

Is Socially Responsible Investment Outperforming Conventional Investment or Not? A Meta—Analysis

Ouassil AitElMekki^{1,2}

¹EDEG, Montpellier Research in Management, Université de Montpellier, Montpellier, France

²CRME, HEEC Business School of Marrakech, Marrakech, Morocco

Email: o.aitelmekki@uca.ac.ma, o.aitelmekki@eheec.ac.ma

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Abstract

This meta-analysis provides an overview of the current literature on Socially Responsible Investment (SRI). It presents the underlying motivation, history and current best practices. The in-depth analysis examines a large body of research and addresses two key issues. The first objective was to determine the relative performance of SRI vehicles compared to their conventional benchmarks. The analysis revealed a lack of consensus in previous research. Some studies argue that SRI funds perform as well as, and/or worse than conventional benchmarks, while others challenge these findings. The second objective was to analyse the impact of corporate social responsibility on the company's financial performance. Here, the analysis covered almost four decades, from the 1980s to 2020. It examined more than 100 academic studies, with an overall sampling period that ran from 1960 to 2019. The results provide a solid platform for future work. The study provides researchers with a well-documented, structured overview of the existing literature on SRI, and identifies gaps that could be filled by future studies.

Keywords

Market Finance, Portfolio Management, Responsible Finance, Ethical Finance, Socially Responsible Investment (SRI), Responsible Investment Funds, Conventional Funds, Portfolio Financial Performance, Corporate Social Responsibility (CSR), Environmental, Social and Corporate Governance (ESG) Criteria

1. Introduction

The recent financial crisis has highlighted a growing preference for responsible

investment and the consideration of ethical decisions in finance; the subprime crisis of 2008 (Longstaff, 2010; Demyanyk & Van Hemert, 2011; Markham, 2015; Taleb & Khouaja, 2019; Pereira, 2020), manifested itself both in public debates and in the academic literature. Since then, many institutional and private investors have been seeking ways to integrate their social and financial interests. As a result, a significant proportion of investors have adopted Socially Responsible Investment (SRI) principles. In its latest report, the Global Sustainable Investment Alliance (GSIA, 2018) indicates that global SRI reached US\$ 30.7 trillion in the five main markets: Europe (€ 12.30 T); the United States (\$ 12 T); Canada (CAD2.13 T); Australia and New Zealand (US\$ 1 T) and Japan (¥ 232 T), an increase of 34% in two years. The world's largest sustainable investment strategy continues to be exclusive selection, with a total of \$19.8 trillion in assets under management. This is followed by a range of environmental, social and governance (ESG) criteria, which have seen investment increase by 69% over the past two years, reaching \$ 17.5 trillion in assets. Exclusive selection is the most widespread strategy in Europe, while selection based on ESG criteria dominates the majority of assets in the United States, Canada, Australia and New Zealand. In Japan, corporate shareholder and engagement action is the dominant strategy.

Several studies have documented the interest and increased investment in corporate social responsibility (CSR) in the United States, European, Canadian and Australian markets over time (Hockerts & Moir, 2004; Umlas, 2008; Junkus & Berry, 2010; Derwall et al., 2011; Bialkowski & Starks, 2016). This demonstrates the growing interest of investors in integrating ethical and financial concerns into their investments.

The meta-analysis presented here draws on more than 40 years of academic research on SRI and its impact. It aims to provide the reader with a comprehensive overview of the literature, and point out leading research methods in this field. The study provides a well-structured overview of a large body of SRI research and its findings, with a key focus on whether or not SRI is a financially profitable approach. It provides an ideal starting point for future research in this area.

The analysis examines the development of SRI over time, and provides an understanding of the different terms and definitions used by CSR researchers. It also identifies the motivations of different groups of investors to include CSR in their investment decisions. It explains the different methods, and how they can be put into practice. It then addresses two major issues in the academic literature: firstly, if the financial performance of CSR investments does compare favourably with conventional investments, does this motivate investors to act? Secondly, are CSR strategies profitable for the companies themselves? This meta-analysis also provides an overview of the different methods and parameters currently available, and identifies the regional focus and time period of the empirical studies reviewed. It outlines more recent areas of research, such as CSR investment ratings, and multi-attribute portfolio optimisation. Finally, it sum-

marises the findings, and offers an overview of potentially interesting future research topics.

