10.2478/cer-2018-0017

MAGDALENA MIKOŁAJEK-GOCEJNA[*]

The Environmental, Social and Governance Aspects of Social Responsibility Indices – A Comparative Analysis of European SRI Indices

Abstract

An increasing number of investors want to invest their capital not only with profit but also responsibly, and they pay significant attention to the formula of socially responsible investing (SRI), which means that they consciously engage their funds in companies operating in accordance with CSR principles. An important influence on the development of CSR is the role of stock exchange indices on socially responsible companies. These indices can be considered specific tools for adapting this concept in practice, in particular in the field of socially responsible investment.

This article provides a comparative analysis of the social, environmental and governance criteria underlying the definition of the composition of selected European SRI indices. The research will cover the following indices: the DJSI Europe Index, the FTSE4Good Europe 40, the FTSE4Good Europe 50, the EURO STOXX Sustainability 40 and the Solactive Sustainability Index Europe.

This paper also intends to set an index reflecting the degree to which companies of certain European countries are represented in major European SRI indices. Consequently, global and national initiatives and ratings were excluded, as well as sector- and industry-specific initiatives and ratings. The proposed index is standardized by introducing the GDP of each country into the calculation formula as a way to a achieve comparable result. We believe that the proposed metric will reflect the state of the art in SRI and provide an overall picture of SRI practices across nations.

Keywords: *social responsibility indices, corporate social responsibility, positive, negative screening strategy, ESG*

JEL: *M14, O16*

[*] Prof., Warsaw School of Economics, Institute of Value Management, Department of Axiology and Value Measurement, Warsaw, Poland, e-mail: magdalena.mikolajek@gmail.com

1. Introduction

Socially responsible investing (SRI) is an investment process that integrates analysis of environmental, social and governance issues into traditional quantitative financial analysis. There is terminological heterogeneity in the literature regarding responsible investment. The most frequently used term to identify investments that integrate social, ethical, environmental and corporate governance in the investment process is socially responsible investing (Sandberg et al. 2009, pp. 519–533). Another definition points out that socially responsible investing (SRI) means integrating nonfinancial factors – such as ethical, social or environmental concerns – into the investment process with the aim of earning both a financial return and a moral 'return' (Foo 2017, p. 4). Muñoz-Torres interprets socially responsible investments as investments which combine financial goals with social values (Muñoz-Torres et al. 2004)

The European Social Investment Forum defines SRI as a process combining investors' financial objectives with environmental, social and corporate governance issues (so-called ESG factors). This definition is in accordance with the sustainability triple bottom line philosophy (Elkington 1999, pp. 75–77). EUROSIF calls SRI as "sustainability and responsible investing" which "…has evolved from a risk management focus (typically linked to investment exclusions of specific companies and sectors) to one that seeks opportunities for the creation of long-term value for business and society"[1]. Therefore, socially responsible investing is not contrary to the essence of traditional investing (Rogowski and Ulianiuk 2012). The term SRI is often used interchangeably with other terms like 'ethical investing', 'sustainable investing', 'responsible investing', 'socially investing', 'green investing' or 'mission-related investing' (Czerwonka 2013).

Socially responsible investing can be recognized as a selection of instruments for the investment portfolio that meet specific criteria related to an organization's ESG or CSR characteristics.

SRI takes different approaches to ensure that their investments do no harm. The first is an exclusion screening strategy which involves the elimination of "unethical" companies from the investment portfolio. The term exclusions refers to the elimination of companies or of sectors from the investment universe of the portfolio. In general, there are two approaches to implementing exclusions: industry classification or company exposures, which focus on companies' actual exposures to specific activities, using a share of company revenues from specific activities. Exclusions can be based on ESG criteria or have a norms-based dimension when screening excludes companies that fail to comply with international standards or conventions (Eurosif 2016, p. 20). Examples of this include screening for "sin stocks", i.e., excluding investment in companies considered to promote harmful societal outcomes, such as the tobacco,

[1] http://www.eurosif.org/wp-content/uploads/2018/01/Eurosif-SDGs-brochure.pdf (accessed: 16 March 2018)

alcohol, gambling, and adult entertainment industries. It also applies to divesting from companies that do business with oppressive regimes or violate ethical, moral, or religious standards (Global Sustainable Investment Alliance. "Global Sustainable Investment Review 2012." p. 14). This approach seeks to reduce the chance of reputational risk, where investment is connected with a negative event or business practice.

Alternatively, a positive screening strategy selects companies with the highest levels of social responsibility (CSR, ESG) (Camey 1994, pp. 20–23). Such a strategy allows investors to assess the degree to which each company in their portfolios respects issues that impact environmental, social and governance criteria by adhering to global norms on environmental protection, human rights, labor standards and anti-corruption (Eurosif 2016, p. 20). The purpose of this is to encourage and assist socially responsible behavior in companies (Bischofskonferenz 2010).

