all claims that SRI-strategies in general come with a penalty (or pay off) are mere speculation.

For AP7's part, the implication of the combined results is that the case regarding negative financial consequences of SRI strategies is closed for the foreseeable future. There are no financial reasons *not* to be a responsible investor! Thus, we should devote ourselves to the more interesting question: how can we best contribute to sustainable development?

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Introduction

The amount of capital that is being directed towards "sustainable" or "socially responsible" investment has grown steadily in recent years, and continues to rise on a worldwide basis. Issues such as climate change, bio-diversity, human rights, labor conditions, corruption, and board diversity are gaining increasing attention among financial market actors.

At the same time, opinions differ about whether the inclusion of an environmental, social and governance (ESG) perspective in fund management practices provides higher or lower financial returns. Financial portfolio theory would posit that non-financial restrictions hamper financial performance, as investment constraints would lower diversification, increase risk exposure and add additional cost. Proponents of ESG, however, tend to argue that ESG issues do have financial relevance, and that ESG considerations not only can decrease risk, but also drive financial value.

This disagreement makes it highly relevant to study performance results more closely, and specifically to investigate what academic researchers have found when they have compared historical results of funds and indexes that do and do not include an ESG perspective in their investment approach.

In 2011, AP7 launched a report that surveyed 21 academic studies that were published from 2008-2010, comparing socially responsible investment (SRI) with its conventional peers.[1] The review concluded that research results point in all directions. There is empirical support for neutral, positive and negative performance for socially responsible investment relative to conventional investment. This suggests that there is nothing inherent in social and environmental concerns that *automatically* generates a higher or lower return. Market conditions, screening methods, fund manager skills and other factors may also influence the results. Additionally, academic research results can be contingent on a number of factors, e.g., sample size, observation period and statistical method.

The purpose of the present report is to compile studies that compare the performance of SRI funds or indices with those of conventional funds or indices. This report includes 21 studies that were published in the three-year period (2011-2013) that follows upon the aforementioned AP7 report. When the two reports are taken together, we have a compilation of 42 academic papers published over a period of six years.

Terminology

In this report, we use the term *socially responsible investment* (SRI) to denote investment where, in addition to financial analysis, an environmental, social and/or governance perspective has been included. The reason that we have chosen SRI over other prevalent terms (such as ESG, short for Environment, Social and Governance; or SI, short for Sustainable Investment) is that the research papers that are included in the report most commonly use the term SRI.

[1] See for example ASrIA (2014), Eurosif (2014), US SIF (2014).

Previous overview studies

A number of research overview studies have been performed by industry as well as academic researchers in order to shed light on the performance question. The common thread is that, while all of the overviews show that individual studies come to conflicting results, most studies show no notable difference in performance between SRI and their relevant conventional benchmarks. This is referred to as "neutral" performance.

One such overview study included 75 empirical studies and 161 experiments conducted from 1972-2009. The authors found 40 papers reporting positive performance for SRI, 80 papers reporting neutral results, and 41 papers with negative performance results for SRI. The authors found that the length of the observation period significantly increased the probability of observing a neutral impact. For shorter observation periods, negative impact results were obtained. The authors found that if all coefficients were taken into account (significant or not), it seemed that studies with neutral impact had a better methodological quality than others. (Revelli & Viviani, 2013)

When a global meta-analysis[2] was performed, including 25 studies with 517 observations, the author found that almost 75% of the performance comparisons did not find any significant performance difference. 13% found a significant outperformance of SRI funds; 15% found a significant underperformance of SRI funds. The sample period in the 25 studies together lasted from 1981 to 2009. Half of the effects investigated funds in the United States. According to the study, the focus on US SRI funds increased the probability of a significant outperformance, and, conversely decreased the probability of a significant underperformance. An important observation from this study is that the consideration of *survivorship bias* in a study increased the probability of a significant outperformance of SRI funds relative to conventional funds (and, conversely, decreased the probability of a significant underperformance). Survivorship bias refers to the tendency to exclude mutual funds with poor performance from studies simply because they do not exist, as such funds are typically dropped by mutual fund companies. Survivorship bias can result in an overestimation of the past returns of mutual funds. This suggests that it is pertinent for performance studies to report on the treatment of survivorship bias in detail. (Rathner, 2013)