2. Development, Rationale and Current Implementation of SRIs

2.1. Historical Development

Even in ancient Rome, wise men sought to distinguish themselves in all aspects of their lives, including trade. It could be said that the *Bible*, and the *Torah* established the first rules for ethical investment. In the 7th century, the *Quran* (the sacred text of the Muslims) and the *Hadith* (the record of the traditions or sayings of the Prophet Muhammad) are an extension of the same philosophy. Islam provides clear guidance for commercial life, in the form of ethical stipulations (sharia or Islamic jurisprudence *Al-Fiqh*). In the middle of the 18th century, the Methodist Church sought to do the same (Peifer, 2012). As early as 1948, the Methodist Church and the Church of England in the United Kingdom set up investment portfolios that took into account ethical constraints (Bengtsson, 2008). But the first, true SRI fund was the *Pioneer Fund of Boston* in 1928, in the United States, founded by a church group (Kirchhoff, 2008). In the 1900s, the equity market began to focus more on the religious requirements of the Islamic community, for example, by excluding specific sectors from investment portfolios, notably practices such as the sale of alcohol, tobacco, sex, pork, usury, gambling, etc. (Warde, 2000; El-Gamal, 2006; Ariff & Iqbal, 2011; Iqbal & Mirakhor, 2011; Ayub, 2013; Alim, 2014; Visser, 2019). At the same time, concerns have grown regarding environmental issues (Fung et al., 2010; Bilbao-Terol et al., 2016). Investment decisions initially followed a simple triangular path of liquidity, risk and return. Today, a growing number of investors use the magic square: liquidity, risk, return and sustainability. This can be seen as an improvement to the neoclassical *homo economicus*, who is motivated solely by economics (Duttweiler, 2011; Bernstein, 2020).

2.2. Definitions and Terminology

There is great heterogeneity in the current academic literature regarding the terminology to be used to refer to the type of investment discussed in this study. Chatzitheodorou et al. (2019) conducted a literature review focused on the issue of the terminology used to define this type of investment, and observed that the majority of the literature focuses on SRI performance compared to conventional investment. The authors argued that, despite the plurality of terms (e.g. sustainable, ethical, environmental and social) that have been invented to explain the reasoning behind SRI, they all relate to an overarching definition. Specifically, they are based on the assumption that SRI undermines the precision and robustness of existing metrics, as only some aspects of global performance are assessed. Although a consensus has not yet emerged in the literature, typical terms are SRI, social, sustainable, green, ethical or alternative investment (Nilsson,

2008). Although there are inconsistencies in their use, some authors (Guay et al., 2004; Arjaliès, 2010; Bilbao-Terol et al., 2016) consider SRI definitions to be consistent to the extent that they refer to the integration of non-financial concerns, such as environmental, social or governance, into investments. This paper adopts the most widely-used term—SRI.

While SRI defines the active task of investing responsibly, the term corporate social responsibility (CSR) is used in the academic literature to describe a company's ethical and responsible behaviour (Whitehouse, 2006). It considers that firms should combine environmental and social questions into their corporate governance. By applying CSR policies, companies seek to attract CSR investors (Teoh & Shiu, 1990). Conversely, shareholders can use their voting rights to steer the company's management in a more CSR-oriented direction (Griseri & Seppala, 2010; Glac, 2014).

2.3. SRI Performance

When it comes to estimating the performance of SRI compared to conventional funds, the literature reports mixed findings. At the same time, there is a large body of research on the relationship between financial performance and SRI. From a technical point of view, two major orientations can be adopted to assess the financial performance of SRI: (1) the comparison of the financial performance of SRI funds with conventional counterparts that have the same characteristics with respect to capitalisation, time horizons, economic zones, etc.; and (2) the comparison of the financial performance of SRI funds with the market, using a model.

Some studies report the results of regression analyses, seeking to provide an explanation for the factors that influence returns, including ethical commitment. One-, two- and four-factor models, such as the Capital Asset Pricing Model (CAPM), the Fama-French and Carhart models have been used. The CAPM considers market risk (beta) as an explanatory factor for asset price movements (Markowitz, 1952). Fama & French (1993) added two other factors to the CAPM: size and book-to-market value. The Carhart model is based on the three-factor Fama-French model, but adds a fourth factor. The latter captures the momentum anomaly, i.e. the difference in return between winners and losers over the past 12 months (Jegadeesh & Titman, 1993; Carhart, 1997). A comparison of SRI with conventional funds must ensure that they have similar characteristics, to minimise size or style effects when comparing returns. Various comparison methods are in use, which differ in terms of: (1) the choice of performance measures; and (2) benchmarks. These two factors are very important in determining the performance of SRI investments and their conventional counterparts. It should be noted that many studies use more than one performance measure.

Other researchers have adopted a different approach, with the same goal. Thus, some studies use the Treynor ratio (1965), Sharpe's ratio (1966), Jensen's

alpha (1967), or Tobin's Q (1969). Another practice is to use the excess standard deviation adjusted return (eSDAR). This was applied by Statman (2000) which estimated the additional return at a specific point in time from a portfolio, using the same risk rate as the benchmark.

