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IS IT WORTH BEING GOOD? – THE EFFICIENCY AND RISK OF SOCIALLY RESPONSIBLE INVESTING IN LIGHT OF VARIOUS EMPIRICAL STUDIES

Tomasz Jedynak[1]

Abstract

The paper discusses the issue of the effects of using SRI strategies on performance and risk of investment portfolios. During the research procedure, a number of goals were executed which is reflected by the article's structure. In the first place, potential directions of the effects of using SRI strategies on portfolio parameters were indicated. Generally, these are hypotheses about 1) positive; 2) negative; 3) neutral impacts of SRI on investment portfolio parameters. Then the main streams in the research on SRI were identified. These streams are mainly based on: modern portfolio theory, the costs of an asset selection conception and the analysis of the correlation between CSR policy and company profitability. Moreover, the research stream which focuses on the relationship between the social responsibility of business and its competitive position was identified. The performed wide review of the literature raising the issues of performance and risk of SRI allows us to make an attempt to synthesize the results obtained by various authors. This synthesis is based on criteria such as: subjective scope, geographical span, methodology and findings of particular research. The main finding of the research is that despite many attempts in which various methods were used, so far there is no firm evidence to support or reject any of the above formulated hypotheses.

JEL classification: G11, M14, Q1
Keywords: SRI, socially responsible investment, portfolio performance, ethical investment

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1 Cracow University of Economics, Department of Risk Management and Insurance, tomasz.jedynak@uek.krakow.pl.

Introduction

Socially responsible investing (SRI) consists in taking into consideration, in the classic investment process based on modern portfolio theory, also non-financial criteria of a socio-ethical, ecological and environmental character. Due to a noticeable growth in popularity of socially responsible investing, more and more often questions are formulated about the effects of using this type of strategy on investment portfolio parameters. A particularly discussed issue is the presence of possible differences in performance and risk of socially responsible investments and classic investments. Starting from the issue defined in this way, the following research goals were adopted: 1) to indicate potential directions of the effect of using SRI strategies on portfolio parameters; 2) to identify major streams manifesting themselves in research on SRI performance; 3) to verify a hypothesis that using SRI strategies will not cause reduction in performance and growth in risk of an investment portfolio. Bearing in mind the multiplicity of empirical analyses undertaken in recent years concerning performance and risk of the SRI strategies, an in-depth study of research findings published in the period 1990-2014 was conducted in the paper. In the opinion of the author, at the present stage of research on the effect of using the SRI strategies, it is necessary to conduct a synthesis of findings obtained by various authors. On the one hand, this procedure will permit systematization of the previous state of knowledge, and, on the other hand, it will contribute to indicating the desired directions of further research.

Effect of using SRI strategies on investment portfolio parameters

A thorough study of potential directions of the effect of using SRI strategies on investment performance was carried out by Statman and Glushov (2009)[1]. They formulated three alternative hypotheses concerning relationships between rates of return on socially responsible portfolios and rates of return on conventional portfolios. These are the following hypotheses: 1) "*doing good but not well*"; 2) "*doing good while doing well*"; 3)"*no effect*". The "*doing good but not well*" hypothesis assumes that rate of return on investments in socially responsible portfolios is lower than rate of return on conventional portfolios. It is right, provided that, as a result of using the corporate social responsibility (CSR) policy, corporate profits drop, which affects directly return on investments in its shares[2]. According to the "*doing good while doing well*" hypothesis, rates of return on socially responsible portfolios are higher than rates of return on conventional portfolios. This situation is possible only when both company management and investors do not appreciate consistently benefits resulting from being socially responsible or overestimate costs of this conduct (Statman & Glushkov, 2009, p. 38)[3]. The "*no effect*" hypothesis says that rates of return on socially responsible portfolios and conventional portfolios do not differ substantially from one another. This hypothesis is true when costs related to social responsibility are compensated by benefits achieved from social responsibility[4]. Theoretically, the "*no effect*" hypothesis would be true also if the company's CSR activities did not generate additional costs, namely that they did not affect its return. However, this option is hardly likely.

Jo, Saha, Sharma and Wright (2010) present an alternative approach to Statman and Glushkov. They formulate two hypotheses concerning performance of the SRI strategies. The *value-discounting* hypothesis assumes that, owing to limited possibilities of portfolio diversification, the use of SRI strategies leads to a slump in portfolio performance. According to the *value-enhancing* hypothesis, using SRI strategies contributes to growing portfolio performance, since the implementation of the CSR policy by companies results in growth in their value, and hence in growth in the valuation of their shares.