A predominantly neutral result was also found in a review that covered 191 papers, published in 1975-2009. 56% of the studies indicated that the financial performance of SRI was neutral compared to conventional investment, 23% showed that SRI outperformed conventional investment, and 20% showed that they underperformed. The authors found that most studies on SRI fund performance suffered from a survivorship bias. (Viviers & Eccles, 2012)

A number of overview reports commissioned by the SRI industry have also been published in recent years. Deutsche Bank surveyed more than 100 academic papers on sustainable investment. Of these, four were individual academic studies on the financial performance of SRI (published in 2005-2009). One showed positive performance results for SRI compared with conventional investment, two showed a neutral result and one showed mixed results. In addition, one literature review covering seven individual studies is included in Deutsche Bank's

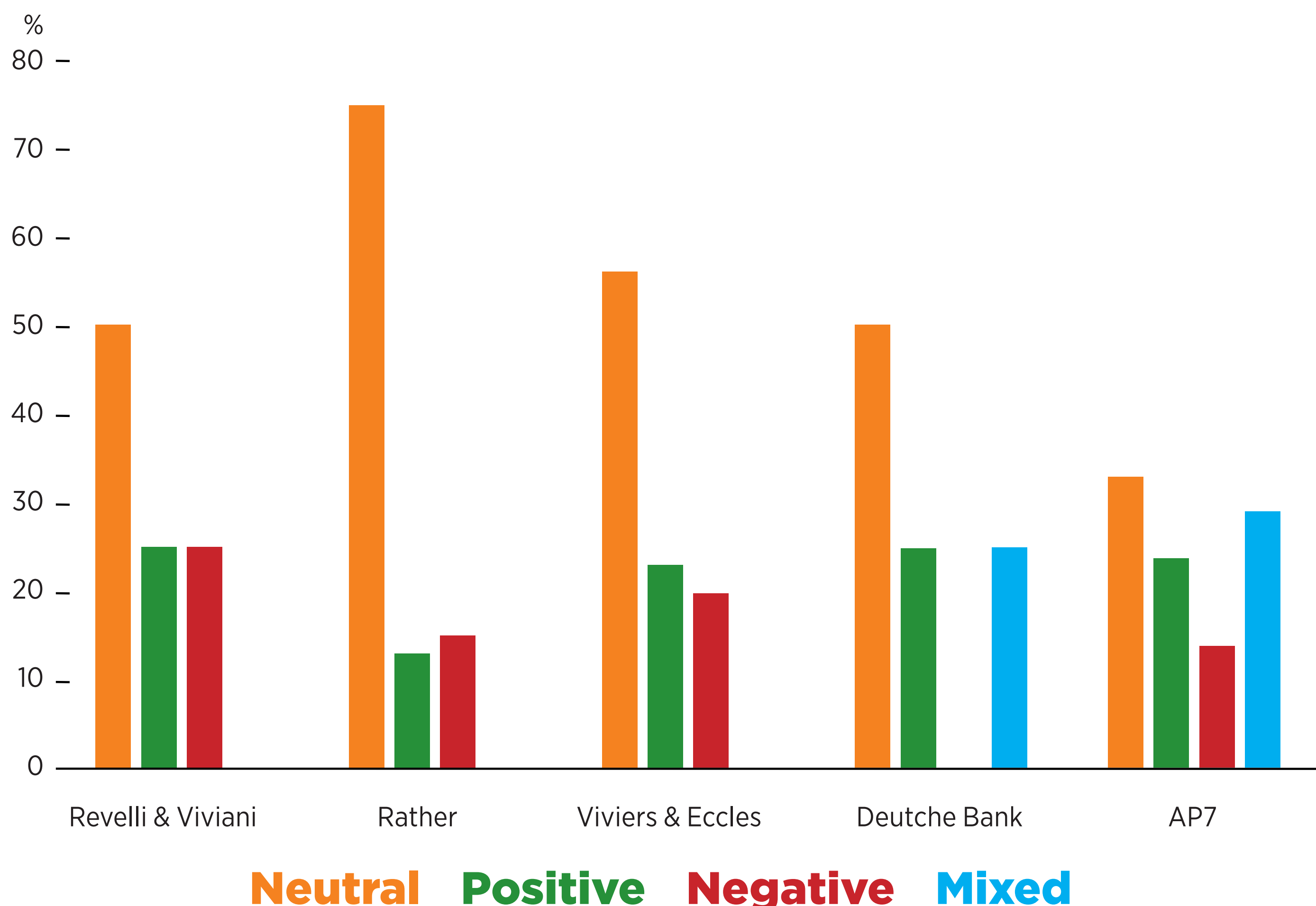
[2] Meta-analysis is a statistical technique for combining (rather than summarizing) the results from independent studies.