One of the main objectives of performance measurement is to find an appropriate benchmark against which to compare a portfolio. In the world of market finance, this concerns the main sustainability indices, the selection methods used, and the benchmarks underlying them. The most well-known and important indices are: (1) KLD's Domini Social Index; (2) the Dow Jones Sustainability Index (López et al., 2007; Searcy & Elkhawas, 2012), both based in the United States; and (3) the FTSE4Good Index, based in the United Kingdom (Martin, Curran, & Moran, 2007; Collison et al., 2008, 2009). The Domini 400 Social Index (sometimes called the KLD 400 Index, as it was established by Kinder, Lydenberg & Domini) is one of the best-known social indices (Corson & Dyck, 1992; Sauer, 1997). Launched in March 1990, it is considered to be the first general stock market index in the United States designed to measure the performance of portfolios subject to multiple religious (notably, Catholic) and social constraints (Kurtz & di Bartolomeo, 2005; Statman, 2006; Ramchander et al., 2012).

3. Does SRI Out- (Under-)Perform Conventional Investment?

Research conducted over the past four decades clearly demonstrates a growing interest in SRI. It emerged from the meta-analysis that the vast majority of published papers relate to the measurement of SRI performance. This can be explained by the fact that this area of research is very much focused on quantitative data, as well as its accessibility. More recently, the SRI literature has moved away from performance measurement, to focus on other, qualitative, variables. The latter includes a diverse range of factors. Interest in stakeholders, ESG criteria, sustainability, activism, etc. has grown considerably over this time. It is not surprising that more than 100 academic studies, including 70 research papers, in the dataset were dedicated to the measurement and comparison of SRI fund performance with a benchmark.

In the world of responsible finance, the literature lacks a consensus regarding the measurement of the performance of SRI funds compared to conventional funds, market indices or benchmark funds. This meta-analysis only focuses on empirical studies of market data, and not those based on accounting data, or those that present a theoretical model. Specifically, the dataset consists of 103 empirical studies of SRI; of these, 33 identify relationships between a specific behaviour that is perceived as responsible (or not), and the financial performance of a single firm. The aim is to show whether CSR behaviour is financially beneficial for the firm.

The overall analysis focused primarily on studies published during the past 40 years (between the 1980s and 2020), with a 60-year sample period running from 1960 to 2019. The aim was to identify trends in empirical analyses (Table 1).

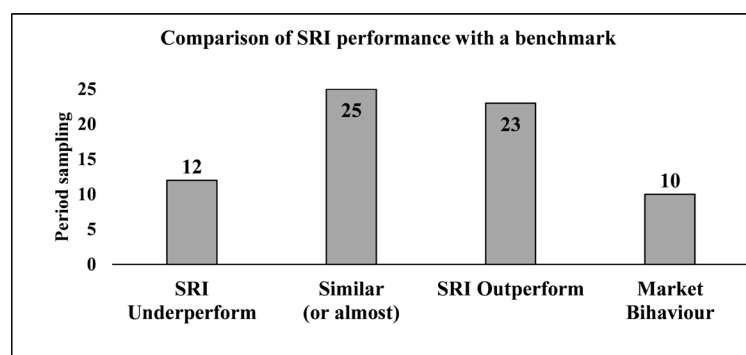
The dataset of studies can be categorised as a function of their findings regarding the comparison of SRI performance with benchmarks. Indices or ethical funds may underperform, outperform or perform equally well as conventional funds and indices, or performance can be considered as a function of market conditions. As shown in **Table 1** and **Figure 1**, of the 70 studies that compare the performance of SRIs with benchmarks, 25 conclude that SRIs perform in the same (or almost the same) way as conventional benchmarks, 12 find underperformance, 23 find outperformance and, finally, 10 attribute SRI performance to market behaviour during crisis and non-crisis periods. The meta-analysis verified these results, and concluded that data followed a normal distribution, with a coefficient of determination (R^2) equal to 0.82. **Figure 1** shows the articles that were reviewed, highlighting the four relationships.

Sampling periods differed for each study. In articles that reported the underperformance of SRIs, the mean sampling period was 10 years. The shortest period, two years (1999-2001), was recorded by *Geczy et al., (2005)*, and the longest, 20 years (1995-2015), was reported by *Kiyamaz (2019a)*. With respect to papers that demonstrated similar performance, the mean sampling period was nine years; the shortest, two years (2000-2002), was reported by *Schröder (2004)* and the longest, 22 years (1982-2004), was noted by *Mill (2006)*. In contrast, studies found that SRIs outperformed their counterparts, the mean sampling period

Table 1. Studies considered in the meta-analysis.

Background		Total
SRI performance vs the benchmark	Similar (or almost)	25 ref.
(70 references)	Underperformance	12 ref.
(Publications date: 1980s-2020)	Outperformance	23 ref.
(Sampling period: 1960-2019)	Market behaviour	10 ref.
Relationship SRI-ESG (Sampling period: 1990s-2020)		33 ref.
Total		103 ref.

Source: Author's survey.



Source: Author's survey.