Renneboog (2008) defined environmental, social or ethical criteria used by SRI funds in negative and positive screening, which were structured by Radu and Funaru (2011) as follows:

Table 1. Negative and positive screening

Negative screening		**Positive screening**	
Tobacco	In the structure of an SRI fund portfolio, manufacturers of tobacco products are avoided	Labor relations and workplace conditions	Seek firms with strong union relationships, employee empowerment, and/or employee profit sharing. Avoid firms exploiting their workforce and sweatshops
Alcohol	Avoid firms that produce market alcoholic beverages	Pollution control	Seek firms with a proactive involvement in recycling, waste reduction and environmental clean-up. Avoid firms producing toxic products, and contributing to global warming
Gambling	Avoid casinos and suppliers of gambling equipment	Business practice	Seek companies committed to sustainability through investments in research and development, quality assurance and product safety
Military weapons	Avoid firms producing weapons	Corporate governance	Seek companies demonstrating "best practices" related to board independence and elections, auditor independence, executive compensation, expensing of options, voting rights or other governance issues. Avoid firms with antitrust violations, consumer fraud and market scandals

Negative screening		Positive screening	
Nuclear power	Avoid manufacturers of nuclear reactors and firms operating nuclear power plants	Employment diversity	Seek firms pursuing an active policy related to the employment of minorities, woman and/or disabled persons who ought to be represented among senior management
Irresponsible foreign operations	Avoid firms with investments in firms located in oppressive regimes such as Burma or China, or firms that mistreat the indigenous people of developing countries	Human rights	Seek firms promoting human rights standards. Avoid firms which are complicit in human rights violations
Pornography/ adult entertainment	Avoid publishers of pornographic magazines, production studios that produce offensive video and audio tapes, companies that are major sponsors of graphic sex and violence on television	Renewable energy	Seek firms producing power derived from renewable energy sources
Abortion/ Birth control	Avoid providers of abortion, manufacturers of abortion drugs and birth control products, insurance companies that pay for elective abortions	Biotechnology	Seek firms that support sustainable agriculture, biodiversity, local farmers and industrial applications of biotechnology. Avoid firms involved in the promotion or development of genetic engineering for agricultural application
Animal testing	Avoid firms that test or produce hunting or trapping equipment, or which use animals in their end products. Seek firms promoting the respectful treatment of animals	Community involvement	Seek firms with proactive investments in the local community by sponsoring charitable, donations, employee volunteerism and/or housing and educational programs
Pork producers	Avoid companies that derive a significant portion of their income from manufacturing or marketing of pork products (used by funds managed according to Islamic principles)	Shareholder activism	SRI funds that attempt to influence company actions through direct dialogue with management and/or voting at Annual General Meetings
Healthcare Pharmaceuticals	Avoid healthcare industries (used by funds targeting the Christian Scientist religious group)		

Source: Radu I., Funaru M. (2011), p. 160.

Another socially responsible investing strategy is best-in-class classification based on classifying available investment assets on the basis on of their issuers' involvement in corporate social responsibility, and then including leading entities in their sector or investment asset class in the investment portfolio. The idea behind this approach is that the better companies act as a model for the less-than-good companies (Bischofskonferenz 2010). This approach also enables the investor to integrate ethical with financial decision-making, for example in cases where two companies get a similar rating against traditional financial indicators, (Hellsten et al. 2006, pp. 399–400).

SRI strategy can also be based on sector selection (pioneer screening/thematic investment propositions). Such a strategy includes a variety of themes, which allows investors to choose specific areas of investments, typically with a close link to sustainable development or seeking solutions in the field of global civilization problems.

Normative (norm-based screening) selection allows investors to assess the degree to which instruments issuers respect normative regulations and standards developed by international organizations on environmental protection, human rights, labor standards and anti-corruption. Norms-based screening can be used both as a standalone strategy or in combination with other strategies, typically engagement and exclusion (Eurosif 2016, p. 20). Engagement strategy is based on portfolio managers exerting an influence, mainly through dialogue and corporate governance policy, on enterprises to encourage them to engage in responsible business practices. It supports the idea that shareholders can use their specific rights and privileges as a tool for social change (Sandberg 2008, p. 233). Such an SRI strategy has a very strong link with fiduciary duty, as it is driven in large part by the view that shareholders are stewards of assets who are accountable to their beneficiaries for how they manage those assets (Eurosif 2016, p. 22).

Another SRI strategy is ESG integration strategy, based on the permanent combination of criteria for responsible business practices for financial analysis and investment assessment by portfolio managers (Czerwińska 2009, pp. 13–14).

There are also impact/community investing strategies, which consist of charitable contributions, involvement in public-private partnerships, or volunteer programs (Lydenberg and Kurtz 1992, p. 209).

Impact investing is becoming more and more important in the the practice of investment (Saltuk 2011), though some authors argue that community development investing should not be seen as a part of SRI, but rather as socially directed investments (Sparkes 2001, pp. 194–205).

In the literature, negative selection is classified as the first generation of SRI investment strategies, positive selection is the second generation, the third is engagement, and integration is the fourth (Renneboog et al. 2008, p. 1728).

The global responsible investment industry has grown rapidly. According to the Global Sustainable Investment Alliance (GSIA), the worldwide 'sustainable investment' market grew from US$13.3 trillion at the start of 2012 to US$22.9 trillion at the start of 2016 (GISIR Review 2016, p. 3). The SRI market is most advanced in Europe. Total assets committed to sustainable and responsible investment strategies grew by 12 percent from 2014 to 2016, to reach $12.04 trillion

(GISR Review 2016, pp. 3–4). Although institutional investors continue to lead the market, the retail sector has grown from 3.4 percent to 22 percent.

According to GISIR (2016), the largest sustainable investment strategy globally is negative/exclusionary screening ($15.02 trillion), followed by ESG integration ($10.37 trillion) and corporate engagement/shareholder action ($8.37 trillion).

In Europe, the largest strategy is negative screening, but the fastest growing strategy is impact investing (Eurosif 2016, p. 12).

