

Corporate socially responsible investing in Sub-Saharan Africa: A factor of shareholders' value creation?

L'investissement socialement responsable en Afrique au Sud du Sahara : Un facteur de création de valeur actionnariale ?

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Abstract

This study analyses the impact of corporate socially responsible investing on corporate shareholder value creation in Sub-Saharan Africa. The sample includes 12 companies from 8 Sub-Saharan African countries that meet two criteria: (i) operating in a sector (agriculture) with a significant impact on the environment, and (ii) publishing full financial and sustainability reports from 2010 to 2022. The information used was obtained from secondary data collected between 2010 and 2022. These data were analysed through a time cross-sectional regression corrected for any latent heteroscedasticity and serial autocorrelation. The findings indicate that average rate of socially responsible investing is 7% turnover compared to 60% turnover of classical investment, and the average rate of shareholder value creation is 65% equity. However, the study finds that socially responsible investments do not significantly impact shareholder value creation. Therefore, the study concludes that socially responsible investment is not a source of shareholder value creation for companies in Sub-Saharan Africa.

Keywords : Sub-Saharan Africa ; Socially responsible investing ; Shareholders' value creation ; Environment Social and Governance ; Green Finance.

Résumé

Cette étude analyse l'impact de l'investissement socialement responsable des entreprises sur la création de valeur actionnariale des entreprises en Afrique subsaharienne. L'échantillon comprend 12 entreprises de 8 pays d'Afrique subsaharienne qui répondent à deux critères : (i) opérer dans un secteur (agriculture) ayant un impact significatif sur l'environnement, et (ii) publier des rapports financiers et de développement durable complets de 2010 à 2022. Les informations utilisées ont été obtenues à partir de données secondaires collectées entre 2010 et 2022. Ces données ont été analysées par une régression transversale temporelle corrigée de toute hétéroscédasticité latente et autocorrélation en série. Les résultats indiquent que le taux moyen d'investissement socialement responsable est de 7 % de chiffre d'affaires, contre 60 % de chiffre d'affaires pour l'investissement classique, et le taux moyen de création de valeur pour les actionnaires est de 65 % de fonds propres. Cependant, l'étude constate que les investissements socialement responsables n'ont pas d'impact significatif sur la création de valeur pour les actionnaires. Par conséquent, l'étude conclut que l'investissement socialement responsable n'est pas une source de création de valeur actionnariale pour les entreprises en Afrique subsaharienne.

Mots clés : Afrique subsaharienne; Investissement socialement responsable; Création de valeur pour les actionnaires; Environnement Social et Governance; Finance Verte.

Introduction

Shareholder value creation has become the new mantra corporate leaders in large companies (Albouy, 2017). This has led to a convergence of corporate financial practices towards models based on modern financial theories. Indeed, according to these theories, maximising the value of a firm is the main objective that managers must pursue. To achieve this goal, leaders must focus on governance and investment (Rappaport, 1986).

However, this model from modern financial theory also allows more room for another approach of value creation through investment in the classic sense of Moskowitz (1972) and has another form called the socially responsible investing. Today, this new form of investment integrates respect for ethical values, environmental protection, and improvement of social conditions or good governance is attracting more and more interest from institutional and private investors but also from academic world (Revelli & Viviani, 2011).

From a scientific point of view, the work treating socially responsible investing concerns mainly the search for its financial profitability, or in other words, tries to understand if this type of investment does not present financial cost compared to traditional investment. Does socially responsible investing have an impact on financial performance? Several empirical studies have attempted to demonstrate a causal link between the effect of the implementation of extra-financial criteria in the investment process and the financial performance of social responsible funds or ethical indices, each of which sheds specific light on this relationship. What emerges today is a clear lack of consensus on the link between socially responsible investing and the financial performance it provides. Some studies argue that socially responsible investing can generate greater financial returns, higher than conventional funds or indices and thus has have no financial costs (Plantinga & Scholtens, 2001 or Galema et al., 2008). Other studies show a negative impact, stating that socially responsible investing is destructive of value and gives performance inferior to those of conventional investment (Burlacur et al., 2004; Miglietta, 2005; Gerard et al., 2007). Finally, a last group of studies concluded on neutral or insignificant impact of socially responsible investing on performance (Kreander et al., 2005; Bauer et al., 2007).

In addition to the lack of consensus on the subject, there is a gap in the literature on the topic in Africa, in general in Sub-Saharan Africa in particular. In 2015, a meta-analysis conducted by the University of Oxford and Arabesque Partner concluded, on the basis of 200 sources including academic studies, management company reports, or even press articles that “80% of the reviewed studies demonstrate that prudent sustainability practices have a positive influence

on investment performance”. However, no study has been published in Africa. In addition, natural disasters such as droughts and floods affected more than 34 million people across the African continent (including 19 million in sub-Saharan Africa) in 2012, and resulted in economic losses of more than 1.3 billion between 2011 and 2012. These figures will undoubtedly increase in the future (Geo.Eco-Trap, 2017).

This paper contributes to the current debate by asking the question of what are the effects of socially responsible investment on the creation of value for shareholders of companies in sub-Saharan Africa? with emphasis on the following specific objectives:

- ✓ Examine the level of corporate socially responsible investing in Sub-Saharan Africa.
- ✓ Determine the level of corporate shareholder value creation in Sub-Saharan Africa.
- ✓ Analyse the effect of socially responsible investing on corporate shareholders’ value creation in Sub-Saharan African.
- ✓ Make recommendations based on the results obtained.

This paper is structured as follows. The first section presents theoretical arguments linking socially responsible investing and shareholder value creation. The second and third sections describe the methodology used to test the hypotheses and the major findings of regression models, respectively. Finally, the theoretical and managerial implications of these findings on shareholder value creation and socially responsible investing were presented.

1. Literature Review

The relationship between socially responsible investing and of shareholder value creation is based on the research framework on the financial performance of socially responsible investing (Revelli & Viviani, 2011). This field is characterised by the “exclusive presence of empirical studies, whose theoretical foundations are very implicit” (Déjean, 2002).

