



Solicited Sustainability Ratings

Correlation between Standard Ethics Rating (SER) and financial performance (including ratios)

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1. Overview

With the outbreak of the financial crisis over the last decade, investors have come to realise the shortcomings of an over-reliance on financials in the formulation of investment strategies. Environmental, social and governmental (ESG) factors have been receiving more attention as deciding factors in the investment world.

Many executives now believe that CSR can improve profits. They understand that CSR can promote respect for their company in the marketplace. In turn, this can lead to higher sales, enhanced employee loyalty and attract more talented personnel to their companies. Moreover, CSR activities focusing on sustainability issues may lower costs and improve efficiencies.

CSR ensures a required level of trust between businesses and consumers and other market players. For example, a portfolio manager must give the same consideration to the portfolios of family members as to small individual investors. Such practices ensure that the public is treated fairly.

When speaking of conduct, behaviour and processes within companies, a step back needs to be taken to remember that all these elements originate from decisions of individuals within the market and from decision-making processes followed by those market players. Accordingly, how decisions are made, the incentives and disincentives behind them, the processes that are applied and whether people actually realise a decision has been made, are an important focus for us as regulators. However, they should also represent a key focus for the industry itself.

There has been growing attention paid by international supervisors on issues of professionalism, culture and ethics in finance. Last year, William Dudley, President of the Federal Reserve Bank of New York, reached the sobering conclusion that there is still evidence of “deep-seated cultural and ethical failures at many large financial institutions” and that “being too big to fail” and shifting the emphasis to longer-term sustainability will encourage the cultural shift necessary to restore public trust in the industry. Just last week, Christine Lagarde of the International Monetary Fund (IMF) remarked that “simply adding regulations is not the answer”. Restoring trust in the financial sector will require a shift towards greater integrity and accountability, with a stronger and systematic ethical dimension to the actions taken by firms. Mark Carney of the Bank of England and the Financial Stability Board (FSB) has also echoed these sentiments by recently calling for a systemic change amongst companies to see their business as a vocation, “an activity with high ethical standards, which in turn conveys certain responsibilities.”

There are numerous local non-governmental and governmental initiatives promoting ESG practices. In Hong Kong, for example, there is the Hong Kong CSR Charter established by Community Business, the Caring Company Scheme created by the Hong Kong Council of Social Service, the Corporate Citizenship Programme launched by the Hong Kong Productivity Council and the Carbon Reduction Charter by the Hong Kong Environmental Protection Department. Independent policy think-tanks such as Civic Exchange also promote ESG by publishing research papers, engaging stakeholders and educating the public. The Association for Sustainable and Responsible Investment in Asia promotes corporate responsibility and sustainable investment practices in Asia.

In a market economy like Hong Kong, relations between ethics and business is always a hot topic for discussion. Some people argue that profit maximization is the ultimate goal and has nothing to do with morality. According to empirical analysis, morality should not be neglected in making business decisions.

Warren Buffett once said “In looking for people to hire, you look for three qualities: integrity, intelligence, and energy. And if you don’t have the first, the other two will kill you.” Lots of business empires have gone

bankrupt because of fraud or other unethical behaviour which ruined their image and destroyed their business.

This report will explore the degree to which financial performance is correlated to ESG factors by analysing the relationship between Standard Ethics Rating (SER) and the corresponding companies, as well as that between Standard Ethics Italian Index and FTSE MIB Index. With the proven correlation, the results will be applied to the construction of the Asian Bank Index (ABI) which aims at tracking the financial performance of Asian banks against their ESG performance. The capability with which it serves its intended purpose will be reviewed.