At this point, it should be noted that the discussed classifications of hypotheses concerning the effect of using SRI strategies on investment portfolio parameters are not exhaustive. Basically, they take into account only one portfolio parameter – rate of return, whereas modern portfolio theory distinguishes two basic parameters

1 These hypotheses were formulated for the first time, in a slightly different form, in the previous paper by Hamilton, Jo and Statman (1993).

2 The use of the CSR policy by the company is a sine qua non condition for considering its qualities as the object of interest of socially responsible investments. The described situation may take place for instance in the case when raising employee salaries is not accompanied by improved efficiency of their work or when the use of alternative, more expensive but environmentally friendly production materials is not reflected in growth in sales.

3 Additionally, benefits from the use of the CSR policy can potentially result from e.g. prospective activities with regard to research and development (Lev, Sarath & Sougiannis, 2005), socially responsible employment policy (Edmans, 2011), (Mass, 2008) and reduction in adverse environmental impact of a company (Derwall, Gunster, Bauer & Koedijk, 2004).

4 For instance, it is possible that better paid employees work more efficiently, and hence additional cost related to increase in salaries is compensated by increased revenue (Statman & Glushkov, 2009, p. 39).

of each investment – profit and risk. Therefore, these two parameters should be considered together. Such reasoning leads to the formulation of nine hypotheses concerning performance and risk of socially responsible portfolios. Taking into account, beyond the direction, of also the strength of the effect of using SRI strategies on portfolio performance and risk, these hypotheses can be reduced to three possibilities which overlap partially the perspective of Statman and Glushkov. These are hypotheses about the: 1) positive; 2) negative; 3) neutral effect of using SRI on investment portfolio parameters.

Main research streams in studies on SRI strategies' efficiency and risk

The study of the literature related to the effect of using SRI strategies on investment portfolio performance and risk provides identification of several contrasting research streams.

Most publications containing quantitative research can be qualified into the current research stream based on modern portfolio theory. The enthusiasts of the Markowitz theory notice that narrowing the investment universe, which is the result of using the SRI strategies, must cause the impossibility of construction of a socially responsible portfolio which lies at an efficient frontier[5]. Portfolios constructed based on the SRI strategy are thus characterized by lower performance than portfolios constructed on the basis of all available assets. It is worth mentioning that the justified character of this reasoning was proved empirically by Adler and Kritzman (2009). On the other hand, some researchers undermine the rightness of the Markowitz theory, indicating that it is based on the assumptions which are never met in reality[6]. It shows that commonly used asset valuation models such as CAPM (Sharpe, 1964), Fama-French model (1993), or the Carhart model (1997) and their different modifications insufficiently explain prices of assets on the capital market. At the same time, it should be noticed that investment performance may be examined, among other perspectives, from the point of view of the arbitrage pricing theory or, enjoying a growing recognition, the behavioural concept of finance. The indicated premises provide thus arguments to the opponents of the thesis about the negative effect of using SRI strategies on portfolio parameters.

The publications about the effect of using SRI strategies on portfolio performance and risk also refers to a research stream based on the concept of asset selection costs. The conclusions from that stream were formulated, among others, by Geczy, Stambaugh and Levin (2005), Bauer, Derwall and Otten (2006), and Kempf and Osthoff (2007). In these papers attention is paid to lower performance of SRI as compared to conventional investments. This results from the need to use specific methods of asset selection in the portfolio construction process (e.g. *negative screening, positive screening*) and then methods of management of this portfolio (e.g. *shareholder activism integration*). These actions require access to additional information and special attention of the management, which generates additional costs that do not appear in the case of classic investment strategies.

Another stream in the research on socially responsible investment performance and risk is the analysis of correlations between the use of the CSR policy by companies and their profitability. Assuming that the implementation of the CSR principles has effect on the financial result of a company and the possibility of its prognosis, one can formulate some conclusions about the relationship between this type of activity and the height and stability of rates of return of the company's shares. According to a view prevailing presently in the literature, the incorporation of the CSR policy by forcing companies to carry out certain actions will result in growth in their profitability in the long run. Greenwald (2010) indicates that a positive correlation between implementing CSR policy and companies' exceptional profitability may result from the following premises: 1) these companies disclose in the reports more information, which may affect their transparency as well enable valuation of their qualities more precisely; 2) these companies have a comprehensive non-financial database about their operations that enables the management to manage changes and formulate more detailed financial forecasts faster and more accurately; 3) managers of SRI companies bear in mind long-term strategic goals of these companies, which contributes to the stabilization of corporate performance.