Indeed, it is complicated for researchers to anchor their research within a scientific framework (Revelli & Viviani, 2011). However, there are several explanatory reasons for the performance of socially responsible investing, whether positive or negative.

Critics of socially responsible investing find their arguments in modern portfolio theory (Markowitz, 1952). According to them, socially responsible investing reduces investment opportunities and offers a much lower capacity for diversification, due to the selection and exclusion constraints that are imposed. However, according to this theory, an efficient portfolio must be well diversified. This should result in lower performance than that of a traditional investment; the efficient frontier of socially responsible investing was therefore under the

Markowitz efficient set, (Le Maux and Le Scout, 2004). This is in line with Clow's theory (1999), which asserts that socially responsible investing by its selective approach would lead to a sector bias by restricting itself to a smaller number of investment sectors, thereby increasing its risk while reducing its profitability. Nevertheless, these arguments need to be balanced as both modern portfolio theory and the principle of market efficiency can be questioned in the context of socially responsible investing. Given that the efficient frontier groups the efficient portfolios in an expected variance framework, it is possible to admit that in certain cases socially responsible investing can offer better returns than certain conventional portfolios. If the portfolio manager applies active management of his portfolio by overweighting socially responsible investing assets, he can expect a high return compared to the efficiency frontier in the context of passive management, where a small investment universe reduces diversification gains.

A second argument advanced by Milton Friedman's position paper (1962) or in the article for the New York Times Magazine (1970) strongly criticises advocates of corporate social responsibility and subsequently, socially responsible investing. According to him, there is no compatibility between investing in a socially responsible manner and profitability. The only social responsibility that can be accepted is an increase of the company's gains. Considering social and environmental concerns in company policy generates additional external costs that must be integrated and thus, will inevitably cause a loss in the value of the company and its shares. Rudd (1981) also asserts that the introduction of constraints within investment portfolios (including social and environmental constraints) could play a negative role on performance.

Finally, the theory of "costs" of socially responsible investing is also advanced to explain the underperformance of socially responsible investing compared to conventional investments. According to Rudd (1981), any transaction generates costs represented either by a brokerage commission or by expenditures for prosecuting or by the exclusion of some blocks of stocks in the selection of portfolios. This is what Luther et al. (1992) defines as "monitoring costs". Thus, the screening criteria of socially responsible investing reduces the long term average liquidity of assets (and therefore increase the impact of the market on each future transaction) and also leads to more complex and expensive asset management, because it requires more research to find if a stock meets the criteria for socially responsible investing or not. All these costs would diminish performance (Munnell et al., 1983; Lamb, 1991; Luther et al., 1992; Tippet, 2001; Bauer et al., 2005; Barnett et Salomon, 2006).

On the contrary, socially responsible investing has theoretical contributions that tend to prove that such investment can generate value. This is the case of shareholder activism or socially responsible investing oriented on “governance” criteria, backed by ideas constituting the theory of stakeholders (Freeman, 1984). Thus, according to Igalens and Points (2009) “the stakeholder approach makes it possible to create value”. This assertion can be verified in the shareholder activism, where the “shareholder” exerts pressure on companies, that help to change the latter’s behavior by directing them towards the values they defend (Ryan and Schneider, 2002). The shareholders’ close relationship with the company's board, the influence he may have in decision taking as well as the demand for immediate consideration (Capron & Quairel-Lanoizelée; 2004) of his concerns. This closeness directly affects share prices, as shown in the three studies by Gompers et al. (2003), Core et al. (2006) and Smith (1996) with the example of the companies targeted by the American pension activist CalPERS, whose share price increases immediately they approve the company’s resolutions.

Other positive performance factors are proposed by various authors such as the “learning effect” presented by Bauer et al. (2005, 2006); for whom socially responsible investing tends to underperform conventional investments in the short term, then reduce this gap in the medium term and to reverse in the long term. A “long-term” horizon would be the key factor of success to socially responsible investing (Cummings, 2000; Barnett and Salomon, 2006; Vermeir and Friedrich, 2006).

Finally, the “information effect” theory developed by Kurtz (2002) (quoted by Saout & Buscot, 2009, p.162) also states that socially responsible investing generates value over time, “the extra-financial concept can be interpreted as reflecting some control of risks factors facing the company. Therefore, companies that best manage environmental issues limit risks of social or industrial unrests; liable to harm their image in particular, and are so called upon to outperform their competitors in the long term”. Conversely, companies which do not consider shareholders’ interests are exposed to a high risk of bankruptcy and withdrawal of capital by investors.

It is therefore important to clearly distinguish the nature of the theoretical arguments put forward, particularly the impact of socially responsible investing on the characteristics of the investment. In fact, two different opinions are stated: one where the investor acts on the characteristics of the investment by being active (shareholder activism) and the other where he cannot act on these characteristics while remaining active in the management of his portfolio. In the context of shareholder activism, the investor actively participates in the management and development of the company to improve its performance, while in the context of active portfolio

management, the investor cannot modify the characteristics of the investment and does not intervene at any time in the management of the company.