Standard Ethics Rating

Recently, more investors have been applying environmental, social and governmental (ESG) factors to analyse their investment performance and risk adjustment. With its “Standard Ethics Rating”, the first Solicited Sustainability Ratings (SSR) in Europe, Standard Ethics is able to quantify the ESG degree of a company. This is a rating on Corporate Social Responsibility and Corporate Governance that, at the same time, is solicited, standard and independent:

- Solicited: because it is issued only on request by applicants, the recipients of the rating;
- Standard: because any rating is always comparable to other ratings and the algorithm is aligned to the same guidelines;
- Independent: because its assignment is incompatible with the supply of other services, research and consulting activities related to data that has been collected. It is also proper not to have common financial and economic interests between the rating agency and applicants.

There are 9 levels of SER: EEE; EEE-; EE+; EE; EE-; E+; E; E-; SOSP.

A rating of EE- or above indicates that a company is compliant whereas a rating of E+ or below that it is non-compliant. The following table shows the level of compliance that corresponds to each rating:

SER	Level of compliance	Ability to respond to reputational crisis
EEE	Full	Strong
EEE-	Excellent	
EE+	Very strong	Good
EE	Strong	
EE-	Adequate	Low
E+	Insufficient	
E	Low	Weak
E-	Very low	
F	Lowest level	

An independent Opinion on the Level of Compliance

Standard Ethics Ratings assess the level of compliance in companies and sovereign nations with sustainability and Corporate Social Responsibility (CSR) based on documents and guidelines published by the European Union (EU), the Organization for Economic Cooperation and Development (OECD) and the United Nations (UN).

If a company shows a strong degree of CSR which complies with the above documents, a higher rating will be assigned.

Corporate Objectives

Standard Ethics Ratings enable companies to achieve corporate objectives related to governance, relations with stakeholders, communication and relations with the financial and credit sectors:

- Governance and CSR – International voluntary guidelines on CSR, sustainability and governance pre-empt future national and legislative requirements. Standard Ethics Ratings prepare companies for compliance procedures.
- Stakeholders – Assistance by a rating agency during this assessment motivates stakeholders and employees to cooperate with their companies so that they can all be involved in a common and constructive challenge by improving relationships. The ultimate objective is to achieve optimum internationalisation.
- Communication – International voluntary guidelines are clear references for the economic world. The market values efforts to comply with these guidelines. In relation to other approaches to CSR that are less measurable and comparable, corporate communication benefits in terms of incisiveness and clarity.
- Clients and Shareholders – Standard Ethics Ratings are a symbol of transparency because they offer comparability vis-à-vis competitors. Therefore, they enhance credibility and reputation with clients and shareholders.
- Finance World and Investors – For many investors and analysts, applying for an SER is, by itself, a mark of seriousness and excellence because it is based on a truly independent assessment performed by a specialised agency that does not confuse analysis with management consultancy, certification or audit.

2. Relationship between Standard Ethics Ratings and Financial Performance

A company's CSR is also aimed at assessing its financial performance, which can be regarded as the return on the listed stock. Our preliminary assumption is that the higher the SER of a company, the higher its financial performance (return).

Methodology

Quantitative research on the impact of a change in rating on a change in financial performance is carried out. The expectation is that, if the SER of a company improves, the financial performance in the period afterwards will be better than that in the previous period with the old rating.

Each rating is ranked (by number). The higher the SER, the higher the rank (9 being the highest). The ranking table is as follows:

Quantified Rating Table

Rating	Rating Conversion
EEE	9
EEE-	8
EE+	7
EE	6
EE-	5
E+	4
E	3
E-	2
SOSP	1

The financial performance is then assessed for 67 Italian companies and compared to their respective ratings at each of the quarters within the assessment period, namely March 2004 to March 2012. The list of these 67 companies is shown on the next page.