Similarly, there is a research stream which raises the issue of relationship between socially responsible behaviour of companies with their competitive position. The main thesis of this stream's representatives says

5 It is worth noting that deriving from Markowitz theory, the argument against SRI is based on the same premises as arguments against active portfolio management in any manner (Kurtz, 2005).
6 This results mostly from the fact that all investors behave rationally and have the same expectations, and the market alone is not efficient.

that the use of the CSR policy by the companies affects positively performance and/or risk of investment in their shares. The arguments formulated to support this thesis are as follows:

1) Socially responsible behaviour of companies is an indicator of high competences of the management staff, therefore, they could be expected to show exceptional performance (Renneboog, Ter Horst & Zhang, 2008a).

2) CSR derives from their success since entities that achieved success care for their good name and reputation and avoid ethically or morally doubtful operations (Kurtz, 1997).

3) The use of the CSR policy is a signal of the management board that the company achieves exceptional results. Instead of paying out the whole surplus in the form of dividends, part of the profits is allocated for activities involving improvement in business image, relations with employees, etc. (Kurtz, 1997).

4) Taking into account postulates of all stakeholders by reduction in non-financial risk leads to creation of shareholder value and provides the company the long-term possibilities of growth (Vermeir, Van de Velde & Corten, 2005).

Observations of representatives of the analysed research stream were accurately summarized by Boatright (1999), who claims that for performance of SRI to be consistently higher than the rate of return on conventional investments the following conditions must be met: 1) CSR activities carried out by the company must cause growth in its economic value in time; 2) effect of growth in the company's economic value must be large enough to affect its intrinsic value; 3) some capital market participants who do not use SRI strategies must consistently underestimate financial profits related to the use of the CSR policy.

In the context of directions of research on performance and risk of socially responsible investment one more specific stream should be mentioned. This stream is based on comparing effects of socially responsible investing and effects of socially irresponsible investing[7]. The representatives of this stream claim that "socially irresponsible" companies, as compared to socially responsible companies, bring larger profits and are less sensitive to recessions in the economy, which affects pricing of their shares (Lucky Luke & Tigrani, 1994; Ali & Gold, 2002). In this situation, excluding shares of these companies from the portfolio must lead to worsening of its parameters, which means that the use of SRI strategies will be unfavourable for investors (Chong, Her & Phillips, 2006; Hong & Kacperczyk, 2009).

Review of studies on socially responsible investment performance and risk

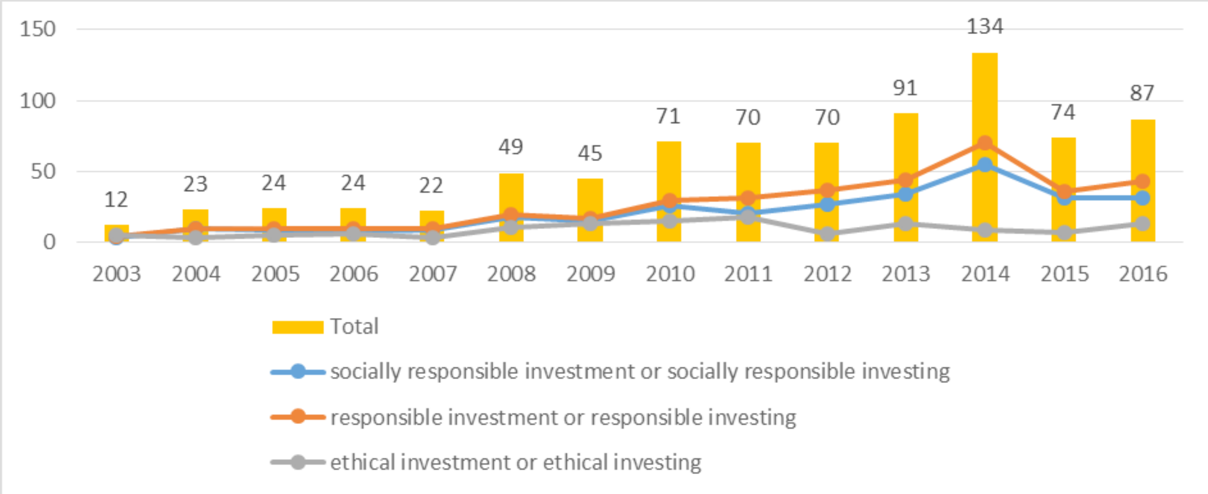
The issue of socially responsible investing became a subject of researchers' interest as early as in the 1970s. (Moskowitz, 1972). However, this concept ceased to be a niche concept and became a full-fledged investment strategy, used by leading financial institutions, as late as in the 1980s. It was determined in part by research findings of Domini and Kinder (1984) who concluded that investors using ethical criteria were more successful than those who did not use them. An important event was also the publishing in 1988, by Lipper Analytical Services, the ranking of investment funds where in the first five per 1550 of the analysed funds were two funds using SRI strategies (Beabout & Schmiesing, 2004). In the following decade, along with the development of the SRI market, controversies were increasing related to the effects of using this type of strategy, which made the issue become the subject of numerous analyses and scientific publications. An impulse for further research on the effects of using SRI strategies was also the financial crisis from the years 2008-2009 that affected a change in past views on traditional investment strategies.