The diversity of results from the various empirical works does not allow us to conclude that socially responsible investing has a negative or positive performance compared to conventional investment, as shown in Table 1 below:

Table 1: Theoretical foundations and empirical validations of the effect of socially responsible investing on the financial performance of companies

Negative effects of SRI on financial performance	
Theoretical foundations	Empirical validations
External costs of corporate social responsibility as a factor of underperformance (neoliberal theory of Friedman)	Vance (1975), Geczy et al.(2003), Brammer et al.(2006), Chong et al.(2006), Gillet (2008), Hong et Kacperczyk (2009)
Less diversification and reduction of investment universe as a factor of underperformance (modern portfolio theory)	Girard et al. (2007)
Financial costs of socially responsible investing as a factor of underperformance (transaction costs and management fees)	Luther et al. (1992), Tippet (2001), Buaer et al. (2005), Saadoul (2009)
Characteristics endemic to the SRI	
Style bias: orientation on SRI portfolios, on shares of small companies (size effect) and rather on growth stocks in order to avoid sectors of activity such as armaments or new technologies	Luther et al. (1992), Luther et Matatko (1994), Gregory et al. (1997), Statman (2000), Schröder (2004), Miglietta (2005), Scholtens (2005), Bauer et al. (2006)
Positive SRI performance	
Shareholder activism and consideration of stakeholders as a factor of outperformance (stakeholder theory)	Opler & Sokobin (1995), Smith (1996), Hillman & Keim (2001), Gompers et al. (2003), Barnett &Salomon (2006), Core et al. (2006), Risalvato et al. (2019), Bollazi et al. (2017), Bollazi & Risalvato (2018), Yilmaz (2013), Bradford et al.(2017).

<p>“Long-term” horizon as a factor of outperformance (“learning effect”)</p>	<p>Cummings (2000), Bauer et al. (2005, 2006), Barnett & Salomon (2006), Pagès (2006), Kempf & Osthoff (2007), Ziegler et al. (2007), Galema et al. (2008), Derwall & Koedijk (2009).</p>
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Source: Auteur

The analysis of this empirical literature confirms all the theoretical foundations identified and can be validated separately according to specific empirical methodologies (period, sample size, measure of financial performance used, etc.). Therefore, the following hypothesis are suggested:

Hypothesis 1: Socially responsible investing has a positive and significant influence on shareholder value creation in companies in Sub-African Sahara.

2. Methodology

The methodology used is basically hypothetical-deductive. it is structured around the sample and data collected (2.1), variable measurements (2.2) and data analysis (2.3).

2.1. Sample and Data

In this study the sampling method used is non-probabilistic. More particularly the convenience method. The sample is made up of subsidiaries of SOCFINAF Plc¹. Group companies established in Sub-Saharan Africa, selected based on the following criteria: (i) sector-based companies (agriculture) with a strong impact on the environment; publishing a full financial report and sustainability report from 2010 to 2022². Although the number of companies selected for the research is not as large compared to the total number of companies that can be listed in Sub-Saharan Africa, the size of the sample chosen with 156 observations (12 companies base in 9 Sub-Saharan African countries x 13 years) is acceptable (Joe et al., 2014).

¹ Socfinaf SA is a Luxembourg company, whose registered office is 4 avenues Guillaume, L-1650 Luxembourg. It was incorporated on October 22, 1961 and is listed on the Luxembourg Stock Exchange. The main activity of SOCFINAF S.A. consists in the management of a portfolio of holdings essentially focused on the exploitation of more than 139,000 hectares of tropical oil palm and rubber plantations located in Sub-Saharan Africa (Cameroon, Côte d’Ivoire, Congo DRC, Ghana, Liberia, Nigeria, Sao-Tome and Principe, Sierra Leone). Socfinaf S.A. employs 24,166 people and achieved a consolidated turnover of 376 million euros in 2019.

² The choice of the period from 2010 is justified by the fact that it is from this year that these companies began to publish complete reports on sustainable development to accompany their financial report.

2.2. Variables measurement

Socially responsible investing

The independent variable is socially responsible investing, which proxied by social responsibility index in the healthy sector, educational sector, basic material sector, and infrastructure sector (Bradfort et al., 2017). Socially responsible investing is calculated thus: the ratio of total expense realized by the company on health, education, basic material and infrastructure sectors divided by the turnover (Bradfort et al.2017; Paquerot, 1997) as shown in the formula below.

$$SRI_i = (\sum esr_i / Turnover) \times 100$$

SRI_i is a socially responsible investing of company, i and esr are expenditures in the social responsibility index realized by company i

Creation of shareholders 'wealth

The dependent variable is the shareholders' value creation measured through the return on equity. This ratio captures how effectively a company uses the money (borrowed or owned) invested in its operations. It is an indicator that always interest shareholders because it pays their contribution. It is defined as net income divided by total equity. In literature, this indicator was used by several authors (Guedri & Hollandts, 2008; Yimaz, 2013).

$$ROE_i = (Net\ Income / Net\ Equity) \times 100$$

With ROE_i is the return of equity of company i

- *Control variables*

As shareholders value creation may be subject to other socially responsible investing factors, several control variables were included in this study. For instance, we sought for the effect of classical investment (investment policy), firm margin, and level of activity.

Investment policy.

Investments have been apprehended through expenditures in fixed assets divided by turnover (excluding VAT) over 2010-2022. This measure was adopted by D'Arcimoles & Trébucq (2003), Ngongang (2013).

- *Margin of firm*

Rappaport (1996) recommends that firm should be retained as key variables in wealth creation. In this research, the gross operating margin is retained and corresponds to the ratio between gross operating surplus and turnover. Trébucq (2002) and Alim (2019) also used this measure.

- *Level of activity*

Insofar as Copeland et al. (1991) recommended level of activity as a critical variable in wealth creation, growth of turnover (excluding VAT) over the period 2010-2022 was introduced in the study. This measure was also retained by Trébuq (2002), Ngongang (2013).

- *Size*

Taking into account the effect of size proves to be essential for a comparative view of the strictly financial performance of companies and, by extension, of wealth creation. The size variable was operationalized by the logarithm of total assets (period 2010-2022).