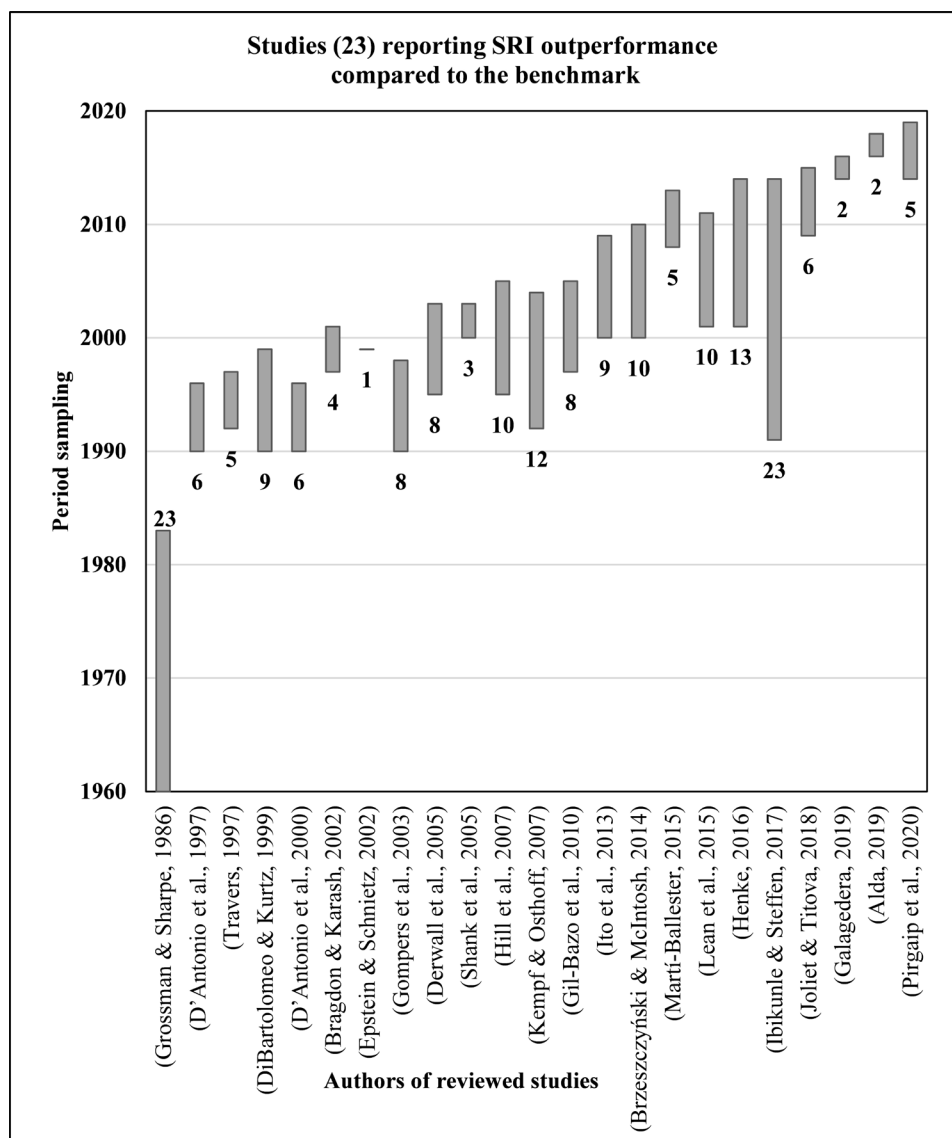
Figure 1. Results of the comparison of SRI performance with a benchmark in the reviewed articles.

was eight years; the shortest period, one year (1999), was identified in Epstein & Schnietz (2002) and the longest period, 23 years, was reported by two studies Grossman & Sharpe (1986) and Ibikunle & Steffen (2017). In the latter case, sampling periods were 1960-1983 and 1991-2014, respectively. These statistics were summarised in Table 2 and Figure 2. The full set of articles that made up