2. Select Global Indices of Socially Responsible Investing

As we can see above, an increasing number of investors want to invest their capital not only with profit, but also responsibility, and they pay significant attention to the formula of socially responsible investing (SRI). In such investments, they try to seek stability and security for their investment portfolios, treating them as a determinant of the proper functioning of the business and the basis for building the company's credibility. The flagship initiative implemented by stock exchanges all over the world is the socially responsible index. Stock exchanges which decide to create ESG indices try to use the environmental, social and governance criteria in such a way that they fully reflect the level of maturity of companies listed in this area. Such indices also are becoming a reliable point of reference for analysts and investors. They consist of shares of companies that take environmental, social and governance issues into consideration in their activities, setting standards in the aspect of corporate social responsibility. They are also the right foundation for comparing the results of the companies (M. Marcinkowska 2010, p. 128). A comparative analysis of social, environmental and governance criteria specifying which companies to include in SRI indices indicates that they are trying to address significant risks related to individual dimensions of business operations. At the same time, the adoption of these criteria, confirmed by joining the index, may be a useful reference point for analysts or investors assessing the appropriateness of investing in a given company. Moreover, such indices affect the continuous improvement of CSR practices by enterprises in order for them to stay in the index or to join it.

Currently, there are more than 50 indices of responsible companies on the global market.

The most well-known index families are the Dow Jones Sustainability Index and the FTSE4GOOD Index. We can talk about families (series) of indices, because the increase in interest in socially responsible investments results in the creation of specific segments of these investments, concerning a specific investment group (specific CSR criterions of companies, market, country, type of financial instruments, company size), and thus the creation of indices for these specific investments. The beginnings of the Dow Jones Sustainability Indices date back to 1999, when the Dow Jones, STOXX Limited and the SAM Group decided to develop an index allowing them to support investment decisions by identifying those companies that are characterized by the highest degree of implementation of the concept of social responsibility. In general, **The Dow Jones Sustainability Index** (DJSI) considers the following criteria:

1. Economic, which includes, among others: corporate governance, risk management, counteracting corruption, and good practice principles;
2. Environmental, in particular: the effectiveness of the use of environmental resources, and information systems in the field of environmental protection;
3. Social, including, among others: human capital development programs, talent recruitment systems, philanthropy programs, or CSR information.

The DJSI family contains one main global index, the Dow Jones Sustainability World Index, and various indices based on geographic regions, such as the Dow Jones Sustainability Europe Index, the Dow Jones Sustainability North America Index, the Dow Jones Sustainability Asia Pacific Index, the Dow Jones Sustainability Korea Index, DJSI Emerging Markets, and DJSI Chile[2]. The DJSI also contains industry-specific indices called "blue chip indices" and indices for investors who wish to limit their exposure to controversial activities: the DJSI Indices with exclusion criteria such as Armaments & Firearms, Alcohol, Tobacco, Gambling and Adult Entertainment[3].

The British equivalent of the Dow Jones Sustainability Index series is the **FTSE4GOOD Index series**, first published in 2001 by the London Stock Exchange. It is the best-known index group in Europe referring to the issue of social responsibility and sustainable development, based on the assessment of ESG factors (environmental, social and governance criteria). FTSE4Good is a series of indices designed to objectively measure the effectiveness of companies that meet globally recognized standards of social responsibility and sustainable development. The FTSE4Good index responds to the needs of individual and institutional investors who want to invest only in such companies that meet social responsibility standards, minimize social and environmental hazards in their portfolios and use the benefits of eco-efficiency and image improvement. The FTSE4Good Index Series includes more than 15 benchmarks, based on research of over 3,000 securities in 46 Developed and Emerging markets[4]. The FTSE4Good Index family consists of: the FTSE4Good Developed Index, the FTSE4Good USA Index, the FTSE-4Good Europe Index, the FTSE4Good UK Index, the FTSE4Good Australia Index, the FTSE4Good Developed 100 Index, the FTSE4Good USA 100 Index, the FTSE4Good Europe 50 Index, the FTSE4Good UK 50 Index, the FTSE4Good Aus-

[2] http://www.sustainability-indices.com/index-family-overview/djsi-family-overview/index.jsp.
[3] see: RobecoSAM, Dow Jones Sustainability Indices. Methodology, October 2017.
[4] http://www.ftse.com/products/downloads/FTSE4Good-brochure.pdf.

tralia 30 Index, the FTSE4Good Japan Index, the FTSE4Good Emerging Index, the FTSE4Good ASEAN 5 Index, and the FTSE4Good Emerging Latin America Index. It is assumed that the indices of the FTSE4GOOD Index group will be used as tools for creating investment portfolios targeted at socially responsible investments. In addition, the index helps identify companies that respect the principles of sustainable development, and at the same time, it is a determinant of the high standards for which they should strive. The indices from the FTSE4GOOD Index group are also used as a benchmark to track the effectiveness of sustainable investment portfolios. The index classifies companies that fulfill particular positive criteria concerning groups of factors such as environmental impact, standards work in the supply chain, mitigating climate change, human rights, and counteracting corruption. It also takes into consideration negative criteria, excluding companies whose business profile consists of the production of conventional and nuclear weapons, uranium extraction and transformation, the extraction of coal, or tobacco production. The FTSE4Good Global Analysis Index allows the percentage share of particular industries in its structure to be determined. The financial sector has the largest share in the index (24.46%), followed by the technological sector (15.9%), healthcare (13.86%), consumer goods (12.24%) and consumer services (9.46%). The FTSE4Good Index also creates a list of countries participating in the index and the percentage of enterprises from individual countries. The largest share is held by United States capital (48.68%), then Great Britain (9.76%), Japan (7.84%), France (5.28%) and Switzerland (5.02%)[5].

Another group of global SRI indices is **the STOXX Global ESG Leaders indices**, tracking the performance of globally leading companies with regard to corporate sustainability. The indices are structured as follows: the STOXX Global ESG Environmental Leaders, the STOXX Global ESG Social Leaders, and the STOXX Global ESG Governance Leaders indices, which together are the STOXX Global ESG Specialized Leaders indices. Each index consists of companies that are leading in one of the three following groups of criteria: environmental, social and governance[6].