report. Out of the seven studies, four showed a positive result and three a neutral result for SRI vis-à-vis conventional investment. (Deutsche Bank, 2012)

Mercer published two studies in 2007 and 2009, respectively. Taken together, 36 studies are included in the two reports. While some of them do compare SRI with its conventional benchmark, the two reports also cover studies on, e.g., the relationship between corporate social performance and corporate financial performance, shareholder engagement, the provision of environmental information in financial research reports, and other variations on the broader theme of ESG and performance. While Mercer concludes that 20 out of 36 studies showed evidence of a positive relationship between ESG factors and financial performance, this cannot be fully related to the results of the present study, due to the different research scope. (Mercer and UNEP-FI, 2007; Mercer, 2009)

As previously mentioned, AP7 published a study in 2011, covering research that was published in the period from 2008-2010. Out of the 21 studies included in the report, seven found that the financial performance of SRI was neutral compared with its conventional peers. Five showed a positive result for SRI, three reported negative results for SRI, and six had mixed results. In the "mixed" category, a majority of studies found positive performance as part of their results, in combination with neutral or negative performance for other parts of their results. (AP7, 2011)

Figure 1: Results from preview overview studies on the performance of socially responsible investment.



Method for data selection

This study includes academic papers published in 2011-2013. Studies have been included if they investigate performance comparisons of conventional investments and investments that include environmental, social and/or governance aspects.[3]

SRI can be carried out in a number of different ways, including systematic avoidance of controversial sectors such as weapons, alcohol, tobacco and gambling, norms-based screening, positive screening and best-in-class. We have included studies that are "self-proclaimed" studies on SRI, regardless of the more specific methods for SRI employed by the funds under study. We have also included studies on faith-based investment, as these typically employ similar inclusion and exclusion screens as SRI.

In order to identify as many relevant articles as possible, we have performed searches in the research databases EBSCO, ProQuest, Business Source Premier and JSTOR. We do not claim to have an exhaustive list of papers, but by using several databases we hope to have identified the vast majority of relevant research papers in the time period.

Only papers published in scholarly, peer-reviewed[4] journals have been included.

Results

Out of the 21 reports covered in this review, seven concluded that SRI neither outperforms nor underperforms conventional investment. Five studies found that SRI outperformed their conventional peers, while two reported that SRI underperformed. Seven studies showed mixed results. The most prevalent themes within the mixed results are negative and neutral performance.

These results are distributed almost the same as for the 2011 report, which also covered 21 studies.