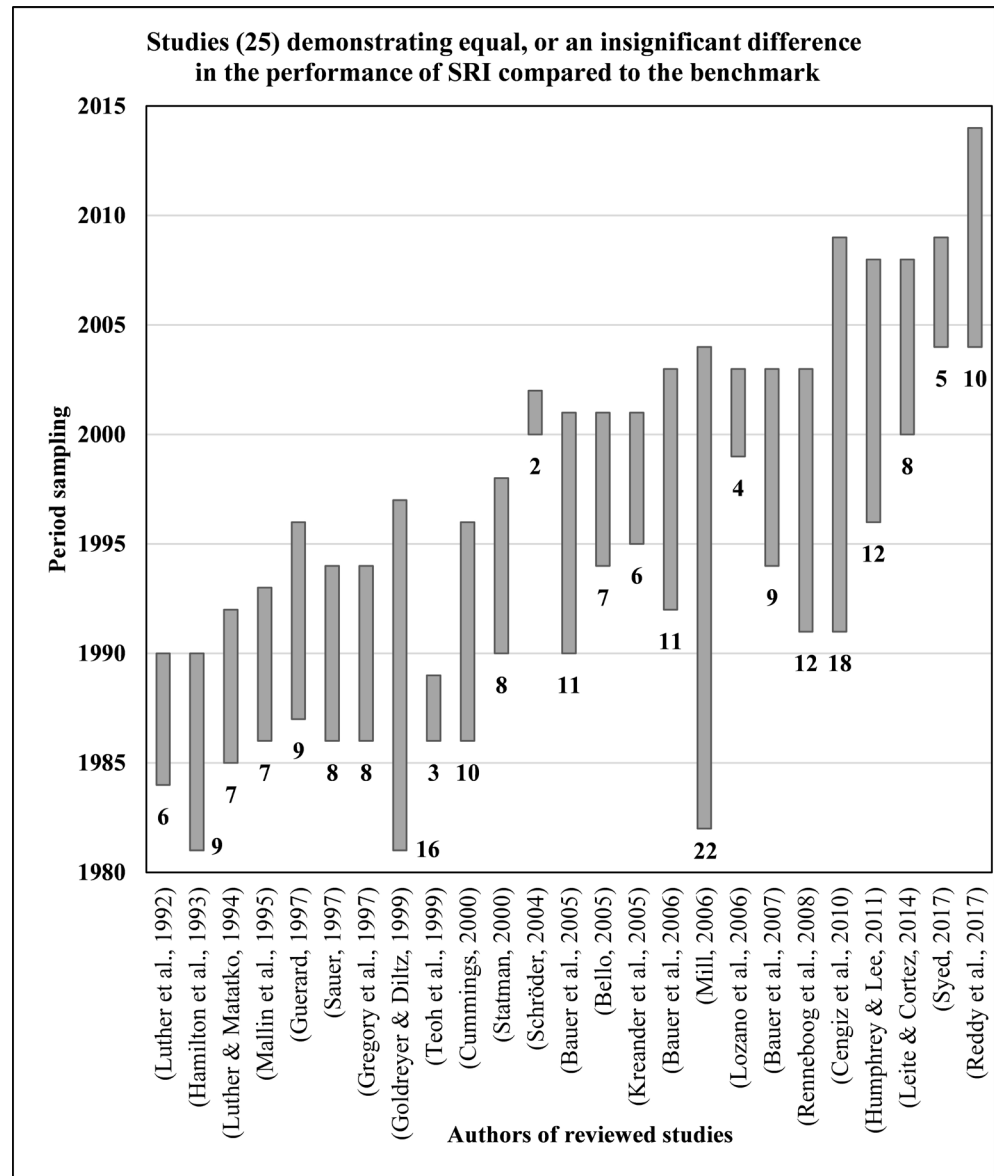
Table 2. Statistics for studies considered in this meta-analysis.

Comparative SRI performance	Period average (sampling)	Minimum period (sampling)	Maximum period (sampling)
Similar (or almost)	9.12 years	2 years	22 years
Underperformance	9.91 years	2 years	20 years
Outperformance	8.13 years	1 year	23 years
Average	9.06 years	2.34 years	22.67 years

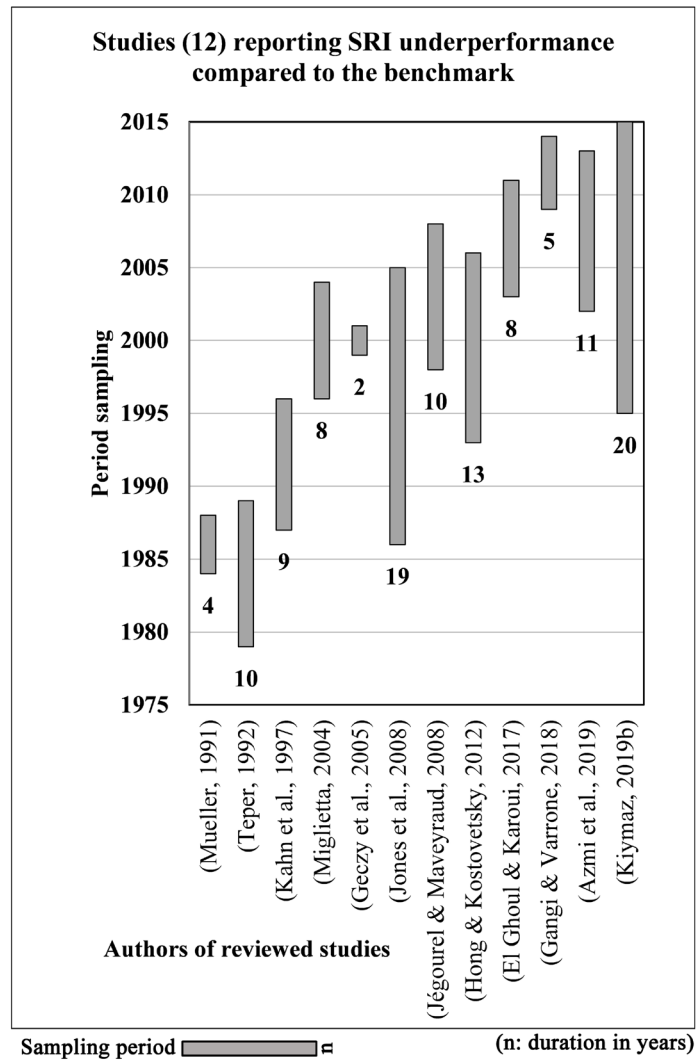
Source: Author's survey



Continued



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Source: Author's survey.