The STOXX Global ESG Leaders indices also contain industry-specific indices called "blue chip indices".

The Calvert Social Index, calculated since March 2000, measures the economic situation of American companies identified as socially responsible. The index classifies companies that fulfill particular positive criteria concerning such groups of factors as: environmental sustainability and resource efficiency; equitable societies and respect for human rights; and accountable governance and trans-

[5] FTSE FACTSHEET 31.03.2017, http://www.ftse.com/Analytics/FactSheets/Home/DownloadSingleIssueByDate?IssueName=4GGL%20&IssueDate=20170331&IsManual=%20False [accessed: 24.04.2017].

[6] https://www.stoxx.com/document/Indices/Common/Indexguide/stoxx_esg_guide.pdf.

parency[7]. The index family includes the Calvert Equity Fund, the Calvert Mid-Cap Fund, the Calvert Small-Cap Fund, the Calvert US Large-Cap Core Responsible Index Fund, the Calvert US Large-Cap Growth Responsible Index Fund, the Calvert US Large-Cap Value Responsible Index Fund, and the Calvert US Mid-Cap Core Responsible Index Fund.

KLD's Global Sustainability Index, launched in 2007, consists of a broad representation of top environmental, social and governance (ESG) performing companies across all sectors in North America, Europe and Asia Pacific. KLD's ESG ratings framework captures a company's sustainability performance by analyzing five key categories – environment; community and society; employees and supply chain; customers; and governance and ethics. The selection process for the GSI yields an index of 687 companies that will closely track the global market while exhibiting a strong sustainability identity[8].

The Index series includes the KLD Global Sustainability Index, three regional indices – the KLD North America Sustainability Index (NASI), the KLD Europe Sustainability Index (ESI), and the KLD Asia Pacific Sustainability Index (APSI) – and the KLD Global Sustainability Index ex-US (GSIXUS).

3. A comparative analysis of particular ESG criteria underlying the definition of the composition of select European SRI indices

Social, environmental and governance issues, both in internal and external dimensions, are the subject of interest to stock exchanges and are analyzed at the stage of including a given entity in the indices of responsible companies. Below is a list of selected issues in the defined sphere taken into account in the process of creating the European ESG indices. The research covers the following indices: the DJSI Europe Index, the FTSE4Good Europe 40, the FTSE4Good Europe 50, the EURO STOXX Sustainability 40, and Solactive Sustainability Index Europe. National initiatives and ratings were excluded, as were sector- and industry-specific initiatives and ratings.

The Dow Jones Sustainability™ Europe Index represents the top 20% of the largest 600 European companies in the S&P Global BMI based on long-term economic, environmental and social criteria[9].

The FTSE4Good Europe 40 and 50 Indices is designed to identify European companies with leading social, environmental and governance practices. These

[7] https://www.calvert.com/the-calvert-principles.php.

[8] http://www.csrwire.com/press_releases/23136-KLD-Launches-Global-Sustainability-Index-GSI-.

[9] https://eu.spindices.com/indices/equity/dow-jones-sustainability-europe-index.

are the companies that are doing more to manage their ESG risks and impacts. The index is constructed by taking all European companies in the FTSE4Good Index Series that have obtained the 'best practice' rating, ranking them by full market capitalization, and then selecting the top 50 to be included in the index.

The EURO STOXX Sustainability 40 Index offers a consistent, flexible and investable blue-chip representation of the largest sustainability Eurozone leaders in terms of long-term environmental, social and governance criteria. Based on the broad EURO STOXX Sustainability Index, the EURO STOXX Sustainability 40 Index covers 40 stocks from 11 Eurozone countries: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain

Solactive Sustainability Index Europe[10] is a newly launched index (2018) based on ESG criteria and rates companies on the principles of the UN Global Compact. The GC score is based on a company's record on human rights, labor, the environment, and anti-corruption[11].

Even though the literature on socially responsible investing and the measuring of CSR activities is evolving rapidly (Clarkson 1995, pp. 92–117; Szekely & Knirsch 2005, pp. 628–647), there is still no generally established method which can serve as a basis for this comparative study on a national level which combines data on economic competitiveness with data on CSR. The AccountAbility institute has published an interesting "Index of Responsible Competitiveness" (MacGillivray, Begley & Zadek, 2007).

In this study, we use European SRI indices based on the triple bottom line approach, and we are concerned only with European countries whose companies are indexed in the DJSI Europe Index, the FTSE4Good Europe 40, the FTSE4Good Europe 50, the EURO STOXX Sustainability 40 and the Solactive Sustainability Index Europe. Regional and national initiatives and ratings were excluded, as were sector- and industry-specific initiatives and ratings. The technical aspect is based on an approach proposed by Gjølberg (2009, pp. 10–22). We propose constructing the index to reflect the degree to which companies of certain European countries are represented in major European SRI indices. All of the indices represent interpretations of CSR and ESG criteria with small differences.Combining them in one index might seem like comparing apples and oranges. However, we believe that the initiatives, when combined in an index, reflect the state of the art in CSR and provide an overall picture of CSR practices across nations.

[10] https://www.solactive.com/?s=Solactive%20Sustainability%20Index%20Europe&index-members=DE000SLA4965

[11] United Nation Global Compact, A call to action for sustainability business, https://www.unglobalcompact.org/docs/publications/UNGC-Value-Proposition.pdf, p. 11.