Sample Companies for Analysis

Company
Alleanza Assicurazioni
Ras
Assicurazioni Generali
Atlantia
Autogrill
Banca Antonveneta
Banca Fideuram
Banca Intesa
Banca Mps
Banca Popolare Di Milano
Banche Popolari Unite
Banco Popolare di Verona e Novara
Benetton
Bnl
Finmeccanica
Capitalia
Edison
Enel
Eni
Fastweb
Fiat
Finmeccanica
Fondiaria-Sai
Gruppo Editoriale L'Espresso
Italcementi
Luxottica
Mediaset
Mediobanca
Mediolanum

Mondadori

Pirelli

Rcs

San Paolo Imi

Seat Pagine Gialle

Snam Rete Gas

St Microelectronics

Telecom Italia

Tim

Tiscali

Unicredit

Saipem

Terna

Lottomatica

A2a

Alitalia

Parmalat

Tenaris

Banca Popolare di Lodi

Unipol

Buzzi Unicem

Intesa San Paolo

Banco Popolare

Impregilo

Prysmian

Ubi Banca

Geox

Ansaldo STS

Campari

Cir-Compagnie Industriali Riunite

Exor

Azimut

Diasorin

Enel Green Power

Fiat Industrial

Tod's

Given a list of financial performances and SERs for the above companies at different quarters, the analysis is continued but with different approaches to ensure the robustness of the results. Initially, a straightforward comparison between average financial performances of high and low rating groups is carried out. Subsequently, event studies are performed to explore the long and short-term effects of a change in SER on the financial performance of a company. Correlational and regression studies follow to investigate the significance of the relationship between SERs and financial performance. The tests are summarised below:

1. Comparison of the financial returns of high and low SER companies
2. Change in SER against change in stock return (long term effect of SER)
 - Event study against MSCI Italy Index
3. Change in SER against change in stock return (short term effect of SER)
 - Event study against MSCI Italy Index
4. Correlations between SER and a list of financial performances
 - Relative score assigned (from 1 to 9 for each quarter)
 - Direct comparison
5. Regression of SER against a list of financial performances

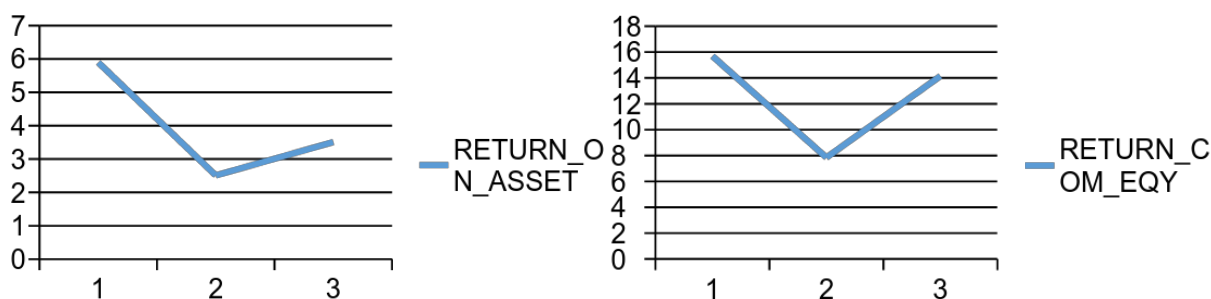
2.1 Comparison of the Financial Return of High and Low SER companies

In this test, Financial Return information (see below) of the target Italian companies is gathered. The companies are then divided into three groups (High, Median and Low SERs). The financial return of the three groups is then plotted to see if any pattern in financial return can be observed with a difference in SERs.

Indicator	When SER improves, Indicator
Market Capitalization	Increases
P/E Ratio	Decreases
ROA	first <i>decreases</i> , then <i>increases</i>
ROE	first <i>decreases</i> , then <i>increases</i>

The results show that companies with larger market capitalization tend to have higher SERs. This is generally true as large companies have the financial resources to invest in corporate governance and are expected to perform better in this category.

- V Shaped Curve in the ROA & ROE Diagram.



Medium-sized companies tend not to have the resources that large companies have and do not enjoy the flexibility and the growth potential of small companies. Therefore, the ROE and ROA of medium-sized companies are the lowest among the three groups (High, Median and Low), whereas large and small companies enjoy economies of scale and management flexibility.