Figure 2. Sampling period of studies demonstrating similar, and out- (under-)performance of SRIs included in this meta-analysis.

the dataset of this study, and that were not cited above, were reported in **Figure 2** and **Tables 3-5**. **Figure 2** presents the sampling period of each study as a function of the authors.

Ten of the 70 studies attributed SRI performance to the market situation, economic conditions and crisis (or non-crisis) periods. An exception is **Rathner (2013)** which attributed it to survivorship bias, while **Leite & Cortez (2015)** and **Trinks & Scholtens (2017)** showed that SRIs performed well compared to their conventional counterparts in times of crisis, but underperformed in non-crisis periods. On the other hand, **Omri et al. (2019)** does not support this finding. Among the remainder of the articles, six studies (See **Table 6**) showed that all SRI funds outperformed conventional funds in booming economic conditions, while they underperformed during quiet periods.

Table 3. Studies (25) demonstrating equal, or an insignificant difference in the performance of SRI compared to the benchmark.

References	Sampling period
(Luther et al., 1992)	1984-1990
(Hamilton et al., 1993)	1981-1990
(Luther & Matatko, 1994)	1985-1992
(Mallin et al., 1995)	1986-1993
(Guerard, 1997)	1987-1996
(Sauer, 1997)	1986-1994
(Gregory et al., 1997)	1986-1994
(Goldreyer & Diltz, 1999)	1981-1997
(Teoh et al., 1999)	1986-1989
(Cummings, 2000)	1986-1996
(Statman, 2000)	1990-1998
(Schröder, 2004)	2000-2002
(Bauer et al., 2005)	1990-2001
(Bello, 2005)	1994-2001
(Kreander et al., 2005)	1995-2001
(Bauer et al., 2006)	1992-2003
(Mill, 2006)	1982-2004
(Lozano et al., 2006)	1999-2003
(Bauer et al., 2007)	1994-2003
(Renneboog et al., 2008)	1991-2003
(Cengiz et al., 2010)	1991-2009
(Humphrey & Lee, 2011)	1996-2008
(Leite & Cortez, 2014)	2000-2008
(Syed, 2017)	2004-2009
(Reddy et al., 2017)	2004-2014

(Sorted by publication date); Source: Author's survey.

Table 4. Studies (12) reporting SRI underperformance compared to the benchmark.

References	Sampling period
(Mueller, 1991)	1984-1988
(Teper, 1992)	1979-1989
(Kahn et al., 1997)	1987-1996
(Miglietta, 2004)	1996-2004
(Geczy et al., 2005)	1999-2001
(Jones et al., 2008)	1986-2005
(Jégourel & Maveyraud, 2008)	1998-2008
(Hong & Kostovetsky, 2012)	1993-2006
(El Ghouli & Karoui, 2017)	2003-2011
(Gangi & Varrone, 2018)	2009-2014
(Azmi et al., 2019)	2002-2013
(Kiyamaz, 2019b)	1995-2015

(Sorted by publication date); Source: Author's survey.

Table 5. Studies (23) reporting SRI outperformance compared to the benchmark.

References	Sampling period
(Grossman & Sharpe, 1986)	1960-1983
(D'Antonio et al., 1997)	1990-1996
(Travers, 1997)	1992-1997
(DiBartolomeo & Kurtz, 1999)	1990-1999
(D'Antonio et al., 2000)	1990-1996
(Bragdon & Karash, 2002)	1997-2001
(Epstein & Schnietz, 2002)	1999
(Gompers et al., 2003)	1990-1998
(Derwall et al., 2005)	1995-2003
(Shank et al., 2005)	2000-2003
(Hill et al., 2007)	1995-2005
(Kempf & Osthoff, 2007)	1992-2004
(Gil-Bazo et al., 2010)	1997-2005
(Ito et al., 2013)	2000-2009
(Brzeszczyński & McIntosh, 2014)	2000-2010
(Martí-Ballester, 2015)	2008-2013
(Lean et al., 2015)	2001-2011
(Henke, 2016)	2001-2014
(Ibikunle & Steffen, 2017)	1991-2014
(Joliet & Titova, 2018)	2009-2015
(Galagedera, 2019)	2014-2016
(Alda, 2019)	2016-2018
(Pirgaip et al., 2020)	2014-2019

(Sorted by publication date); Source: Author's survey.

Table 6. Studies (10) reporting that SRI performance is a function of market behaviour and economic conditions.