Table 2. ESG criteria in major European SRI indices

ESG criteria	Selected ESG issues	DJSI Europe	FTSE4Good Europe 40	FTSE4Good Europe 50	Solactive sustainability index Europe	the STOXX Europe ESG
Environmental	environmental policy (its content, scale of publication)	x	x	x	x	x
	environmental management system (type and scope of system operation, scope of certification)	x	x	x	x	x
	limiting environmental impact	x	x	x	x	x
	biodiversity	x				
	direct and indirect emission of greenhouse gases (emission scale, data integrity, independent verification)	x	x	x	x	x
	environmental reporting	x	x	x	x	x
	eco-efficiency	x				x
Social	activities undertaken in the area of health and safety, certification of the occupational health and safety management system, accidents	x	x	x	x	x
	development of human capital (indicators used to measure the effectiveness of personnel strategy, training and development, development programs)	x			x	
	employee relations	x	x	x	x	x
	requirements in the sphere of responsible business for suppliers (ethical clauses, audits)	x	x	x		
	relationships with the community	x	x	x	x	
	social reporting	x	x	x	x	x
	stakeholder involvement (policy, approach, procedures, monitoring/measuring outcomes)	x			x	
	human rights	x	x	x	x	x
	corporate philanthropy	x				x

ESG criteria	Selected ESG issues	DJSI Europe	FTSE4Good Europe 40	FTSE4Good Europe 50	Solactive sustainability index Europe	the STOXX Europe ESG
Governance	governance and company organs (council construction, committees, effectiveness, remuneration principles, transparency/payroll disclosure)	x	x	x	x	x
	risk management, crisis management (organization, identification of correlations between risks, sensitivity analyses, risk culture	x	x	x	x	x
	code of ethics/conduct and business principles	x			x	x
	standards of supply chain	x	x	x		
	anti-corruption/risk of abuse	x	x	x		
	internal audit and control system	x	x	x	x	x
	customer relationship management (identifying clients, client strategies, measuring customer satisfaction)	x			x	
	tax strategy (strategy, reporting, management, risk)	x	x	x		x
	brand management (values, brand strategy, sustainable development strategy, measurement of brand strength)	x				

Source: Author's own compilation, based on: https://www.stoxx.com/document/Indices/Common/Indexguide/stoxx_esg_guide.pdf; http://www.robecosam.com/en/sustainability-insights/about-sustainability/corporate-sustainability-assessment/send.jsp; http://www.ftse.com/products/indices/FTSE4Good; https://yearbook.robecosam.com/methodology/

For all five SRI indices, the number of companies from each nation was divided by the total number of companies from all nations represented in the index. The proposed measure is standardized by introducing the GDP of each country in the calculation formula, as a way to achieve a comparable result.

The number of firms per index and per country is reported in Table 3.

Table 3. The number of firms per index and per country

Country	FTSE4Good Europe 40	FTSE4Good Europe 50	Europe STOXX	DJSI Europe Index	Solactive Sustainability Index Europe	GDP ($ bln.)	Population in mln
	number of companies in index						
Belgium	1	1	1	1	2	466.37	11.35
Denmark		1	1	2	3	307	5.731
France	6	9	9	30	6	2465	66.9
Germany	8	11	6	17	7	3467	82.67
Italy	3	4	2	5	4	1850	60.6
Netherlands		4	2	15	7	771	17.02
Norway		1	1	2		371	5.233
Spain	5	5	1	13	2	1232	46.65
Sweden	1	1		5	1	511	9.903
Switzerland	7	6	5	14	3	660	8.372
UK	10	12	8	34	5	2648	65.64
Estonia			4				1.316
Finland			1	6	1	237	5.495
Portugal				2	1	205	10.32
Ireland				1	1	305	6.2
Austria					1	386.4	8.747
Luxembourg					1	59.95	0.583
All	41	55	41	147	45	15964.86	412.73

Source: Author's own elaboration based on the macroeconomic variables from the World Bank, OECD and Eurostat

To summarize, the index represents 15 nations in 5 European SRI indices, relative to the size of their respective economies. Once all data relating to these indices (i=1…5) are gathered, the SRI index in each country (j=1…15) is calculated using the following expression (M. Gjølberg 2009, p. 15.):

$$Index\,of\;SRI_j = \frac{\dfrac{Total\,number\,of\;companies\;from\,country\;j\,in\,index\,i}{Total\,number\,of\;companies\;from\,all\,countries\,in\,index\,i}}{\dfrac{Country\;j\,GDP}{Sum\,of\;the\,GDP\;from\,all\,countries}}. \quad (1)$$

We normalized the data by using the natural logarithm which ensures the best preservation of variation across all values. Since the natural logarithm of 1 is 0, the index is easy to interpret: perfect proportionality between "SRI companies" relative to the size of GDP (or population) produces the score 0. Consequently, positive scores equal over-representation, while negative scores equal under- representation.

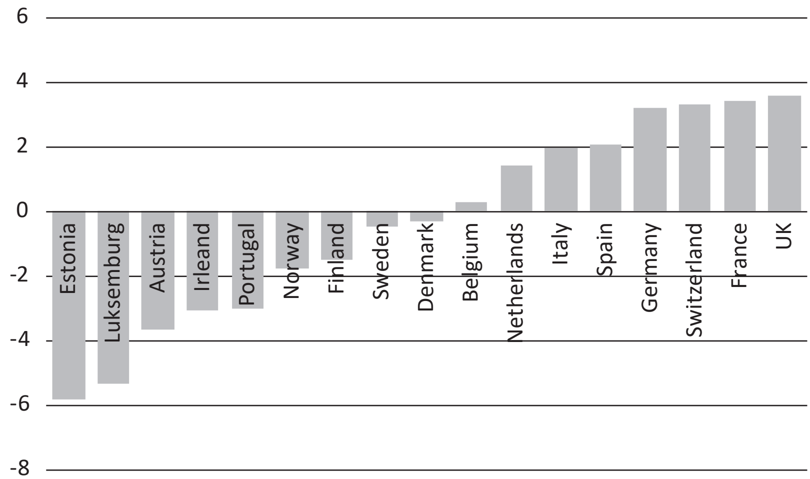

Chart 1. Index of national SRI practices, total scores per nation (GDP denominator)

Source: Author's own elaboration.