Table 2: Definitions of Variables included in the analysis

Variables	Definitions
Return on equity	Net income after tax divided by equity
Socially responsible investing	Expenditures on socially responsible index divided by turnover (excluding VAT) over the period 2010-2022
Investment policy	Expenditures of fixed assets divided by turnover (excluding VAT) from 2010-2022
Margin of firm	Gross operating surplus divided by turnover (excluding VAT) from 2010-2022
Level of activity	Growth of turnover (excluding VAT) 2010-2022
Size	Logarithm of total assets (period 2010-2022)

Source: made by the author

2.3. Data analysis

In this longitudinal study, data analyses related 12 companies based in 8 Sub-Saharan African countries, which publish each year their financial report and sustainability report over 13 years (2010-2022). For this purpose, a times series of cross-sectional regression, corrected for any latent heteroscedasticity and serial autocorrelation is used. Accordingly, regression model was estimated with a cross-sectional times series samples of 156 observations. The general form for this regression is

$$ROE_{it} = c + \alpha SRI_{it} + \beta X_{it} + \varepsilon_{it} (1)$$

Where ROE is return on equity, SRI is the socially responsible investing and X the matrix of control variables that includes:

- Investment policy
- Margin of firm

- Level of activity
- Size

Analysing this model required the choice of various empirical tests. These are individual effect test, Breush-Pagan, Breush-Godfrey and normality test. Moreover, in order to correct the problem of serial correlation and endogeneity, the generalized moment method has been adopted for the estimation of this model.

Estimation technic

Dynamic panel data models support the correlation between the delayed endogenous variable and the imperceptible fixed effects. The double causality between the dependent variable and one of the independent variables creates a problem of endogeneity due to an observed heterogeneity resulting from an omitted variable or a random coefficient. Measuring errors that are difficult to control are also a source of endogeneity. The generalized moment's method (GMM) is more efficient than the static analysis of the model in the presence of delayed dependent variable. We use the MMG technique whose difference estimator (GMM difference) was introduced by Arellano & Bond (1991) and Arellano & Bover (1995). Subsequently, Blundell & Bond (1998) developed the MMG-System estimator, which is more appropriate for solving the problem of multicollinearity, endogeneity and omitted variable bias. While the MMG-System in theory seems more effective than the MMG-Difference, it uses, however, more instruments than the latter, which makes it inappropriate. The absence of autocorrelation of the residues guarantees the obtaining of the estimators. Although measures of socially responsible investing variables are objective, we cannot exclude the risk of measurement error. One solution is to introduce instruments, institutional variables, and test their validity with Sargan & Hansen tests (Roodman, 2009). Thus, equation (1) is rewritten:

$$ROE_{it} - ROE_{i,t-1} = c + \alpha(SRI_{it} - SRI_{i,t-1}) + \sum_j \beta_j (X_{i,t}^j - X_{i,t-1}^j) + (v_t - v_{t-1}) + (\varepsilon_{it} - \varepsilon_{it-1}) \quad (2)$$

$ROE_{it} - ROE_{i,t-1}$ being correlated with the error term $(\varepsilon_{it} - \varepsilon_{it-1})$, Arellano and Bond (1991) propose to use the delayed value of the dependent variable ROE_{it} as an instrument for the term $(SRI_{it} - SRI_{i,t-1})$. They advise to do the same for the others explanatory variables contained in the vector $X_{i,t}^j$. Arellano & Bover (1995) show that delayed dependent variables are weak instruments in the first difference model and the obtained estimator is biased in small sample, because, when the dynamic model is expressed in first differences, the instruments are level, and vice versa. Blundell et Bond (1998) show that this fragility comes from the lack correlation between $ROE_{i,t-1}$ and the variables of the model written in the first difference. They test this

method using Monte Carlo simulations. They combine the equation in the first difference (2) with the instruments of Arellano & Bond (1991). They propose GMM-system estimator in terms of the completeness of the tests. The instruments selected are the lagged value of socially responsible investing, investment policy, margin of firm, level of activity and size. The number of instruments is equal $(\beta - \alpha) + 1$ with β the number of delays and α the first delay (Roodman, 2007).

3. Findings

This section presents the level of corporate socially responsible investing in Sub-Saharan Africa, the level of shareholder value created by these companies and the effect of socially responsible investing on shareholder value creation of companies in Sub-Saharan Africa.

3.1. Level of corporate socially responsible investing in Sub-Saharan Africa

Table 3 indicates the degree of corporate socially responsible investing in Sub-Saharan Africa between 2010 and 2022.

Table 3: Level of corporate socially responsible investing in Sub-Saharan Africa

Mean of SRI between 2010 and 2011	Frequencies	Percentage	Cum Percentage
<5%	4	33	33
5% to 10%	6	50	83
Above 10%	2	17	100
Total	12	100	

Source: made by author

The findings of table 3 below shows that, for half of the companies in the sample (50%), the average level of socially responsible investing in 13 years is between 5% and 10%. Moreover, more than (1/3) of this sample do not exceed 5% of average of socially responsible investing (2010-2022); and only 17% of companies of this sample invest more than 10% do socially responsible investing. Table 4 below presents the descriptive statistics of corporate socially responsible investing in Sub-Saharan Africa.

Table 4 : Descriptive statistics of corporate socially responsible investing in Sub-Saharan Sahara

Items	Mean	Max	Min
Cameroon	0.05	0.07	0.02
Côte d'Ivoire	0.08	0.12	0.01
DRC Congo	0.03	0.08	0.005
Ghana	0.10	0.20	0.07
Nigeria	0.12	0.19	0.08
Sierra Leone	0.06	0.09	0.03
Liberia	0.07	0.1	0.02
Sao Tome	0.04	0.08	0.01

Source: made by author

The results of table 4 below show that in these 8 Sub-Saharan African countries the maximum average level of socially responsible investing is 20% and the minimum is 0.5%. The maximum level of this investment falls in the West African country (Ghana) and the minimum in the Central African country (Democratic Republic of Congo). Therefore, the average level of socially responsible investing represents only 5% on 13 years in the companies of Central African countries while in the West African countries, the average level of this investment represents the double of Central African Countries (10%). As a result, it is worth noting that the average level of socially responsible investing in this sample is 7%. In addition, the results of the different mean test show a significant statistical difference in socially responsible investing between the group of companies of West African countries and that of Central African countries. Table 5 below presents the results of this test.