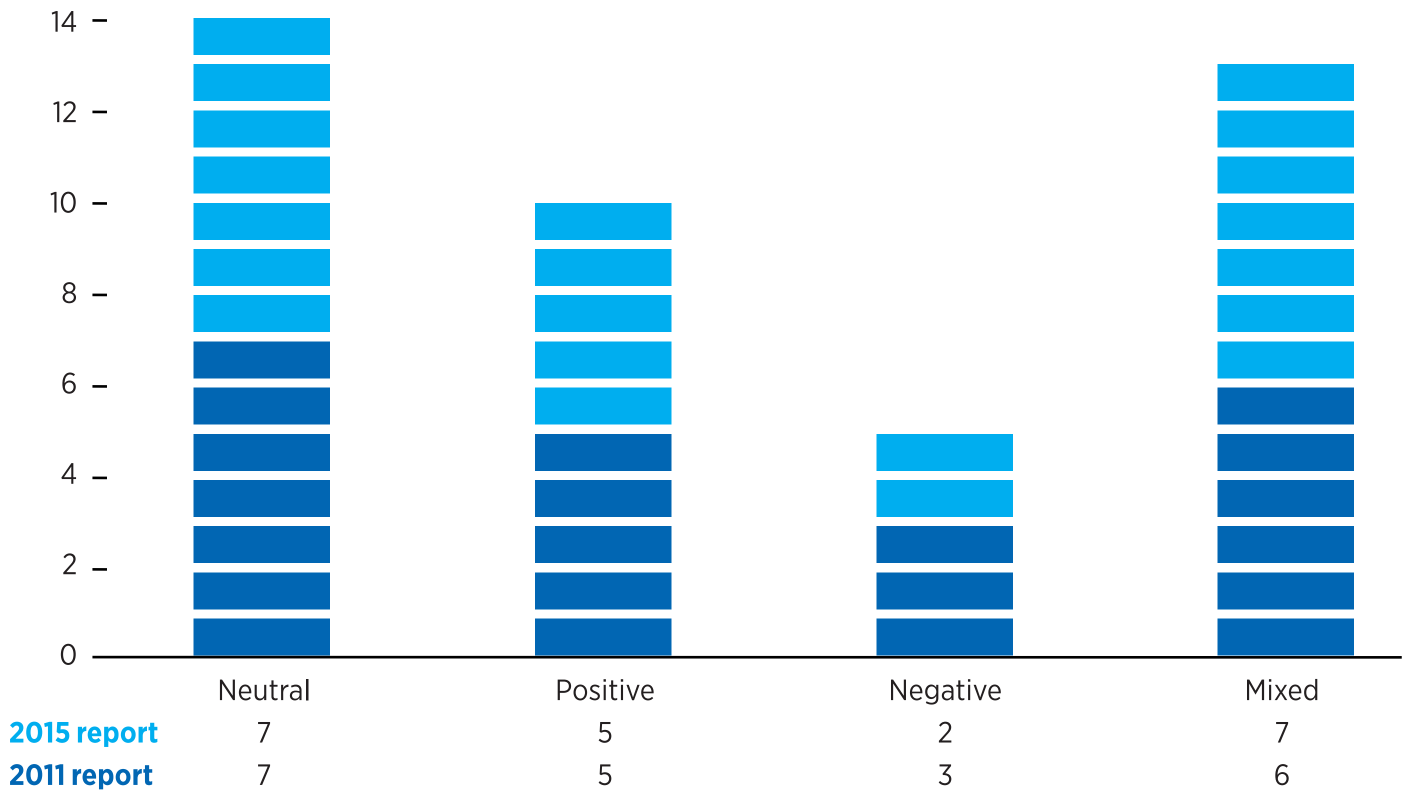
The results of the present study together with the AP7 study published in 2011 are summarized in Figure 2.

[3] Whereas the previous report by AP7 on this topic did not include studies that solely treated the governance aspect of ESG, this study did consider such studies. This difference in data inclusion is, however, of less practical significance, as none of the identified studies for the present study did have a governance-only focus.

[4] Peer-reviewed refers to a publication in which articles go through an official editorial process that involves review and approval by the author's peers (people who are experts in the same subject area).

Results

Figure 2: Distribution of papers



The result for each article is summarized in Tables 1-4.

