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Global Reporting Initiative (GRI) and its implications on portfolio values in CEE countries – environmental aspect

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Abstract: *Objective* – The main objective of the article is to assess the conformity of the selection process to the RESPECT, CEERIUS and VONIX portfolios with the GRI guidelines and the profitability as well as investment effectiveness of the above mentioned portfolios.
Research methodology – the article presents a quantitative and qualitative analysis of the passive portfolios of socially responsible companies' shares within the ESPECT, CEERIUS and VONIX indices. The quantitative analysis encompasses the years between 2010 and 2015 and evaluates the profitability and effectiveness of the above mentioned indices against conventional ones. Within the scope of the qualitative analysis special attention was put on the components of the enumerated indices in terms of their conformity with the guidelines of the Global Reporting Initiative (a model of responsible business reporting). These guidelines set the standards which the entities selecting assets should follow in socially responsible portfolio investments.
Result – the conducted analysis clearly shows that investments in the RESPECT index are the most profitable, and it simultaneously concludes that the selection of companies to the RESPECT index does not completely fulfill the GRI standards in the Environment Category.
Uniqueness/value – the conducted research should provide guidelines of how to select companies to socially responsible portfolios – in an Environmental Category and assesses their implementation in CEE countries.

Keywords: Global Reporting Initiative, indices: CEERIUS, VONIX, RESPECT, sustainability in finance

Introduction

R. Paul Herman in his book *The HIP Investor* asks the question: 'Is it possible to make bigger profits while building a better world?' The question does not, however, remain unanswered since the author not only theoretically but also by using the data obtained from economic practice answers this question in an affirmative way. The main thesis on which he bases his assumptions of the higher profitability of socially responsible investments over classical investments concerns the character of socially responsible activities. He similarly assesses the activities within: higher revenue, lower costs, optimal taxes or investor demand. It means that the selection to the portfolio of potentially higher expected rates of return than a conventional portfolio results from the applied methodology considering simultaneously many cooperating factors.

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As earlier research has it (Jensen, Meckling 1976; Bertrand, Mullainathan 2003; Barnea, Rubin 2006; Edmans 2008; Lev, Sarath, Sougiannis 2005) socially responsible activities of high capital-consumption whose effects remain unnoticeable by investors result in lowering assets prices. However, at the same time these activities which in spite of their high capital-consumption are noticed by investors may, according to their assessment, lead to obtaining a higher than expected income (e.g. resulting in a considerably higher income or the reduction of costs in the near future). The analysis here is conducted from the high capital-consumption perspective; nevertheless, the very same analysis may be made in the case of low capital-consumption. An example may be such organizational activities which lead to lowering operating costs and while being noticed by investors, may also lead to a higher than expected investors' income.

1. Global Reporting Initiative (GRI) Standards

Reporting based on the Global Reporting Initiative (GRI) constitutes a framework for the assessment of a company's activities in terms of sustainable development in environmental, social and economic areas. Reporting which is made pursuant to the GRI principles means revealing information about companies' activities according to the concept of sustainable development and increasing responsibility for the obtained results towards internal and external stakeholders. The GRI guidelines are the basis in the process of selecting assets to socially responsible portfolios. The analysis below considers only the Environmental Category. It is due to the hypothesis made, which assumes that the companies from the Basic Materials and Utilities sector were classified to the RESPECT index violating the GRI guidelines in the Environmental Category. The Environmental Category covers impacts related to inputs (such as energy and water) and outputs (such as emissions, effluents and waste). In addition, it covers biodiversity, transport, and product and service-related impacts. This category assesses not only the procedure of environmental standards compliance but also the amount of related expenses.

GRI is an international independent organization that helps businesses, governments and other organizations understand the impact of business on critical sustainability issues such as climate change, human rights, corruption and many others. The GRI organization prepares reporting guidelines considering the feedback given by all interested parties. The latest version of the report which constitutes the basis for the research herein in terms of quality is GRIG4.

Pursuant to the GRI standards, before any detailed criteria are presented, the general standards are put forward first and they concern reporting rules encompassing such elements as strategy and analysis, organizational profile, identified material aspects and boundaries, stakeholder engagement, report profile, governance, ethics and integrity. Only then are the standards divided into particular categories. The article touches upon only one category, i.e. the environmental one. It is due to the conclusions drawn earlier and the assessment

of RESPECT, VONIX and CEERIUS portfolio constituents. The RESPECT index consists of those companies operating within the Utilities and Basic Materials[1] industry (more than 55%). In other indices the Financial and Health Care industry prevails. The companies from these sectors do not emit greenhouse gases as well as (especially the financial industry) do not use recycling procedures and do not use it for the purpose of business strategies.