The available IT tools allow us to verify the phenomenon of growing researchers' interest in the issue of SRI by considering the number of publications raising this issue published in scientific journals in particular years. Figure 1 presents the number of articles and conference papers issued in the period 2003-2016 for which the following keywords were assigned: "socially responsible investment" or "socially responsible investing"; "responsible investment" or "responsible investing" and "ethical investment" or "ethical investing" [8].

7 Socially irresponsible investing includes purposeful allocation of free funds in securities of companies that do not meet specific standards e.g. (companies from the armaments industry, manufacturers of alcohol and tobacco).

8 It should be noted that the information collected on the basis of databases of scientific publications has its own limitations: 1) due to the use of several phrases in the search the same article can be included several times 2) many pioneer papers do not contain relevant keywords, because at the time of their publication the respective conceptual network was not available yet 3) no database covers all scientific journals – in the case of the Scopus base, on the date of conducting the search they amounted to more than 22 thousand titles 4) The most recent articles may not yet be included in the database. Probably it is a reason why a number of articles with the considered keywords dropped after 2014.

Figure 1: Number of articles raising the issue of socially responsible investing in the years 2003-2016



Source: prepared by the author on the basis of the Scopus database (www.scopus.com), accessed on 26.07.2017

An attempt to systematize research concerning the effect of using SRI strategy on portfolio performance and risk leads to distinction of four criteria for their classification, i.e. in terms of: 1) subject scope, 2) geographical scope, 3) applied research methods, 4) research findings. The indicated criteria constitute the basis for the review of research conducted further in the paper. The list of selected researches is presented in Table 1, including author (authors) and year of publication, subject scope, geographical and time scope of studies as well as key conclusions. Having in mind the significant cognitive value of the research result criterion, the table was divided into three parts accordingly. Within each part particular research was arranged in chronological order by the year of issuing.

Subject scope of studies on SRI

Considering the subject scope of research on performance and risk of SRI, one can identify studies where it includes:

1) SRI indexes and classic indexes;
2) mutual funds using SRI strategies and, as a comparison, conventional mutual funds or appropriate benchmarks;
3) investment portfolios constructed for the purposes of specific research (using both SRI and conventional strategies);
4) shares of companies included in social responsibility rankings and shares of companies not included in these rankings.

Table 1, column five indicates subject scope of particular research included in the analysis. When analysing different items, it may be noted that in terms of quantity, definitely studies dominated considering the analysis of performance of investment funds and researches that compare results of stock exchange indexes. On the other hand, a relatively small number of publications focused on the structure of unique investment portfolios with the