Table 1: Neutral performance

NEUTRAL

Author	Market	Year	Data	Comment
Managi, Okimoto & Matsuda	US, UK, Japan	2001-2008; 2003-2008	DJSI, FTSE4Good, MS-SRI	Strong co-movements between SRI and conventional stock indexes in bear and bull markets.
Humphrey & Lee	Australia	1996-2008	27 SRI funds	The study also examines screening intensity: Neither the return nor the risk of a fund is impacted by the type of screen employed (positive or negative screen). There is some weak evidence that funds with more screens overall provide better risk-adjusted performance.
Ortas, Burritt & Moneva	Asia-Pacific	2003-2011	DJSI-AP index	DJSI-AP is less risky than its global benchmark DJ-G. The maximum difference appears in 2007-2011, which coincides with the appearance and consolidation of the global financial crisis.
Ortas, Moneva & Salvador	Brazil	2005-2010	Brazilian Corporate Sustainability Index (BCSI)	The BCSI does not result in a risk or return disadvantage in bullish market periods. The BCSI was slightly riskier than its Brazilian benchmark indices during market downturn periods.
Lai	US, EU	2001-2010	14 indexes: 6 ESG 6 Islamic 2 Christian	Most of the indexes' returns can be explained by the benchmark returns. Only a small fraction (9%) of the belief-based indexes' returns can be attributed to their individual beliefs (ESG/Islamic/Christian).
Pérez-Gladish, Rodríguez, M'zali, & Lang	US	2007	25 funds listed by US SIF	The study takes an efficiency perspective and applies data envelopment analysis (DEA).
BinMahfouz & Kabir Hassan	World	2005-2010	Dow Jones Global Index, DJSI World, DJWI Islamic Market, DJSI Islamic Market	There is no statistically significant difference between the performance of Islamic indexes compared to conventional or sustainability indices.

Table 2: Positive performance

POSITIVE				
Author	**Market**	**Year**	**Data**	**Comment**
Ito, Managi & Matsuda	US, EU, Japan	2000-2009	131 green mutual funds	SRI funds outperformed conventional funds in the EU and the US. Environmental funds do not perform as well as SRI, but perform in manners equal or superior to conventional funds. The poor performance of green funds can be attributed to lower returns and not to higher risk.
Rubio, Hassan & Merdad	Saudi Arabia	2003-2010	95 Islamic mutual funds	The study takes an efficiency perspective and applies data envelopment analysis (DEA).
Dewi & Ferdian	Indonesia, Malaysia	2005-2007	5 Indonesian and 20 Malaysian Islamic mutual funds	Malaysian Islamic mutual funds seem to outperform Indonesian Islamic mutual funds, likely because the Malaysian Islamic Capital Market is relatively more established than the Indonesian one.
Chelawat & Trivedi	India	2008-2012	S&P ESG India Index	The result holds even for a substantially reduced portfolio size.
Ferrary, Michel	France	2007-2012	Femina index	The Femina index is derived from its benchmark CAC 40 and comprises 10 companies with a minimum of 35% female managers in their 2007 work forces.

Table 3: Negative performance

NEGATIVE				
Author	**Market**	**Year**	**Data**	**Comment**
Chang, Nelson & Witte	US	3, 5 and 15 years periods up to 2011	131 green mutual funds	The poor performance of green funds can be attributed to lower returns and not to higher risk (as risk is similar to conventional funds).
Hayat & Kraeussl	Global, Malaysia, Asia-Pacific, Middle East, North America	2000-2009	145 Islamic equity funds	On average Islamic equity funds substantially underperform both their Islamic and conventional benchmarks. The underperformance seems to have increased during the recent financial crisis.

Table 4: Mixed results within the same study...