Table 5: Two-sample t test with equal variance

Group	Observations	Means	t-statistic	significance
0(Group of companies of Central African Countries)	39	0.05	9.78***	0.000
1(Group of companies of West African Countries)	117	0.10		
Significance	***p<0.01	**p<0.05	*p<0.1	Df = 154

Source: made by author

3.2. The level of corporate shareholder value creation in Sub-Saharan African countries

Table 6 shows the level of corporate shareholder value creation in Sub-Saharan Africa.

Table 6: Level of corporate shareholder value creation in Sub-Saharan Africa

Mean of ROE between 2010 to 2022	Frequencies	Percentage	Cum Percentage
<20%	6	50	50
20% to 40%	2	17	67
Above 40%	4	33	100
Total	12	100	

Source: made by author

The findings of table 6 show that, in 50% of companies, the average level of shareholder value creation between 2010 and 2012 is less than 20%. This rate increase (20% to 40%) in 17% of companies and in the greater (33%) part of these companies, there is more than 40%. Thus, the average level of shareholder value creation in these companies is 65%.

Table 7 below presents the findings of descriptive statistics of corporate shareholder value creation in Sub-Saharan Africa.

Table 7: Descriptive statistics of corporate shareholder value creation in Sub-Saharan Africa

Items	Mean	Max	Min
Cameroon	0.45	0.62	0.15
Côte d'Ivoire	0.72	0.92	0.25
DRC Congo	0.15	0.25	0.10
Ghana	0.80	0.90	0.17
Nigeria	0.75	0.80	0.15
Sierra Leone	0.10	0.15	0.08
Liberia	0.25	0.35	0.10
Sao Tome	0.08	0.12	0.05

Source: made by author

The results of table 7 show that in these 8 Sub-Saharan African countries the maximum average level of shareholder's value creation is 92% and the minimum is 5%. The maximum level of this creation situated in the West African country (Côte d'Ivoire) and the minimum in (Sao Tome). Therefore, the average level of shareholders' value creation is 30% on 13 years in the

companies of Central African countries while in the West African countries the average level of shareholders' value creation represents 45%. In addition, findings of the different means test show no significant difference in shareholder value creation between the group of companies in West African countries and that of Central African countries. Table 8 below presents the results of this test.

Table 8: Two-sample t test with equal variance

Group	Observations	Means	t-statistic	significance
0(Group of companies of Central African's Countries)	39	0.30	1.65	0.1134
1(Group of companies of West African's Countries)	117	0.45		
Significance	***p<0.01	**p<0.05	*p<0.1	Df = 154

Source: made by author.

3.3. The effect of socially responsible investing on the creation of shareholders' wealth of companies in Sub-Saharan Africa countries

The correlation matrix of the independent variables shows that all Pearson coefficients are below 0.7, as it is the limit where one generally begins to have a serious problem of multi-collinearity (Kervin, 1972). This therefore indicates the absence of multi-collinearity between independent variables included in the model. Table 9 below present this result.

Table 9: Correlation matrix of independent variables

	SRI	INV	MOF	LOA	SIZE
SRI	1.0000				
INV	0.0234	1.0000			
MOF	-0.0165	0.4678	1.0000		
LOA	0.2356	0.5789	0.2690	1.0000	
SIZE	0.5076	0.4578	0.1780	-0.3256	1.0000

Source: field author

Concerning effects specification test, latent heteroscedasticity, serial autocorrelation, normality test and estimation method choice, table 10 summarizes the main results.

Table 10: Main result of Preliminary Test

Test	value
Individual effect test:	
<i>f</i> -statistic	1.345
Significance	0.247
Breush Pagan test-heteroscedasticity:	
<i>Chi 2 (1)</i>	1.234
Significance	0.3367
Skewness/Kurtosis test for normality:	
<i>Pr(Skewness)</i>	0.0351
<i>Pr(Kurtosis)</i>	0.0367
<i>Adj Chi 2 (2)</i>	9.87***
Significance	0.000
Breusch Godfrey test-serial autocorrelation:	
<i>Chi 2 (1)</i>	11.54***
Significance	0.000
Number of observations	156
Notes: *, **, ***Significant at the	10, 5 and 1 percent levels, respectively

Source: field author

The findings of table 10 show that the model implemented is a common effect model. Therefore, probability value of Fisher statistic is above the maximum level of significance of 10% (1.345). However, these findings also show that this model suffers, the serial correlation and the normality problem, because the Breusch-Godfrey test and the normality test are significant at 1%. Moreover, there is no latent heteroscedasticity problem, since the Breusch-Pagan test is not statistically significant.

In the light of the preliminary results obtained, the following model (written in equation 1) is a common effect, estimated by the Ordinary Least Square method with robust. Table 11 gives the main findings.

**Table 11: Influence of socially responsible investing on the shareholders' value creation
(Ordinary Least Square Findings)**

Variables	Coefficients	t-statistic	Significance
Socially responsible investing	0.05	1.65	0.114
Investment policy	0.08**	2.28	0.03
Margin of firm	0.09***	3.67	0.000
Level of activity	0.12***	4.14	0.000
Size	0.08***	2.76	0.003
Constant	0.63***	5.13	0.000
R ²	0.765***		
F(5,150)	14.76		
Significance	0.000		
Number of observations	156		

Notes: *, **, ***Significant at the 10, 5 and 1 percent levels, respectively
Dependent variable: shareholders value creation

Source: field author

These findings show that socially responsible investing do not significantly affect the shareholders' value creation. At the level of control variables, the investment policy (classical investment), margin of firm, level of activity and size affect positively and significantly at the 5 and 1 percent levels, respectively. Therefore, these findings are in the line of the theoretical predictions (Rappaport,1996; Ngongang, 2013, etc.). However, this model suffers from the problem of serial correlation and the normality of residues. That is why, the unbiased estimator of this model is the Generalised Method of Moments estimation system (GMM-System, written in equation 2). Table 12 presents the main results estimated.