The standards (in the Environmental Category) referring to various ecological aspects are presented in Table 1.

Table 1

G4 overall standard disclosures overview – indicators by aspects in the Environmental Category

Overall Standard Disclosures with an appropriate code	Aspects
G4- EN1, G4-EN2	Materials
G4-EN3 G4-EN4, G4-EN5 G4-EN6, G4-EN7	Energy
G4-EN8, G4-EN9, G4-EN10	Water
G4-EN11, G4-EN12, G4-EN13, G4-EN14	Biodiversity
G4-EN15, G4-EN16, G4-EN17, G4-EN18, G4-EN19 G4-EN20, G4-EN21	Emissions
G4-EN22, G4-EN23, G4-EN24, G4-EN25, G4-EN26	Effluents and Waste
G4-EN27, G4-EN28	Products and Services
G4-EN29	Compliance
G4-EN30	Transport
G4-EN31	Overall
G4-EN32, G4-EN33	Supplier Environmental Assessment
G4-EN34	Environmental Grievance Mechanism

Source: the author's own analysis on the basis of GRI.

For the purpose of the research in the Environmental Category, 34 standards referring to 12 environmental aspects were distinguished. Below the definitions have been assigned to particular standards which are considered to be the basic ones (17 standards). Among the presented standards, seven refer to the emission itself (standards from G4-15 to G4-21). This group finds as many as five standards to be the basic ones (G4-16, G4-17, G4-19, G4-20, G4-21). They refer to greenhouse gas emissions.

Assessing the conformity of being qualified to the RESPECT index will be made pursuant to the five standards. According to the McKinsey& Company Report (2009) in spite of visible activities in terms of greenhouse gases reduction, the Polish economy is one of the most emissive ones in the EU. It results from the fact that the Polish energy sector is based on coal-powered plants (having a ~95% share in energy production). Here, the crucial thing is to find other sources of fuel for electric energy production while preserving the economic structure. Such undertakings are indeed made and mean financial support (especially from EU funds) for proper technology installations or obtaining renewable energy sources, but also the still controversial process of co-combustion. The last option of greenhouse gases

[1] The classification was conducted pursuant to the Industry Classification Benchmark (ICB).

Table 2

G4 fundamental specific standards disclosures – indicators by aspects in the Environmental Category

Specific Standard Disclosures (fundamental)	Description
G4-EN1	– materials used by weight or volume
G4-EN2	– percentage of materials used that are recycled input materials
G4-EN3	– energy consumption within the organization
G4-EN4	– energy consumption outside of the organization
G4-EN5	– energy intensity
G4-EN8	– total water withdrawal by source
G4-EN11	– operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas
G4-EN12	– description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas
G4-EN16	– energy indirect greenhouse gas (GHG) emissions
G4-EN17	– other indirect greenhouse gas (GHG) emissions
G4-EN19	– reduction of greenhouse gas (GHG) emissions
G4-EN20	– emissions of ozone-depleting substances (ODS)
G4-EN21	– NOx, SOx, and other significant air emissions
G4-EN22	– total water discharge by quality and destination
G4-EN23	– total weight of waste by type and disposal method
G4-EN26	– identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff
G4-EN27	– extent of impact mitigation of environmental impacts of products and services

Source: the author's own analysis on the basis of GRI.

reduction is used by many companies in Poland, including those present in the RESPECT index (e.g. KGHM). Such companies as KGHM, PGNIG, LOTOS, PGE, TAURON or Grupa Azoty give out information about their greenhouse gases reduction policy. This policy means a constant monitoring or the introduction of gas reduction technologies. For example, KGHM provides information about the summary emission reduction between 2005 and 2013 by 14%. Grupa Azoty, having installed a secondary catalytic converter, reduced sulphate acid emissions by as much as 93% in 2009. The success should not be diminished here nor the value of the achievements, however, such companies are still greenhouse gas emitters. Therefore, classifying these companies to the socially responsible index seems to be an overestimation.

2. The assessment of the profitability of socially responsible indices

The results obtained from particular socially responsible indices from Central and Eastern European countries are presented below. The obtained results were compared with classical companies' indices. The equivalent for the CEERIUS index is CECEx and for the VONIX – ATX.