The study also reveals that companies with better SERs have generally lower PE ratios. This finding is somewhat surprising as it is assumed that the market perceives companies with good corporate governance as having more upside and growth potential. However, the result is arguable as the current test does not divide target companies into different industries and PE ratios of different industries are generally known to differ hugely. More in-depth analysis, especially industry-wise, would be required before reaching final conclusions.

2.2 Change in SER against Change in Stock Return (Long Term Effect of SER) --- Event Study against MSCI Italy Index

The performance of a company's CSR (SER) is supposed to impact the company's stock return in both the long and the short term. CSR should be a component that can fundamentally affect a company's financial statements which, in turn, affect its market performance. Tests ought to reveal the extent to which the market responds to the change in SER: the hypothesis is that, when there is a positive change in SER (more CSR), the stock return should be higher.

In order to examine the impact of the change in SER on the stock return, an event study is undergone. The difference between normal and abnormal returns is used to examine the effect of the change in SER. A normal return is the theoretical return without the occurrence of the event, i.e., the change in SER (announcement of the change). A normal return is assumed to be the market return, where MSCI Italy Index is used for Italian companies. An abnormal return is the theoretical return with the occurrence of the event, i.e., the change in SER. Therefore, (abnormal return – normal return) is the quantitative measurement of the impact of change in SER.

There are two variables that need to be taken into account to find the relationship between change in SER and long-term financial performance. These are the change in SER at a specific point in time and the difference between a 12-month stock return and the market return after the change.

The following is an example of the above:

SER of Finmeccanica from Dec-2005 to Jun-2009

Finmeccanica	31/12/2005	31/3/2006	30/6/2006	30/9/2006	31/12/2006
	1	1	1	1	1
	31/3/2007	30/6/2007	30/9/2007	31/12/2007	31/3/2008
	1	1	1	5	5
	30/6/2008	30/9/2008	31/12/2008	31/3/2009	30/6/2009
	5	5	5	5	5

Source: Standard Ethics Company Filings

As can be seen, a change in SER took place for Sep-2007 to Dec-2007: +4 (more CSR).

Data Collection

On the basis of the above example, two variables ought to be considered. The X-variable would be the change in SER at a point in time, i.e., **+4** in the example, whereas the Y-variable is the difference between a **cumulative** stock return and the market return at a specific point in time.

The pseudo-formula is therefore equal to (from the example):

(the **cumulative** company's return from **31/12/2007 to 31/12/2008**) minus
the **cumulative** MSCI Italy Index's return from **31/12/2007 to 31/12/2008**)

The result is that one of the Y-variables is +2.43 (%) and one of the X-variables is +4. The list of the results is shown on the next page (in descending order of change in SER):