Table 12: GMM-System estimation model

Variables	Model 1	Model 2	Model 3
Socially responsible investing	0.05 (1.62)	0.06 (1.65)	0.07 (1.68)
Investment policy	0.18*** (2.87)	0.15*** (2.65)	0.17*** (2.75)
Margin of firm	0.12** (2.25)	0.11** (2.28)	0.10*** (2.26)
Level of activity	0.08*** (3.20)	0.09*** (3.10)	0.10*** (3.22)
Size	0.11*** (3.26)	0.10*** (3.32)	0.13*** (3.25)
Constant	0.31 (3.24)***	0.33 (3.67)***	0.32 (3.66)***
N.Observations	156	156	156
N.Instruments	07	19	25
AR(1)	0.059	0.071	0.012
AR(2)	0.10	0.12	0.18
Test of Sargan/Hansen	41.24	26.76	34.12
Prob, of Sargan/Hansen	0.131	0.671	0.567

Notes: t, statistic in parantheses:*, **, ***Significant at the 10, 5 and 1 percent levels, respectively

Dependent variable: shareholders value creation

Source: field author

The analysis of table 12 shows that, for this estimate, the AR(2) autocorrelation test of Arellano and Bond gives a probability greater than 10%. Therefore, the hypothesis of non-second order autocorrelation cannot be rejected. Therefore, the quality of this model is good. Similarly, the Sargan and Hansen statistic have a probability greater than 10%. This implies that the instruments are valid.

In addition, the findings of the estimation by the GMM-System compiled in table 10 show a stability of the coefficients of the basic model unlike the OLS method. The socially responsible investing always, do not significantly influences the shareholders' value creation. In

consistence with the theoretical prediction, the control variables (investment policy, margin of firm, level of activity and size) affect positively and significantly at 1% respectively the shareholders' value creation.

Following these findings, it cannot be concluded that socially responsible investing is a factor of the shareholders' value creation Sub-African Sahara. The research hypothesis is not confirmed.

4. Discussions

Concerning the effect of socially responsible investing on shareholders' value creation, the results are not in line with the theories put forth because shareholders are not active in these companies and socially responsible investing is not oriented on the governance criteria of the stakeholder theory. According to this theory, "shareholders" exert pressure on companies, making it possible to modify the behavior of the latter by directing them towards the values they defend (Ryan & Schneider, 2002). The shareholders' close relationship with the company's board, the influence he may have in decisions taking as well as the demand for immediate consideration (Capron & Quairel-Lanoizelée; 2004) of his concerns.

For example, we observe in these companies the partial integration of the United Nations principles of socially responsible investing, such as the failure to take ESG (Environment, Social and Governance) principles in to account in the decision-making process in matters of investment, policies and practices of shareholders. Moreover, ecological transition was recently introduced in these companies. Indeed, from 2017 some principles of socially responsible investing such as the publication of reports on ESG practices were taken into account. Similarly, the analysis of the group's 2021 financial report reveals that, it was only on 30 March 2022 that the group approved the responsible management policy update, renewed and reinforced in 2021 in order to respond to the elements of GPSNR (Global Platform for Sustainable Natural Rural) policy. The responsible management policy is grounded on three pillars (rural development, workers and communities, as well as the environment) in parallel with the group's specific commitment to transparency. These commitments from the basis key initiatives aimed at improving long-term economic performance, social well-being, health, safety and the issue of natural resources.

Regarding control variables, the positive and significant effect of investment policy on shareholder value creation can be explained by the highest level of classical investment realised by these companies. Between 2010 and 2022, the average investment policy rate represents

60% turnover, compared to 7% for socially responsible investing. In addition, the positive and significant effect of corporate profit margin and shareholders' value creation level of activity is justified by the increase in the prices of goods and services in Sub-Saharan African countries. Indeed, according to data from the World Bank, the price of goods, such as Soap or Oil, has increased from 4% in 2010 to 9.4% in 2022 in these countries. The raw materials of these manufacturing products come mainly from the companies in this sample. This increases the margins and activities of these companies. At the end, the positive sign of size corresponds to expected results.

Finally, the positive correlation between company size and increased shareholder value can be attributed to the good governance practices of these companies. According to agency theory predictions, large firms have relatively higher agency costs compared to small firms and the presence of a board of directors to direct the manager reduces the divergence of interests between shareholders and managers. This results in increase in shareholder value (Jensen & Meckling, 1976 ; Ross, 1977; Paquerot, 1997; Charreaux, 1997).

These findings are in line with Miglietta (2005), Scholtens (2005), and Bauer et al. (2006), who show that socially responsible investing has no significant effect on the shareholder value creation. However, these findings are not in line with Bollazi & Risalvato (2018), Yilmaz (2013), and Bradford et al. (2017), who proved that socially responsible investing positively and significantly affects companies' performance (measured by return on equity).

Conclusion

The main objective of this study was to analyse the effect of socially responsible investing on shareholder value creation. The empirical investigations carried out help establish several findings from the panel data estimated by the least squares method and the generalized method of moments in the system.

Firstly, socially responsible investing does not affect shareholder-value creation. The hypothesis of this research is not confirmed, and socially responsible investing is a factor of corporate shareholder value creation in Sub-Saharan Africa. Secondly, all control variables positively and significantly affect at 1% corporate shareholder value creation in Sub-Saharan Africa. Lastly, the descriptive findings show that the average level of socially responsible investing in this sample is 7%. In addition, findings of the different means test show no significant difference in shareholder value creation between the group of companies in West African countries and that of Central African countries. Furthermore, the average rate of

investment policy (classical investment) represents 60% of turnover, compared to 7% of socially responsible investing.

Theoretically, this study contributes to the existing literature on green finance. It is a building emerging literature in socially responsible investing in Sub-Saharan Africa concerning piloting aspects of green finance in corporate social responsibility. From a managerial point of view, the findings of this research can serve as framework for reflection to politicians, managers, and business leaders, as a strategic management tool to improve social climate in companies and protect their working environment.