The index relies on a purely formative measurement model in the sense that the five indices are assumed to intercept different shades and shapes of SRI practices (based on the triple-line approach) across companies and countries. In fact, the index produces a somewhat unexpected distribution of country scores. The group of countries with an over-representation of companies in the five indicators consists of Belgium, the Netherlands, Italy, Spain, Germany, Switzerland, France and the UK. The group of countries with an under-representation consists of Estonia, Luxembourg, Austria, Ireland, Portugal, Norway, Finland, Sweden, and Denmark. Nordic companies are generally known for being subjected to strict social and environmental regulations, as well as for having a strong commitment to corporate social responsibility and responsible investing, but their share in European SRI indices is quite low.

Germany and UK are widely recognized for their high environmental standards, but the positive scores of Spain and France may surprise. Companies from these countries are not generally known to be very active in the European SRI society.

To test the index formula and to understand whether the ranking is maintained when one of its attributes is changed, a variation to expression (1) was introduced, using population instead of GDP in the denominator:

$$Index\,of\ SRI_j = \frac{\dfrac{Total\ number\,of\ companies\ from\,country\ j\,in\,index\,i}{Total\ number\,of\ companies\ from\,all\,countries\,in\,index\,i}}{\dfrac{Country\ j\ population}{Sum\,of\ the\ populations\ from\,all\,countries}} \quad (2)$$

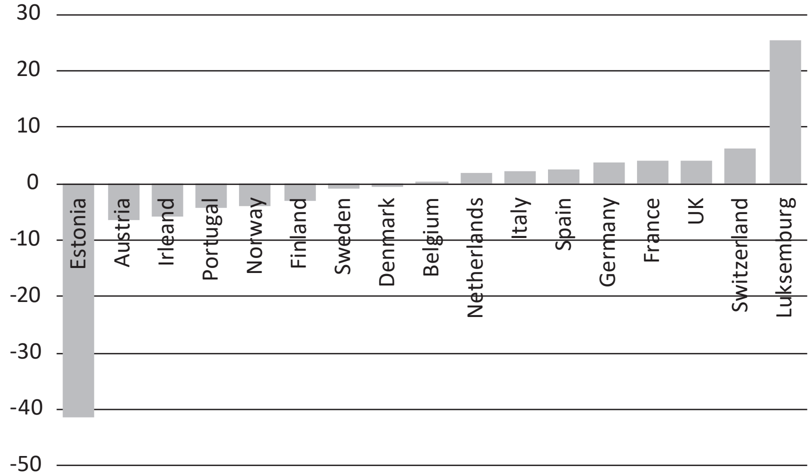

Chart 2. Index of national SRI practices, total scores per nation (population denominator)

Source: Author's own elaboration.

The qualitative conclusions remain almost unchanged, except for Luxembourg.

The index is composed of five diverse SRI indices initiatives which function as a proxy for SRI practices in a broad sense. These five indices differ regarding ESG criteria (Table 1). However, there are two important dimensions of the proposed index. First, sustainability stock market indices are typically results-oriented, focusing on demonstrable performance. They are result-oriented indices oriented only on companies listed on stock markets and they do not include NGOs, governments or other social actors who participate in socially responsible investments alongside the companies. This has a great impact on our findings.

Second, all indicators based on socially responsible investment evaluations (indices) can be categorized as results-oriented with hard requirements. Companies must document their achievements, and approval depends upon external evaluations based on environmental, social and governance criteria. Therefore, the proposed index omits all initiatives that have no entry barriers, where the only requirement is a willingness to learn and to participate.

Moreover, companies do not exist in a vacuum; they operate in an institutional environment, which affects their strategy and their commitment to socially responsible issues. Consequently, we might expect that national political, economic and social institutions cause differences between countries in socially responsible investing on the national level. Gjølberg (2007) indicated the existence of two separate roads to CSR success. The first country cluster of socially responsible leaders comprises countries with comparatively strong globalized economies (measured as the size of outward foreign direct investments) and large proportions of the biggest global companies. This group consists of the UK, Switzerland and the Netherlands, which is in line with our research. Globalized companies are more exposed to reputation risk (Bendell 2000a, 2000b; Rodgers 2000); thus, they have a particularly strong business for SRI activities. This might explain their aggregate national over-representation on our SRI index.

This can also explain the low position of Nordic countries in our ranking, because they do not have a large proportion of large and globally oriented companies. Matten and Moon (2008) also indicate that Nordic countries are embedded in an institutional environment with a strong regulatory framework, creating a more implicit style of SRI while our index measures only explicit efforts in CSR, i.e., the companies must take active steps to be included in any of the five indices.

4. Conclusions

After eliminating the outliers (Estonia and Luxembourg in the population-normalized index) both SRI indices (normalized by GDP and by population) reveal a dichotomous division:

1. Companies from the United Kingdom, France, Germany, Italy, Spain, the Netherlands and Switzerland are relatively more represented in SRI indices,
2. Companies from other countries are rarely included in indices even after normalization.