Table 1: Key findings of the selected studies on SRI performance

Publication	Geographical scope	Subject scope	Time scope	Research conclusions
Research whose results indicate positive effect of using SRI strategies on portfolio performance and risk				
Haveman, Webster (1999) *	GB	15 SRI funds	07.1988- 07.1998	SRI funds are characterized by a lower risk than traditional funds, however, it entails lower rates of return.
Abramson, Chung (2000)	US	2 panels made of shares of 177 companies and shares of 120 companies and 5 indexes used as benchmarks	09.1990- 03.2000	ESG factors positively affect return on investments.
Asmundson, Foerster (2001)	CA	6 SRI funds and TSE 300 Total Return index as benchmark	01.1995-12.1999	Rates of return on SRI funds are running at a similar level as rates of return on classic funds. On the other hand, SRI funds are characterized by lower risk.
Derwall, Gunster, Bauer, Koedijk (2005)	US	shares of 450 companies	07.1995-12.2003	A portfolio consisting of companies with a high environmental ranking achieved better results than a comparative portfolio.
Shank, Manullang, Hill (2005)	US	1 SRI fund, 1 "sinful" fund	12.1993-12.2003	In the analysed period, both funds demonstrated exceptional rates of return, however, they were statistically significant only with respect to the SRI fund.
Barnett, Salomon (2006)	US	61 mutual funds	01.1972- 12.2000	The use of social factors in the investment process brings positive results, there is no evidence of positive effect of including the environmental criteria.
Kempf, Osthoff (2007)	US	shares of 650 companies	01.1991-12.2003	The use of SRI strategies may be reflected in a greater rate of return for portfolio subject to the use of the strategy of positive screening or the best in class strategy. The findings are statistically significant.
Colisson, Cobb, Power, Stevenson (2008)	US, Eurozone, GB, world market	8 SRI indexes of the FTSE group and their benchmarks	01.1996-12.2005	In the whole analysed period, SRI indexes recorded higher rates of return than their classic benchmarks, though in the period 2001-2005 they were lower. The same conclusions result from the analysis of risk-adjusted performance measures.
Nakai, Yamaguchi, Takeuchi (2013)	JP	Shares of companies forming the Morningstar SRI Index	05.2003-09.2010	Incorporation of companies in the SRI index positively affects rate of return on their shares. On the other hand, slope in share prices was not observed in the case of removal of companies from the SRI index.

Yu (2014)	US	321 SRI funds	01.1999-12.2009	As a matter of fact, rates of return on SRI fund are lower than in the cases of traditionally managed funds, however, values of risk-adjusted performance measures indicate that SRI funds perform better than traditional funds.
Humphrey, Warren, Boon (2016)	US	151 SRI funds and 3637 conventional funds	01.2003-12.2012	SRI fund investors can expect returns that are neither better nor worse than those from investing in a conventional fund.
Tripathi, Bhandari (2016)	India	All companies listed in S&P ESG India Index	01.1996-12.2013	Returns of socially responsible companies are significantly higher than returns of general companies.
The research whose results indicate no effect of using SRI strategies on portfolio performance or risk				
Hamilton, Jo, Statman (1999)	US	32 SRI funds, 170 conventional funds	01.1981- 12.1990	The achievements of particular groups do not show statistically significant difference.
Mallin, Saadouni, Briston (1995)	GB	29 SRI funds, 29 conventional funds	01.1986-12.1993	Higher rates of return and lower risk of SRI funds was recorded. Differences considered as statistically insignificant.
Gregory, Matako, Luther (1997)	GB	18 SRI funds, 18 conventional funds	01.1986- 12.1994	Lower rates of return on SRI funds were recorded. The difference is not, however, statistically significant.
Statman (2000)	US	31 SRI funds, 62 conventional funds	Different periods before 1998	SRI funds are characterized by higher rates of return and lower risk. Differences are however statistically insignificant.
Cummings (2000)	AU	7 ethical funds	09.1986-10.1994	No significant differences in relation to benchmarks.
Platinga, Scholtens (2001)	FR, BE, DE	784 mutual funds with different degree of using SRI	01.1994-07.1999	Funds using SRI achieve slightly higher rates of return. Observed differences are statistically insignificant.
Schroeder (2004)	DE, CH, US	30 American funds, 16 German and Swiss funds and 10 SRI indexes	Different periods before 2002	Some SRI funds reached statistically insignificantly higher rates of return.
Bauer, Koedijk, Otten (2005)	DE, US, GB	103 SRI funds, 4384 conventional funds	01.1990-12.2001	Both higher and lower rates of return generated by SRI funds were recorded in the analysed period, however observed differences were considered as statistically insignificant.
Vermeir, Van de Velde, Corten (2005)	US, Eurozone, world market	6 SRI indexes and 6 conventional indexes	01.1998-12.2004	4 per 6 SRI indexes reached higher rates of return at greater risk. However, the observed differences were not statistically significant.
Bello (2005)	US	42 SRI funds, 84 conventional funds	01.1994-03.2001	Rates of return adjusted by risk from SRI funds are indistinguishable in respect of similar rates of return on traditional funds.
Kreander, Gray, Power, Sinclair (2005)	NL, DE, SE, GB	29 SRI funds and 29 conventional funds	01.1986-12.1993	SRI funds are characterized by higher rates of return and lower risk. Differences are however statistically insignificant.