Thus, considering these findings, the following points should be applied to improve corporate shareholder value creation in Sub-Saharan Africa that respect the protection of the environment. An increase rate of socially responsible investing by approximately 60% of turnover compared to classical investment that integrate the principles of socially responsible investing in the United Nations, considering environmental, social, and governance (ESG) principles in the decision-making process on investment, policies, and practices of shareholders. Shareholder activism must be enhanced to protect the environment and corporate transparency. It is worth noting that at the end of this study, these findings should be taken with great caution because of the small number of samples.

REFERENCES

- Albouy, M. (2017). *Decision financière et Creation de Valeur*. Paris: Economica.
- Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economics Studies*, 58(2), 277-297.
- Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics*, 68(1), 29-51.
- Barnett, M. L., & Salomon, R. M. (2006). Beyond dichotomy: the curvilinear relationship between social responsibility and financial performance. *Strategic Management*, 27(11), 1101-1122.
- Bauer, R., Koedijk, K., & Otten, R. (2005). International evidence on ethical mutual fund performance and investment style. *Journal of Banking and Finance*, 29, 1751-1767.
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87, 115-143.
- Bollazzi, F., & Risalvato, G. (2018). Corporate Responsibility and ROA: Evidence from the Italian Stock Exchange. *Asian Economic and Financial Review*, 8(4), 565-570.
- Bollazzi, F., & Risalvato, G. (2018). Corporate Responsibility and ROA: Evidence from the Italian Stock Exchange. *Asian Economic and Financial Review*, 8(4), 565-570.
- Bradford, M., Earp, J. B., & William, P. F. (2017). Understanding sustainability for socially responsible investing and reporting. *Journal of Capital Markets Studies*, 1(1), 10-35.
- Brammer, S., Brooks, C., & Pavelin, S. (2006). Corporate Social Performance and Stock Returns: UK Evidence from Disaggregate Measures. *Financial Management*, 35(3), 97-116.
- Burlacu, R., Girerd-Potin, I., & Dupré, D. (2004). Y'a-t-il un sacrifice à être éthique ? Une étude de performance des fonds socialement responsables américains. *Banque et Marchés*(69), 20-29.
- Capron, M., & Quairel-Lanoizelée, F. (2004). *Mythes et réalités de l'entreprise responsable : acteurs, enjeux, stratégies*. Paris: La Découverte.
- Charreaux, G. (1997). *Le Gouvernement Des Entreprises: Corporate Governance, Theories et Faits*. Paris : Economica.
- Chong, J., Her, M., & Phillips, G. M. (2006). To sin or not to sin? Now that's the question. *Journal of Asset Management*, 6(6), 406-417.
- Clow, R. (1999). Money that grows on trees. *Institutional Investor*, 33(10), 212-215.
- Copeland, T., Koller, T., & Murrin, J. (1991). *La Strategie de la valeur*. Paris: Interdictions.
- Core, J., Guay, W., & Rusticus, T. (2006). Does Weak Governance Cause Weak Stock Returns? An Examination of Firm Operating Performance and Investors' Expectations. *Journal of Finance*, 56(2), 655-687.
- Cummings, L. S. (2000). The Financial Performance of Ethical Investment Trusts: An Australian Perspective. *Journal of Business Ethics*, 25(1), 79-92.
- D'Arcimoles, C. H., & Tréboucq, S. (2003). Une approche du rôle de l'actionnariat salarié dans la performance et le risque des entreprises françaises. *Revue de Gestion de Ressources Humaines*(48), 2-15.
- Déjean, F. (2002). *L'investissement socialement responsable : étude du cas français*. Paris: Collection FNEGE – Editions Vuibert.
- Derwall, J., & Koedijk, K. (2009). Socially Responsible Fixed-Income Funds. *Journal of Business Finance and Accounting*, 36(1), 210-229.
- Freeman, R. E. (1984). *Strategic Management: a Stakeholder Approach*. Boston: Marshall, M. A. Pitman.

- Friedman, M. (1962). *Capitalism and Freedom*. Chicago: University of Chicago Press.
- Galema, R., Plantinga, A., & Scholtens, B. (2008). The stocks and stake: return and risk in socially responsible investment. *Journal of Banking and Finance*, 32(12), 2646-2654.
- Geczy, C., Stambaugh, R. F., & Levin, D. (2003, mai 12). *Investing in Socially Responsible Mutual Funds*. Retrieved 04 2023, 14, from www.wharton.upenn.edu.
- Gillet, P. (2008). *Les performances des fonds « éthiques » et vicieux*. Paris: Etats Généraux du Management.
- Girard, E., Rahman, H., & Stone, B. (2007). Socially Responsible Investment: Goody-Two Shoes or Bad to The Bone. *Journal of Investing*, 16(1), 96-110.
- Gompers, P., Ishii, J., & Metrick, A. (2003). Corporate Governance and Equity Prices. *The Quarterly Journal of Economics*, 118(1), 107-155.
- Gregory, A., Matatko, J., & Luther, R. G. (1997). Ethical Unit Trust Financial Performance: Small Company Effects and Full Size Effects. *Journal of Business Finance and Accounting*, 24(5), 705-725.
- Guedri, Z., & Hollandts, X. (2008a). Beyond dichotomy: the culvilinear impact of employee ownership on firm performance. *Corporate Governance: An international Review*, 16(5), 460-464.
- Hillman, A. J., & Keim, G. D. (2001). Shareholder Value, Stakeholder Management, and Social Issues: what's the Bottom Line? *Strategic Management Journal*, 22, 125-139.
- Hong, H., & Kacperczyk, M. (2009). The Price of Sin: The Effect of Social Norms on Markets. *Journal of Financial Economics*, 93, 15-36.
- Igalens, J., & Point, S. (2009). *Vers une nouvelle gouvernance des entreprises : l'entreprise face à ses parties prenantes*. Paris: Dunod.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial Behavior, Agency Cost and Ownership Structure. *Journal Of Financial Economics*, 3(4), 305-360.
- Joe, H. F., Christian, R. M., & Sarsteadt, M. (2014). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-152.
- Kempf, A., & Osthoff, P. (2007). The Effect of Socially Responsible Investing on Portfolio Performance. *European Financial Management*, 13(5), 908-922.
- Kervin, J. B. (1992). *Methods for Business Research*. New-York: Harper Collins.
- Kreander, N., Gray, R. H., Power, D. M., & Sinclair, C. D. (2005). Evaluating the performance of ethical and non-ethical funds: A Matched Pair Analysis. *Journal of Business Finance*, 32(7/8), 1465-1493.
- Kurtz, L. (2005). Answers to Four Questions. *Journal of Investing*, 14(3), 125-139.
- Lamb, D. (1991). Morals and Money. *Money Management*, 39-46.
- Le Maux, J., & Le Saout, E. (2004). La performance des indices socialement responsables : mirage ou réalité ? *Revue Sciences de Gestion*, 44, 51-79.
- Le Saout, E., & Buscot, C. (2009). Comment expliquer la performance de l'investissement socialement responsable. *Revue Management et Avenir*, 3(23), 153-169.
- Luther, R. G., & Matatko, J. (1994). The Performance of Ethical Unit Trusts: Choosing an Appropriate Benchmark. *British Accounting Review*, 26(1), 77-89.
- Luther, R. G., Matatko, J., & Corner, D. (1992). The Investment Performance of UK Ethical Unit Trusts. *Accounting, Auditing and Accountability Journal*, 5(4), 57-70.
- Luther, R. G., Matatko, J., & Corner, D. C. (1992). The Investment Performance of UK Ethical Unit Trusts. *Accounting, Auditing and Accountability Journal*, 5(4), 57-70.
- Markowitz, H. (1952). Portfolio selection. *Journal of Finance*, 7(1), 77-99.
- Miglietta, F. (2005). Socially responsible investments in Continental Europe : a multifactor style analysis. *10ème symposium de Finance, banque et assurance* (pp. 14-16). Allemagne: Université de Karlsruhe.