The CEERIUS index includes the companies listed on the Central and Eastern European stock exchanges. At the end of 2015, there was only one company listed on the Warsaw Stock Exchange, namely PZU S.A. The VONIX index contains only those companies listed on the Vienna Stock Exchange. The analysis was made on the basis of daily rates of return. The indices CEERIUS, VONIX CECEx and ATX are listed in EUROS, therefore the risk-free rate is EONIA, and for the Polish zloty (RESPECT is listed in the zloty) WIBOR ON. The analysis period is relatively short due to the fact that the idea of socially responsible investment and creating indices of this type have been visible recently on the markets in CEE countries. Such an analysis was made also for weekly returns and the risk-free rate was respectively EURIBOR SW and WIBOR 1W.

Table 3

Profitability and effectiveness measures from conventional indices versus sustainability indices (daily returns) 2010–2015

Fators	CEERIUS	VONIX	RESPECT	CECEx	ATX
mean return	–0.0216	–0.0043	0.0174	–0.0177	–0.0027
sigma	0.9803	1.2805	1.1685	1.2201	1.3824
semi_sigma	0.7156	0.9405	0.8619	0.8965	1.0036
SR	–0.0228	–0.0040	0.0076	–0.0151	–0.0025
SR*	–0.0312	–0.0054	0.0103	–0.0206	–0.0034
Sortino	–0.0307	–0.0054	0.0103	–0.0204	–0.0034
Omega	0.9400	0.9892	1.0211	0.9586	0.9933
Sharpe-Omega	–0.0580	–0.0108	0.0414	–0.0414	–0.0067
Var	1.6342	2.1108	1.9048	2.0247	2.2768
RoVar	–0.0137	–0.0024	0.0046	–0.0091	–0.0015

Source: the author's own analysis on the basis of VSE.

The analysis of socially responsible indices indicated the advantage of the RESPECT index over CEERIUS and VONIX. The daily rate of return for RESPECT is positive with negative rates for the remaining indices even the conventional ones. The risk measured with a standard deviation is the lowest for the CEERIUS index. The difference amounts to 16% against RESPECT and 23% against VONIX. The effectiveness indices also indicate the RESPECT index as the one which has the highest income value for a risk unit. It is a consequence of the positive rate of return for the RESPECT index even though the risk-free rate of return for the EURO is definitely lower than for the Polish zloty, still it did not distort the final results. It only lowered the value of the Sharpe ratio which still is positive. The profitability index of the Value at risk (RoVaR) has the highest value for the RESPECT index (which is due to positive rates of return) even though the VaR (for the statistical significance level is 0.05) is lower for the CEERIUS index, it is the pure rate of return which has been detrimental for such values. Socially responsible indices, while compared with their conventional equivalents, are at the same level. However, the risk level measured by the standard

deviation as well as Value at risk are noticed to be higher than for the socially responsible indices (a specifically huge difference is noticeable for the CEERIUS vs. CECEx indices).

All rates of return are characterized by a negative skew, which means that the majority of rates of return are below the average. The kurtosis of a normal distribution is 3. The analysed rates of return (apart from the rates of return for the ATX index) are grouped more about the mean than in the normal distribution (see Table 4).

Table 4

Skewness and Kurtosis in the analysed rate of returns (daily returns) 2010–2015

Factors	CEERIUS	VONIX	RESPECT	ATX	CECEx	WIG20
Skewness	–0.2663	–0.29526	–0.57887	–0.16164	–0.39326	–0.60028
Kurtosis	3.786829	3.177442	3.70993	2.720771	4.440086	3.931658

Source: the author's own analysis.

Table 5

Profitability and effectiveness measures from conventional indices versus sustainability indices (weekly returns) 2010–2015

Factors	CEERIUS	VONIX	RESPECT	CECEx	ATX
mean return	–0.1197	–0.0226	0.0898	–0.0880	–0.0197
sigma	2.3244	3.1493	2.5499	2.6895	3.3521
semi_sigma	1.7307	2.3579	1.9293	2.0001	2.5194
SR	–0.0563	–0.0107	–0.0104	–0.0369	–0.0092
SR*	–0.0757	–0.0143	–0.0137	–0.0496	–0.0123
Sortino	–0.0728	–0.0142	–0.0137	–0.0484	–0.0122
Omega	0.8608	0.9717	0.9729	0.9054	0.9756
Sharpe-Omega	–0.1392	–0.0283	–0.0271	–0.0946	–0.0244
Var	3.9434	5.2032	4.1048	4.5122	5.5339
RoVar	–0.0332	–0.0065	–0.0065	–0.0220	–0.0056

Source: the author's own analysis on the basis of VSE.