MIXED RESULTS WITHIN THE SAME STUDY

Author	Market	Year	Data	Comment
Thompson, Engle & Winters Spain	US	2001-2006	50 SRI funds: 39 large-cap; 11 small- and mid-cap	NEUTRAL-NEGATIVE No significant difference, with two exceptions: In 2003, small/mid-cap SRI underperformed, possibly because the benchmark index contains many companies with technical and biological operations, while SRI often avoids companies that perform animal studies and other experimental studies. In 2006, SRI underperformed, likely because of the significant rise in oil prices this year (SRI typically avoids the oil industry).
Climent & Soriano	US	2001-2009	Seven green funds	NEGATIVE – NEUTRAL In the 1987-2009 period, US environmental funds had lower performance than their conventional counterparts. In the more recent period of 2001-2009, green funds achieved adjusted returns not significantly different from conventional funds (or from SRI funds). Green funds fell more than conventional funds during the 2008 financial crisis. The authors note that green investing is to a large extent affected by government policies, which were uncertain during the crisis.
Cortez, Silva & Areal	US and EU (Austria, Belgium, France, Germany, Italy, Netherlands and the UK)	1996-2008	7 US funds and 39 funds for European markets	NEGATIVE-NEUTRAL Most European global socially responsible funds do not show significant performance differences in relation to both conventional and socially responsible benchmarks. US funds and Austrian funds show evidence of underperformance. The authors suggest that the underperformance of US funds might at least in part be explained by the turbulent period in the financial markets in the latest period of the sample. The authors could not conclude that underperforming US SRI funds use more negative screens than the other funds.
Arias Fogliano de Souza Cunha & Samanez	Brazil	2005-2010	Corporate Sustainability Index (ISE) of the BM& FBOVESPA	NEUTRAL-NEGATIVE The ISE performed similar to its benchmark, but did not recover as well as its benchmark during and after the 2008 financial crisis.
Das & Rao	US	1995-2007	94 socially responsible mutual funds	NEGATIVE-POSITIVE More than three-fourth of SRI funds (75 of 94) have negative performance relative to benchmark indices. 19 of 94 outperform the benchmark. Using style analysis, the authors found that more active management of SRI funds results in better performance.

...Table 4: Mixed results within the same study

MIXED RESULTS WITHIN THE SAME STUDY

Author	Market	Year	Data	Comment
Lobe, Rößle & Walkshäusl	One world index, 18 regional indices, 124 country indices aggregated to regions. Regions include Africa, Asia, Australia, Europe, North America, South America	2001-2012 (period varies w/data availa-bility)	155 Islamic indies	NEGATIVE-POSITIVE Islamic indices outperform in general in developed markets, and tend to underperform in emerging markets on a risk-adjusted basis. The highest outperformance of shari'ah-compliant indices is in Europe, whereas the highest underperfor mance is in the EMEA emerging markets region. Islamic indices for developed market regions show a strong growth orientation in their investment behavior, while the performance of regional Islamic indices from emerging markets is on average driven by a significant large-cap bias. A strong overweighting of energy and materials stocks both in developed markets and in emerging markets. As stocks from these two sectors account on average for more than 40% of the return variation on Islamic indices across all regions, they can be considered the main performance drivers.
Hoepner, Ramal & Rezec	Twenty countries, in Africa, Asia-Pacific, Europe, Gulf Cooperative Council, and North America	1990-2009	265 Islamic equity funds	POSITIVE-NEGATIVE-NEUTRAL Islamic funds from the six largest Islamic financial centers in the study (the GCC countries and Malaysia) perform competitively or even outperform international equity market benchmarks. Funds from especially Western nations with less Islamic assets tend to significantly underperform.

We note that the most common market to be studied is the US, although taken together studies do cover all parts of the world. Emerging markets are less commonly researched, but individual studies have centered on, e.g., Brazil and India. Another general finding is that research on Islamic investment is becoming a prevalent research theme within the research field of socially responsible investment. SRI and Islamic investment both include a social dimension and partly use the same screens.

Concluding remarks

The question of whether socially responsible investment pays off or comes with a financial penalty continues to fascinate the academic research community and financial practitioners alike. It seems that we will not be able to find the Holy Grail. As concluded in our earlier report (AP7, 2011) there does not seem to be anything inherent in ESG that automatically renders a comparably lower, higher or similar performance result. Rather, factors such as market conditions and observation period can influence results.

At the same time, it appears that of all available research on the topic, the vast majority of research points to a neutral result, i.e., that there is no significant difference in the risk-adjusted performance between SRI and conventional investments.

The fact that most studies come to this conclusion is not in itself evidence that this is the "correct" answer to the question of how SRI performs relative to conventional investment. What we can conclude, however, is that there is not enough evidence to determine that SRI persistently underperforms conventional investment. For the investor who might prefer to engage in SRI as long as it does not hurt financial performance, this is good news.

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