Scholtens (2005)	NL	12 SRI funds were compared with standard indexes and SRI indexes	11.2001-04.2003	Insignificantly better results of SRI funds in respect of SRI indexes, slightly worse results of SRI funds in respect of traditional indexes. Both observations are statistically insignificant.
Bauer, Otten, Rad (2006)	AU	25 SRI funds, 281 conventional funds	11.1992-04.2003	Differences in rates of return between SRI funds and traditional funds are statistically insignificant.
Benson, Brailsford, Humphrey (2006)	US	185 SRI funds and S&P indexes as benchmarks	01.1994- 12.2003	Investment results of SRI funds are indistinguishable from conventional funds' results.
Core, Guay, Rusticus (2006)	US	shares in 732 companies	09.1990-12.1999	ESG factors neutral in respect of share prices.
Statman (2006)	US	4 SRI indexes and 1 conventional index	05.1990 -04.2004	SRI indexes generate higher rates of return than classic indexes (S&P 500). These observations are not statistically significant.
Bauer, Derwall, Otten (2007)	CA	8 SRI funds, 267 conventional funds and Jantzi Social Index	01.1994-12.2003	Np significant differences between achievements of the analyses funds were found.
Renneboog, Horst, Zhang (2008)	11 European countries, US, CA, AU, JP, MY, SG	440 SRI funds and 16 038 conventional funds	01.1991-12.2003	SRI funds achieve weaker results than benchmark funds in most analysed countries. However, differences in rates of return are statistically insignificant.
Blanchett (2010)	US	164 SRI funds and 18 indexes-benchmarks	01.1990-12.2008	SRI funds achieve slightly lower profitability than their classic counterparts, showing, however, higher risk-adjusted performance. However, both results are not statistically significant.
Cortez, Silva, Areal (2012)	AT, BE, FR, NL, DE, GB, IT, US	39 European SRI funds, 7 US SRI funds	08.1996-08.2008	Results of European SRI funds are comparable to benchmarks' achievements. In the case of US SRI funds, a lower performance was observed in relation to benchmark.
Managi, Okimoto, Matsuda (2012)	JP, US, GB	4 SRI indexes and 3 conventional indexes	08.2001-07.2008	No statistically significant differences were observed in rates of return and risk from the analysed funds on any of the analysed markets.
Humphrey, Tan (2014)	US	Shares in companies comprising the index SP500	01.1996-12.2010	There is no evidence of positive or negative effect of the screening strategies on investment portfolio parameters.
Auer (2016)	Europe	520 companies which were included in STOXX 600 index and had ESG rating	06.2004-12.2012	SRI strategies can be implemented to portfolio selection without doing harm to the portfolio performance. For certain SRI strategies, even increased portfolio performance can be achieved.

Auer, Schuhmacher (2016)	Asia-Pacific region, Europe, US	shares of 1518 companies	08.2004-12.2012	ESG stocks do not consistently increase or decrease investment performance. However, in certain industries and depending on the ESG criterion, investors pay a price for being socially responsible in their stock selection.
The research whose results indicate a negative effect of using SRI strategies on portfolio performance or risk				
Geczy, Stambaugh, Levin (2005)	US	35 SRI funds, 859 conventional funds	07.1963- 12.2001	Lower rates of return on funds using SRI were observed. When fulfilling additional conditions, differences are significant.
Brammer, Brooks, Pavelin (2006)	GB	shares in 451 companies listed on the London Stock Exchange	06.1997- 06.2002	Stocks of companies regarded as socially responsible have lower rates of returns than the FTSE All Shares index.
Chong, Her, Phillips (2006)	US	1 SRI fund, 1 "sinful" fund	08.2002- 08.2005	The "sinful" fund achieved better results than the SRI fund.
Girard, Rahman, Stone (2007)	US	117 SRI funds and corresponding benchmarks	01.1984-12.2003	SRI funds are less diversified than conventional funds.
Cliement, Soriano (2011)	US	7 "green" funds 14 SRI funds and 28 traditional funds	03.1987-12.2009	In the period 1987-2001, "green" funds achieved lower rates of return than conventional funds. After 2001, differences between "green" funds, SRI funds and conventional funds are indistinguishable.
Leite, Cortez (2015)	FR	40 French SRI funds and 120 conventional funds.	01.2001-12.2012	The study concentrates on performance of mutual funds during crisis and non-crisis periods. The authors found that SRI funds significantly underperform conventional funds during non-crisis periods, but match the performance of their peers during market downturns.
Halbritter, Dorfleitner (2015)	US	Companies listed in databases: ASSET4 (1170), Bloomberg (1073), KLD (4209)	01.2002-12.2011	The ESG portfolios do not show significant return differences between companies featuring high and low ESG rating levels.