References	Crisis	Non-crisis
(Rathner, 2013)	According to survivor bias	
(Nofsinger & Varma, 2014)	>	<
(Leite & Cortez, 2015)	=	<
(Lesser et al., 2016)	>	<
(Silva & Cortez, 2016)	>	<
(Trinks & Scholtens, 2017)	=	<
(Omri et al., 2019)	>	=
(Ielasi & Rossolini, 2019)	>	<
(Arefeen & Shimada, 2020)	>	<
(Dopierała et al., 2020)	>	<

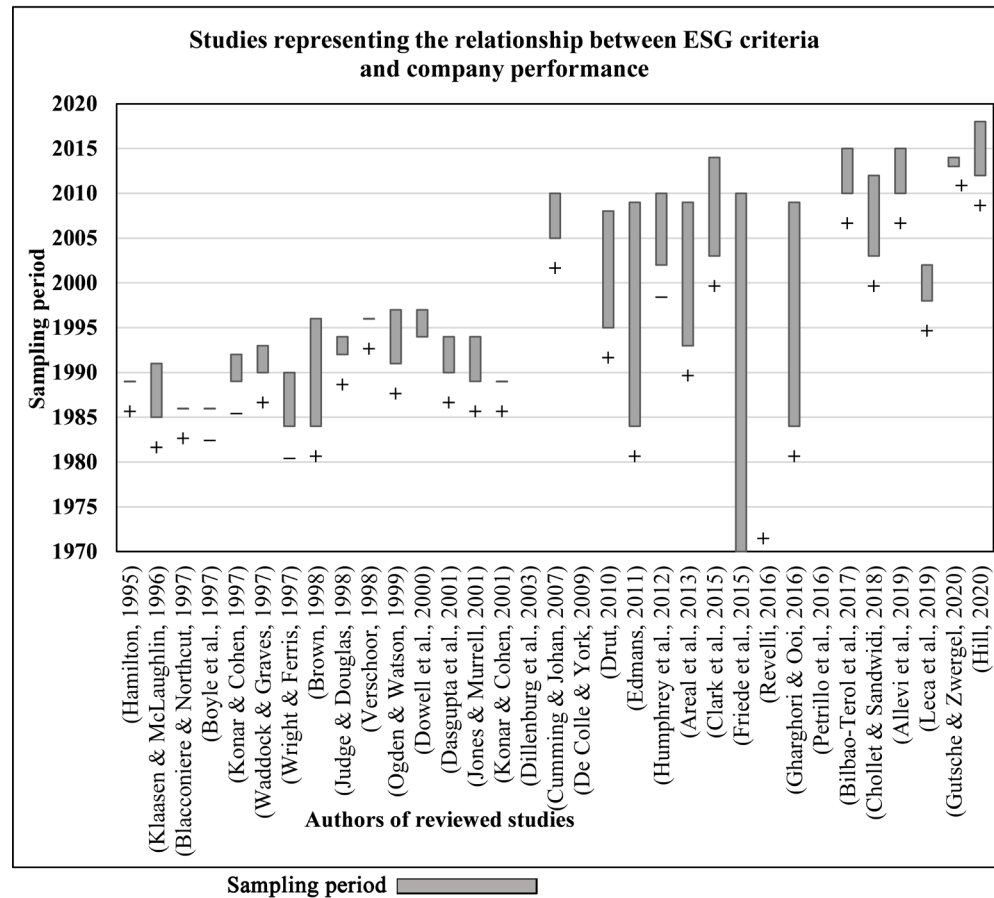
(Sorted by publication date); Source: Author's survey. Note: = SRI funds perform equally well (or with an insignificant difference) as the benchmark; > SRI funds outperform the benchmark; < SRI funds underperform compared to the benchmark.

4. Impact of ESG Criteria on Company Performance

As discussed earlier, most studies construct SRI portfolios and then compare them to a counterpart, conventional portfolio or index. However, another approach is to look at the value of a single company to determine the effects of socially responsible behaviour, most often referred to as CSR. There are two ways to measure the value of a company: using accounting data or market data. Most studies focus on market value, determined by the company's share price multiplied by the number of shares outstanding, as the aim is to determine the impact of CSR on both shareholder behaviour and profits. Heiduk & McCaleb (2014) and Gatti & Seele (2015) argue that there is a wide gap in the performance of CSR-aware European companies, compared to Asian and American companies. This is claimed to be due to differences in culture and history, as European investors seem to place higher value on SRI than Asian and American investors (Auer & Schuhmacher, 2016).

There are two approaches to determining whether CSR companies are more valuable than conventional companies. For example, event studies have demonstrated that share prices rise when a company receives a social, environmental or governance award; conversely, if there is information or a scandal related to one, or a set of CSR criteria, share prices fall significantly. Even a simple, explicit commitment to ethical behaviour can have a positive effect on the company's financial performance (Kolk, 2016). Most event studies analyse specific CSR characteristics, such as social or environmental. A positive relationship has been demonstrated between a company's financial performance and the integration of environmental issues into its strategic planning (Shahzad et al., 2020). Furthermore, a positive relationship has been found between the level of environmental information provided by a company, and its financial performance. Other studies have looked at environmental relationships, and the relationship between financial performance and the treatment of stakeholders (such as society, government, customers, suppliers, shareholders, creditors, managers and employees).