The first group includes the most important European countries from the economic point of view with high GDP per capita or (and) a large economy (volume of GDP). They include countries that formed the European Economic Community (France, Germany, Italy, and the Netherlands). Great Britain joined the community in 1973 and Spain in 1986. A significant exception in this group is Switzerland, which remains outside the structures of the community (now the European Union) but has an innovative economy with high GDP per capita.

Countries from the second group either joined the European Union later (Austria, Sweden, and Finland – 1995), or have smaller economies (Ireland, Norway, Denmark, Belgium, and Luxembourg), or weaker economies (Portugal and Estonia). In principle, this group of countries also includes all other peripheral European countries, from which companies are not included in the index at all.

The observed dichotomy can be explained from the point of view of the demand for information and satisfying this demand (supply) through the creation of specialized indices.

The countries of the first group have a high GDP per capita. Their inhabitants satisfy more and more higher-order needs. In particular, better education and material comfort draw the attention of investors from these countries to the principles of SRI. The cultural factor is also important. The countries of the first group are the core of the European Union and are very much attached to common European values promoted and protected institutionally by the Union's bodies.

The increase in the number of companies from a given country that remain in the SRI indices is a consequence of the progress of civilization. This is one more convergence field, as economic divergences between countries decrease as a result of economic growth. Concerning the relationship between CSR practices and countries' macroeconomic context, very interesting research was conduct by Pimentel et al. (2016). They observed that the Gini coefficient on social inequalities is strongly inversely correlated with CSR, and the unemployment rate seems to be inversely correlated with CSR, which also confirms our conclusions.

References

Bendell, J. (2000a), *Civil regulation: A new form of democratic governance for the global economy?*, [in:] Bendell, J. (ed.), *Terms for endearment. Business, NGOs and sustainable development*, Sheffield: Greenleaf Publishing.

Bendell, J. (2000b), *Introduction. Working with stakeholder pressure for sustainable development*, [in:] Bendell, J. (ed.), *Terms for endearment. Business, NGOs and sustainable development*. Sheffield: Greenleaf Publishing.

Bischofskonferenz (2010), Wissenschaftliche Arbeitsgruppe für weltkirchliche Aufgaben der Deutschen. Mit Geldanlagen die Welt verändern? Eine Orientierungshilfe zum ethikbezogenen Investment, Deutsche Bischofskonferenz. Bonn.

Camey, B.F. (1994), *Socially responsible investing*, 'Health Progress', No. 75(9).

Clarkson, M.B.E. (1995), *A stakeholder framework for analysing and evaluating corporate social performance*, 'Academy of Management Review', No. 20(1).

Czerwińska, T. (2009), *Społeczna odpowiedzialność polityki inwestycyjnej funduszy emerytalnych*, 'Wiadomości Ubezpieczeniowe', No. 3.

Czerwonka, M. (2013), *Inwestowanie społecznie odpowiedzialne*, Difin, Warszawa.

Elkington, J. (1999)*, Triple bottom line revolution – Reporting for the third millennium*, 'Australian CPA', No. 69(1).

European SRI Study (2016), Eurosif, http://www.eurosif.org/wp-content/uploads/2016/11/SRI-study–2016-HR.pdf

Foo, M. (2017), *A review of socially responsible investing in Australia*, An independent report for National Australia Bank (NAB) by the Australian Centre for Financial Studies (ACFS) at Monash Business School.

Gjølberg, M. (2009), *Measuring the immeasurable? Constructing an index of CSR practices and CSR performance in 20 countries*, 'Scandinavian Journal of Management', No. 25.

Gjølberg, M. (2007), *The origin of corporate social responsibility. Global forces or national legacies?*, Working Papers. Centre for development and the Environment, University of Oslo.

Global Sustainable Investment Review (2016), Global Sustainable Investment, http://www.gsi-alliance.org/wp-content/uploads/2017/03/GSIR_Review2016.F.pdf

Hellsten, S., Mallin, C. (2006), *Are Ethical or Socially Responsible Investments Socially Responsible?*, 'Journal of Business Ethics', No. 66.

Lydenberg, S. D., Kurtz, L. (1992), *Researching social performance*, [in:] Kinder, P. D., Lydenberg, S. D., Domini, A. L. (eds.), *The social investment Almanac: a comprehensive guide to socially responsible investing*. New York: Henry Holt and Company.

MacGillivray, A., Begley, P., Zadek, S. (eds.) (2007), *The state of responsible competitiveness*, London: AccountAbility.

Marcinkowska, M. (2010), *Odpowiedzialne przedsiębiorstwo na rynku kapitałowym – czyli o giełdowych indeksach zrównoważonego rozwoju*, [in]: Duraj, J. (ed.), *Przedsiębiorstwo na rynku kapitałowym*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź.

Matten, D., Moon, J. (2008), *"Implicit" and "Explicit" CSR: A conceptual framework for a comparative understanding of corporate social responsibility*, 'Academy of Management Review', No. 33(2).

Muñoz-Torres, M. J., Fernández-Izquierdo, M. A., Balaguer-Franch, M. R. (2004), *The Social Responsibility Performance of Ethical and Solidarity Funds: An Approach to the Case of Spain*, 'Business Ethics', No. 13.

Pimentel, L. V., Branca, A. S. and Catalão-Lopes, M. (2016), *International Comparisons of Corporate Social Responsibility*, 'International Journal of Economics & Management Sciences', No 5.

Radu, I., Funaru, M. (2011), *Socially responsible investments in mutual funds*, 'Bulletin of the Transylvania University of Braşov', Series V, No. 4(53).

Renneboog, L., Horst, J. T., Zhang, C. (2008), *Socially Responsible Investments: Institutional Aspects, Performance, and Investor Behavior*, 'Journal of Banking and Finance', No. 32.