Source: prepared by the author on the basis of particular publications and: (Philips, Hager & North, 2007), (The Asset Management Working Group of the United Nations Environment Program Finance Initiative & Mercer, 2007), (RBC Global Asset Management 2013)

Geographical scope of studies on SRI

A wide review of studies raising the issues of socially responsible investing was made by Viviers and Eccles (2012). They indicated that 34.2% of all studies was related to the US and Canadian market, 18.0% – to the UK market, 16.2% – to the European markets other than the UK, 13.5% – to other regions of the world (Africa and Australasia), and in 18% of those studies the geographical scope was not defined. Attempting to conduct an in-depth analysis of the geographical scope of research on socially responsible investing it may be noted that it was correlated in time with the spreading of this concept around the world. The first research focused on the market of the United States (Moskowitz, 1972; Rudd, 1981), then, in the 1990s, analyses covered the British market (Mallin, Saadouni & Briston, 1995; Gregory, Matako & Luther, 1995). Later, attention was paid to markets of other developed countries, such as Australia (Cummings, 2000) and Canada (Asmundson & Foerster, 2001; Bauer, Derwall & Otten, 2006) and countries of continental Western Europe, which, due to unified markets, were usually analysed together or in larger groups. For instance, Kreander, Gray, Power and Sinclair (2005) were analysing the markets of the Netherlands, Germany, Sweden and Great Britain, and Cortez, Silva and Areal (2009) – the markets of Austria, Belgium, France, Germany, Italy, the Netherlands and Great Britain. An exception to this rule were, among others, Spain and the Netherlands for which also separate research was conducted (Scholtens, 2005; Fernandez-Izquierdo, Matallin-Saez, 2008). Currently, research raising the issues of socially responsible investing is conducted with regard to most financial markets on which relevant data are available. More and more often they cover also, at the same time, the markets of several countries. For instance, Cortez, Silva and Areal (2012) carried out research including 7 European markets and the USA and Hong and Kacperczyk (2009) included in research Canada, France, the Netherlands, Spain, Germany, Switzerland, Great Britain, and Italy. So far, the broadest in terms of geographic scope research was carried out by Renneboog, Horst and Zhang (2008b) who analysed 11 countries of Western Europe, 4 countries from the region of Asia and the Pacific and the United States and Canada.

Methodology of empirical studies

Analyses concerning performance and risk of SRI make use of various research methods. An attempt of their standardization and classification results in distinction of four groups of this type of method:

1) comparative analysis of results of mutual funds declaring the use of SRI strategies with achievements of conventional mutual funds;

2) comparison of rates of return generated by traditional stock exchange indexes with rates of return of SRI indexes;

3) the use of widely known capital market models to analyse rates of return generated by socially responsible portfolios and their comparison with rates of return on portfolios constructed by using the conventional methods;

4) the use of simulative methods in order to create random, hypothetical portfolios of shares of companies regarded as socially responsible and then comparison of their performance with portfolios consisting of shares in any companies

Examples of publications where the first three from among the listed methods were used are presented in Table 1. On the other hand, simulative methods were used, among others, by Adler and Kritzman (2008).

The use of the above listed methods of verification of the effect of using SRI strategies on investment performance and risk is based mainly on adequate use of classic portfolio analysis tools. Traditional indicators of portfolio performance and risk, as well as risk-adjusted performance measures and measures of selectivity and market timing are usually calculated in empirical research. The first to conduct research based on risk-adjusted performance measures were Hamilton, Jo and Statman (1993). In the context of risk-adjusted performance measures it is worth paying attention also to the paper by Statman (2000), in which a modified variant of the Sharpe indicator was used, referred to as eSDAR (excess standard-deviation-adjusted return). Measures of selectivity were used, among others, by Girard, Rahman and Stone (2007). Schroeder (2003) applied the model approach to research on market timing of SRI funds managers in line with the concept by Treynor and Mazuy (1996). The most often used model for calculations of values of performance and risk measures is the one-indicator Sharpe model (1964). Some authors also apply more extended models including those proposed by Fama and French (1993) and Carhart (1997). It is also worth noting that some authors use for assessment of performance of SRI strategies more sophisticated methods, such as e.g. analysis of conditional multi-factors models (np. Bauer, Derwall & Otten, 2006; Cortez, Silva & Areal 2012), ARCH/GARCH models (e.g. Chong, Her & Phillips, 2006), MS models estimated by using the highest credibility method (e.g. Managi, Okimoto & Matsuda, 2012) or simulation by using the Monte Carlo method (e.g. Adler & Kritzman, 2008).