This meta-analysis provides a good overview of the state of CSR. It examined 33 academic studies dealing with the topic that report different results. The selected studies were presented in Table 7 and Figure 3. Eighty-four per cent of studies find a positive correlation between financial performance and the adoption of ESG criteria, while the remaining 16% note a negative correlation. The overall, mean sampling period for all studies is around 7.5 years. Research that identifies a positive correlation has a mean sampling period of eight years; the shortest period, one year, was reported in six studies (see Table 7), and the longest period, 40 years (1970-2010), was reported by (Friede et al., 2015). With respect to studies that find a negative correlation, the mean sampling period is four years; the shortest period, one year (1986), was reported by (Boyle et al., 1997), and the longest period, eight years (2002-2010), was noted by (Humphrey et al., 2012). Full references for the articles making up the dataset, which were not cited



Source: Author’s survey. Note: + relationship; - not relationship.

Figure 3. Sampling period of studies representing the relationship (or not) between ESG criteria and company performance included in this meta-analysis.

above, were reported in **Table 7** and **Figure 3**.

5. Conclusion

This meta-analysis outlined the reasons for the increased interest that institutional and private investors are showing in incorporating ethical concerns into financial decision-making. The analysis examined a large body of empirical research, and outlined the ongoing discussions in the academic literature regarding the performance of SRI investments. The findings indicate that the majority of the current academic literature reports that the performance of SRI funds is on par with conventional investments. At the same time, many studies show that SRI investments outperform conventional instruments, while others have found that they underperform. The analysis highlighted studies that sought to determine the relationship between a company’s financial performance and its efforts to implement CSR policies. Overall, most studies found that the integration of ESG criteria has a positive effect on financial results.

This initial study could form the basis for future research. It deepens knowledge related to SRI investments and the ambiguities surrounding this increasingly

Table 7. Studies (33) that report a relationship (or not) between ESG criteria and company performance.

References	Sampling period	Relationship
(Hamilton, 1995)	1989	Yes
(Klaasen & McLaughlin, 1996)	1985-1991	Yes
(Blacconiere & Northcut, 1997)	1986	Yes
(Boyle et al., 1997)	1986	No
(Konar & Cohen, 1997)	1989-1992	No
(Waddock & Graves, 1997)	1990-1993	Yes
(Wright & Ferris, 1997)	1984-1990	No
(Brown, 1998)	1984-1996	Yes
(Judge & Douglas, 1998)	1992-1994	Yes
(Verschoor, 1998)	1996	Yes
(Ogden & Watson, 1999)	1991-1997	Yes
(Dowell et al., 2000)	1994-1997	Yes
(Dasgupta et al., 2001)	1990-1994	Yes
(Jones & Murrell, 2001)	1989-1994	Yes
(Konar & Cohen, 2001)	1989	Yes
(Dillenburg et al., 2003)	-	Yes
(Cumming & Johan, 2007)	2005 & forecast 2006-2010	Yes
(De Colle & York, 2009)	-	No
(Drut, 2010)	1995-2008	Yes
(Edmans, 2011)	1984-2009	Yes
(Humphrey et al., 2012)	2002-2010	No
(Areal et al., 2013)	1993-2009	Yes
(Clark et al., 2015)	2003-2014	Yes
(Friede et al., 2015)	1970s-2010s	Yes
(Revelli, 2016)	-	Yes
(Gharghori & Ooi, 2016)	1984-2009	Yes
(Petrillo et al., 2016)	-	Yes
(Bilbao-Terol et al., 2017)	2010-2015	Yes
(Chollet & Sandwidi, 2018)	2003-2012	Yes
(Allevi et al., 2019)	2010-2015	Yes
(Leca et al., 2019)	1998-2002	Yes
(Gutsche & Zwergel, 2020)	2013-2014	Yes
(Hill, 2020)	2012-2018	Yes

(Sorted by publication date); Source: Author's survey.

popular type of ethical finance. Finally, from a broader perspective, this meta-analysis is a valuable resource for researchers, as it summarises, in a few pages, the current state of knowledge in the field. It adopts a spatiotemporal view, spanning almost four decades, from the 1980s to 2020, and examines more than 100 academic studies, over a sampling period that runs from 1960 to 2019. Data come from all four continents, and shed light on the academic and professional evolution of practices related to responsible finance—the results provide interesting insights into future trends. From an epistemological point of view, it will not only be useful for researchers working in this field but also, and more generally, science historians.

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Tribute to My Father

In memory of Sir. Abdelmajid AitElMekki ben Belkhir (1955-2018), my father.

You are missed, you are loved and you are remembered every moment of every day for I would not have the life I do without your love and lessons.

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Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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