Renneboog, L. (2008), *The performance of socially responsible mutual funds*, 'Journal of Corporate Finance', No. 14(3).

Responsible Investing: a Paradigm Shift. From Niche to Mainstream, Booz & Company, (2007) https://yearbook.robecosam.com/methodology/

RobecoSAM, Dow Jones Sustainability Indices. Methodology, October 2017, http://www.robecosam.com/en/sustainability-insights/about-sustainability/corporate-sustainability-assessment/send.jsp;

Rodgers, S. (2000), *Making it legit: New ways of generating corporate legitimacy in a globalising world*, [in:] Bendell J. (ed.), *Terms for endearment. Business, NGOs and sustainable development*. Sheffield: Greenleaf Publishing.

Rogowski, W., Ulianiuk, A. (2012), *Społecznie odpowiedzialne inwestowanie (SRI) – próba charakterystyki. Część III: Efektywność inwestycji społecznie odpowiedzialnych*, 'Studia i Prace Kolegium Zarządzania i Finansów' Zeszyt Naukowy No. 114, SGH, Warszawa.

Saltuk, Y. (2011), *Insight into the impact investment market*, 'J.P. Morgan Social Finance Research', No. 1.

Sandberg, J. (2008), *The ethics of investing: making money or making a difference?* [in:] Malmgren, H., Munthe, C., Persson, I., Dag, W. (ed.), *Acta philosophica gothoburgensia*, Gothenburg: Department of Philosophy of the University of Gothenburg.

Sandberg, J., Juravle, C., Martin, Hedesström T. H., Hamilton, I. (2009), *The Heterogeneity of Socially Responsible Investment*, 'Journal of Business Ethics', No. 87.

Sandberg, J., Juravle, C., Hedesstrom, T. M., Hamilton, I. (2009), *The Heterogeneity of Socially Responsible Investment*, 'Journal of Business Ethics', No. 87(4).

Sparkes, R. (2001), *Ethical investment: whose ethics, which investment?*, 'Business Ethics: A European Review', No. 10(3).

Székely, F., Knirsch, M. (2005), *Responsible Leadership and Corporate Social Responsibility: Metrics for Sustainable Performance*, 'European Management Journal', No. 23(6).

http://www.csrwire.com/press_releases/23136-KLD-Launches-Global-Sustainability-Index-GSI-)

http://www.ftse.com/Analytics/FactSheets/Home/DownloadSingleIssueByDate?IssueName=4GGL%20&IssueDate=20170331&IsManual=%20False

http://www.ftse.com/products/downloads/FTSE4Good-brochure.pdf, [accessed: 20.05.2018].

http://www.ftse.com/products/indices/FTSE4Good, [accessed: 20.05.2018].

http://www.sustainability-indices.com/index-family-overview/djsi-family-overview/index.jsp). [accessed: 20.05.2018].

https://eu.spindices.com/indices/equity/dow-jones-sustainability-europe-index, [accessed: 20.05.2018].

https://thegiin.org/assets/binary-data/RESOURCE/download_file/000/000/27-1.pdf, [accessed: 20.05.2018].

https://www.solactive.com/?s=Solactive%20Sustainability%20Index%20Europe&indexmembers=DE000SLA4965, [accessed: 20.05.2018].

https://www.stoxx.com/document/Indices/Common/Indexguide/stoxx_esg_guide.pdf, [accessed: 20.05.2018].

https://www.unglobalcompact.org/docs/publications/UNGC-Value-Proposition.pdf, [accessed: 20.05.2018].

Streszczenie

ŚRODOWISKOWY, SPOŁECZNY I ZARZĄDCZY ASPEKT INDEKSÓW SPOŁECZNEJ ODPOWIEDZIALNOŚCI – ANALIZA PORÓWNAWCZA EUROPEJSKICH INDEKSÓW SRI

Coraz większa grupa inwestorów chce zainwestować swój kapitał nie tylko z zyskiem, ale również odpowiedzialnie, zwracając szczególną uwagę na formułę społecznie odpowiedzialnego inwestowania (SRI). Oznacza to, że inwestorzy coraz chętniej świadomie angażują swoje fundusze w firmy działające zgodnie z zasadami społecznej odpowiedzialności. Istotnym czynnikiem wpływającym na rozwój SRI są giełdowe indeksy spółek społecznie odpowiedzialnych. Można je bowiem uznać za specyficzne narzędzia adaptacji tej koncepcji w praktyce.

Celem artykułu jest analiza porównawcza kryteriów środowiskowych, społecznych i zarządczych (ESG), które stanowią podstawę definicji wybranych europejskich indeksów SRI. Analizą objęto następujące indeksy: DJSI Europe Index, FTSE4Good Europe 40, FTSE4Good Europe 50, EURO STOXX Sustainability 40 i Solactive Sustainability Index Europe. Artykuł ma również na celu ustalenie wskaźnika (indeksu) odzwierciedlającego stopień, w jakim firmy z poszczególnych krajów europejskich są reprezentowane w głównych europejskich indeksach SRI. Oczywiście analizowane indeksy różnią się nieznacznie co do interpretacji kryteriów ESG, jednak wydaje się, że mimo słabości takiego podejścia, połączone w jednym indeksie mogą odzwierciedlać ogólny obraz praktyk CSR w poszczególnych krajach. W związku z tym, że badaniom podlegały tylko europejskie indeksy SRI, z analiz wyłączono globalne i krajowe inicjatywy, a także te specyficzne dla sektorów czy branż.

***Słowa kluczowe**: indeksy społecznie odpowiedzialne, społeczna odpowiedzialność przedsiębiorstw, strategia pozytywnego i negatywnego screeningu, kryteria ESG*