Results of the analysed studies

In respect of final research findings, publications concerning performance and risk of SRI strategies can be divided into three groups (see classification in Table 1):

1) studies proving that in relation to classic methods of selecting assets, using SRI strategies leads to achievement of higher rates of return or lower risk, or both effects at the same time;

2) studies whose findings prove that using SRI strategies leads to a slump in portfolio performance or growth in its risk, or both effects at the same time;

3) studies indicating no effect of using SRI strategies on performance and risk of investment portfolio.

Analysis of findings of particular studies leads to a conclusion that in most of them no empirical evidence that using SRI strategies leads to statistically significant over- or underperformance of the portfolio was found. These conclusions are consistent with observations of Rathner (2013) who indicates that in almost 75% of the so far published research no empirical confirmation was found of the presence of statistically significant differences in rates of return of SRI funds and conventional funds. The remaining 25% of publications contain, on the other hand, to an equal extent, evidence of greater and smaller performance of SRI funds. Similar conclusions were also drawn by Revelli and Viviani (2013) who, in the period 1972-2009, identified 161 empirical attempts to verify hypotheses about the direction of effect of using SRI strategies on investment performance and risk . According to their observations, 40 studies indicate the positive effect of using SRI strategies on portfolio parameters, 31 suggest that this effect is negative, and the conclusion of 80 studies is lack of effect of using SRI strategies on portfolio performance and risk.

Summary

In the theory, three hypotheses can be formulated, referring to the issues of the effect of SRI strategies on portfolio performance and risk. These are hypotheses about: 1) positive, 2) negative, 3) neutral effect of using SRI strategies on investment portfolio parameters. The literature does not contain the final consensus as to which of these hypotheses is true. When formulating arguments to support particular hypotheses, the authors refer to various research streams, among which special attention should be paid to those referring to: modern portfolio theory; concept of asset selection costs; analysis of correlation between the use of the CSR policy by companies and their performance and association between socially responsible behaviour of companies with their competitive position.

The research conducted in the paper was based on detailed analyses of findings of previous studies. These analyses were then the basis for the synthesis that was conducted on the basis of criteria such as: subject scope, geographical scope, used research methods and research findings. As a result of these works it was possible to indicate the desired directions of further research concerning the issue of socially responsible investing. Subjects requiring in-depth analysis are:

1) the issue of possible differences in the effect of implementing various SRI strategies (negative screening, positive screening, involvement, etc.) on portfolio performance and risk.

2) analysis of the effects of using SRI strategies on financial markets in various countries, depending on the degree of their development (emerging markets, developed markets),

3) effect of management skills (market timing and selectivity) on performance of SRI funds,

4) conditions and determinants for development of a socially responsible investment market,

5) non-financial effects of using SRI strategies by various entities of the financial market (pension funds, insurance companies).

In association with the lack of the final consensus about the direction of effects of using SRI strategies on portfolio performance and risk, further detailed researches in this issue are also desirable. Those studies should focus on using the latest research methods and tools. In addition, the behavioural approach to socially responsible investing seems interesting. Under this approach, an answer is looked for to the question about expectations and motivations of socially responsible investors.

In the context of performance and risk of socially responsible investing there is also one more important thing which should be mentioned. This is a specific factor which may have an influence on results of various empirical analyses, regardless of the adopted research methodology. This factor is conducting of research on the effect of using SRI strategies on investment portfolio parameters during dynamic development of the SRI market. It may turn out that performance of this type of investment affects an increased demand for financial instruments meeting the criteria formulated by socially responsible investors, which only temporarily exceeds supply of this type of instrument. In this situation, the mechanism of market balance will result in the future in decrease in performance of investments in financial instruments meeting the SRI criteria. This observation is partially confirmed in the research by Bauer, Otten and Councils (2006) who came to a conclusion that the effects of using SRI strategies on the Australian market were different, depending on the development phase. Cliement and Soriano (2010) formulated a similar conclusion for the US market. In this situation, the only way of verification of this type of doubt is re-conducting research on performance and risk of SRI in the future including a longer time horizon.

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