The analysis made on the basis of weekly rates of return confirms the higher profitability of the RESPECT index over CEERIUS and VONIX. The risk level is the highest for the VONIX index just as in the case of the daily rates of return analysis. However, the differences are visible in the effectiveness indices which for the three indices are negative (excluding the Omega index which due to its structure is always positive). Effectiveness indices are negative (even though their rate of return is positive for the RESPECT index) due to the advantage of the average risk-free rate of return for the RESPECT index. At the beginning of the article the author referred to the differentiation between risk-free rate of return for the EUR (in which the CEERIUS and VONIX indices are listed) and the risk-free rate of return for the PLN (in which the RESPECT index is listed). In the case of the VaR, the

highest value is for the VONIX index and the lowest for CEERIUS. The RoVar index for all the indices is negative. Socially responsible indices against their conventional equivalents indicate both lower profitability records and lower risk records.

Concluding remarks

The companies listed in socially responsible indices undergo highly severe selection rules. However, especially in Central and Eastern Europe, due to the relatively young concept of social responsibility in investment still not all standards are followed. It especially refers to environmental standards. Particular companies from SR indices do use the GRI guidelines; however, as they say in a minimal scope (it considers especially the companies from the RESPECT index operating in the Utilities and Basic Materials industries). In the CEERIUS and VONIX indices, the limit or lack of such companies from this sector definitely improves the standards of complying with promoted values through the concept of social responsibility, but this selection leads to smaller portfolio diversification. Such a situation influences the results, which the research confirms.

Socially responsible indices as well as the majority of other indices have a mostly informative value. The information given refers to not only the composition but also performance. Investors, on the basis of this information select assets for their portfolios. Not a clear selection of companies, especially different standards binding in the CEE countries (also the differentiation between the countries themselves) and in the remaining European countries may lead to a lack of transparency. Consequently, it may result in the isolation of such markets by socially responsible investors where the concept of social responsibility will live at its own pace. Companies operating within this concept will surely obtain a marketing effect; however, it may be discredited by investors themselves. The opinion that social responsibility is a marketing bonus not a concept, which should influence relationships with stakeholders both internal and external, may act against itself.

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GLOBALNA INICJATYWA SPRAWOZDAWCZA (GIS) I JEJ IMPLIKACJE NA WARTOŚCI PORTFELA AKCJI W KRAJACH EUROPY ŚRODKOWEJ I WSCHODNIEJ – ASPEKT ŚRODOWISKOWY

Streszczenie: *Cel* – Celem artykułu jest ocena zgodności selekcji do portfeli RESPECT, CEERIUS, VONIX z wytycznymi GRI oraz ocena dochodowości i efektywności inwestycyjnej w/w portfeli.
Metodologia badania – W artykule została przeprowadzona analiza ilościowa i jakościowa portfeli pasywnych akcji spółek odpowiedzialnych społecznie notowanych w ramach indeksów RESPECT, CEERIUS i VONIX. Analiza ilościowa dotyczy lat 2010–2015. Oceniona została dochodowość i efektywność w/w indeksów vs. indeksów klasycznych. W ramach analizy jakościowej szczególna uwaga skoncentrowana została na składzie wymienionych indeksów w kontekście zgodności z wytycznymi zapisanymi w ramach Globalnej Inicjatywy Sprawozdawczej (*Global Reporting Initiative*- wzorca raportowania odpowiedzialnego biznesu). Wytyczne te wyznaczają standardy jakimi powinny się posługiwać podmioty selekcjonujące aktywa w ramach społecznie odpowiedzialnych inwestycji portfelowych.
Wynik – Wynik przeprowadzonej analizy wskazuje, że inwestycja w indeks RESPECT była najbardziej dochodowa ale równocześnie dobór spółek do indeksu RESPECT nie w pełni spełnia standardy GRI w kategorii – środowisko.
Oryginalność/wartość – Wynik badania wskazuje standardy doboru aktywów do portfeli społecznie odpowiedzialnych w kategorii środowisko jak i dokonuje oceny ich stosowania w krajach Europy Środkowo-Wschodniej.

Słowa kluczowe: Inicjatywa Sprawozdawcza, indeksy: CEERIUS, VONIX, RESPECT, zrównoważone finanse

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