- Moskowitz, M. R. (1972). Choosing Socially Responsible stocks. *Business and Society*.
- Munnell, A. H., Blais, L. E., & Keefe, K. M. (1983). The Pitfalls of Social Investing: The Case of Public Pensions and Housing. *New England Economic Review*, 20-37.
- Ngongang, D. (2013). Actionnariat salarié comme levier de création de valeur ajoutée et de productivité dans les entreprises camerounaises. *Revue Gestion et Organisation*, 5(1), 1-8.
- Opler, T. C., & Sokobin, J. (1995). Does Coordinated Institutional Activism Work ? An Analysis of the Activities of the Council of Institutional Investors. *working paper*.
- Pagès, A. (2006). *Les performances de l'Investissement Socialement Responsable : mesures et enjeux*. Paris: HEC Paris.
- Plantinga, A., & Scholtens, B. (2001). *Socially responsible investing and management style of mutual funds in the Euronext Stock Markets*. University of Groningen.
- Rappaport, A. (1986). *Creating Shareholder Value: The New Standards of Business Performanvr*. Chicago: FreePress.
- Revelli, C., & Viviani, J. L. (2011). LES DÉTERMINANTS DE L'EFFET DE L'ISR SUR LA PERFORMANCE FINANCIÈRE : UNE ANALYSE STATISTIQUE DE LA LITTÉRATURE EMPIRIQUE. *Management & Avenir*, 4(44), 34-59. doi:10.3917/mav.044.0034
- Risalvato, G., Venezia, C., & Maggio, F. (2019). Social Responsible Investments and Performance. *International Journal of Financial Research*, 10(1), 10-16.
- Roodman, D. (2009). How to do Xtabond2: an intruductionto difference and system GMM in Stata. *The Stata Journal*, 9, 86-136.
- Ross, S. A. (1977). The Determination of Financial Structure: The Incentive-Signaling approach. *The Bell Journal of Economics*, 8, 23-40.
- Rudd, A. (1981). Social responsibility and portfolio performance. *California Management Review*(23), 55-61.
- Ryan, L. V., & Schneider, M. (2002). The Antecedents of Institutional Investor Activism. *Academy of Management Review*, 27(4), 554-573.
- Saadaoui, K. (2009). La performance financière de l'investissement socialement responsable : cas des fonds socialement responsables français et canadiens. In *Thèse de Doctorat en Sciences de Gestion*. Université Paris-sud .
- Scholtens, B. (2005). Style and Performance of Dutch Socially Responsible Investment Funds. *Journal of Investing*, 14(1).
- Schröder, M. (2004). The Performance of Socially Responsible Investments: Investment Funds and Indices. *Financial Markets and Portfolio Management*, 18(2), 122-142.
- Smith, M. P. (1996). Shareholder Activism by Institutional Investors: Evidence from CalPERS. *Journal of Finance*, 51(1), 227-252.
- Statman, M. (2000). Socially Responsible Mutual Funds. *Financial Analysts Journal*, 56(3), 30-39.
- Tippet, J. (2001). Performance of Australia's Ethical Funds. *The Australian Economic Review*, 34(2), 170-178.
- Trébucq, S. (2002). L'actionnariat salarié dans les entreprises familiales du SBF 250: un outil de création de valeur ? *Revue Finance*, 15(4), 107-123.
- Vance, S. C. (1975). Are socially responsible corporations good investment risk? *Management Review*, 64, 18-24.
- Vermeir, W., & Friedrich, C. (2006). La performance de l'ISR. *Revue d'Economie*(85), 107-120.

- Yilmaz, I. (2013). Social performance vs. Financial performance: CSR disclosures as indicator of social performance. *International Journal of Finance & Banking Studies*, 2(2), 53-65.
- Ziegler, A., Schröder, M., & Rennings, K. (2007). The Effect of Environmental and Social Performance on the Stock Performance of European Corporations. *Environmental and Resource Economics*, 37(4), 661-680.