Companies' Returns against Change in SER

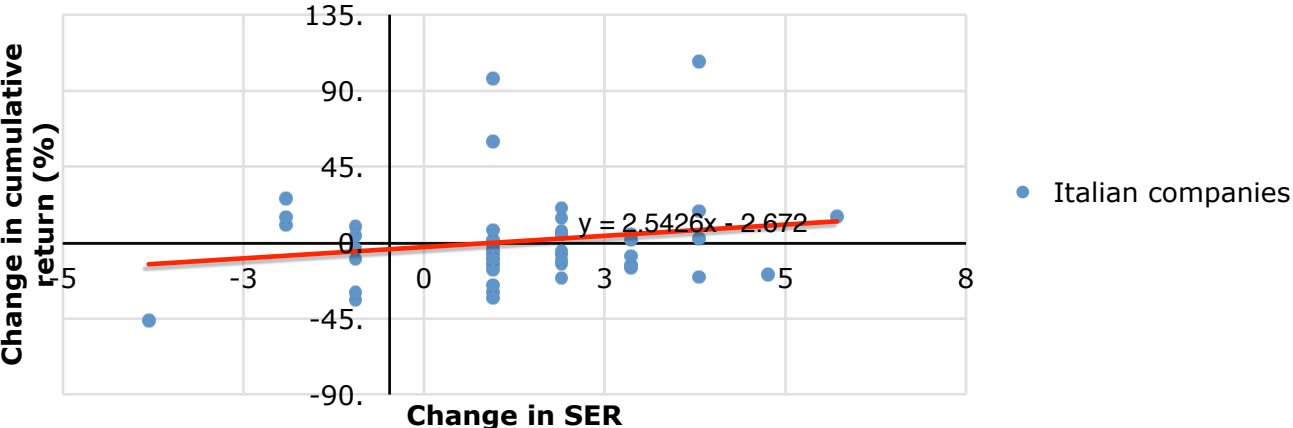
Change in Return (%)	Change in SER
15.57	6
-19.04	5
107.24	4
18.56	4
2.43	4
-20.50	4
4.79	3
1.34	3
-8.01	3
-13.24	3
-14.61	3
20.59	2
14.27	2
6.76	2
5.26	2
4.77	2
-5.01	2
-6.79	2
-10.33	2
-12.62	2
-20.74	2
96.90	1
59.78	1
7.75	1
1.60	1
0.87	1
-1.09	1
-4.71	1
-6.39	1

-9.78	1
-9.78	1
-12.72	1
-16.06	1
-25.15	1
-29.37	1
-32.88	1
9.59	-1
4.35	-1
-3.52	-1
-9.84	-1
-29.43	-1
-34.11	-1
26.08	-2
15.24	-2
10.35	-2
-46.18	-4

Results

The correlation between change in return and change in SER = **+0.1776** is calculated. The correlation shows that, with an increase in SER (more CSR and a more sustainable company), there will be an improvement in stock performance (more return) in the long term, and vice versa. A graph on the next page of financial performance against changes in SER is plotted to find out how large SERs can impact performance:

Difference in Cumulative Return against Change in SER (Italian Companies)



The equation is as follows: difference in cumulative return (%) = 1.9133 (change in SER). The result is as expected: the greater the change in SER, the better the financial performance.

2.3 Change in SER against Change in Stock Return (Short Term Effect of SER) -- Event Study against MSCI Italy Index

There are two variables to consider in order to find the relationship between change in SER and short-term financial performance. These are the change in SER at a specific point in time and the difference between a 3-month stock return and the market return after the change. The time frame for the short term performance is three months; no significant change in the business and company structure within a quarter is assumed.

The following is an example of the above:

SER of Finmeccanica from Dec-2005 to Jun-2009

Finmeccanica	31/12/2005	31/3/2006	30/6/2006	30/9/2006	31/12/2006
	1	1	1	1	1
	31/3/2007	30/6/2007	30/9/2007	31/12/2007	31/3/2008
	1	1	1	5	5
	30/6/2008	30/9/2008	31/12/2008	31/3/2009	30/6/2009
	5	5	5	5	5

Source: Standard Ethics Company Filings

As can be seen, a change in SER took place for Sep-2007 to Dec-2007: +4 (more CSR).

Data Collection

On the basis of the above example, two variables ought to be considered. The X-variable would be the change in SER at a point in time, i.e., **+4** in the example, whereas the Y-variable is the difference between a **cumulative** stock return and the market return at a specific point in time.

The pseudo formula is therefore equal to (from the example):

(the **cumulative** company's return from **31/12/2007 to 31/3/2007**) minus
the **cumulative** MSCI Italy Index's return from **31/12/2007 to 31/3/2007**)

The result of the example is that one of the Y-variables is + 2.75 (%) and one of the X-variables is +4.

The list of the results is as follows (in descending order of change in SER):

Companies' Return against Change in SER

Change in Return (%)	Change in SER
12.27	6

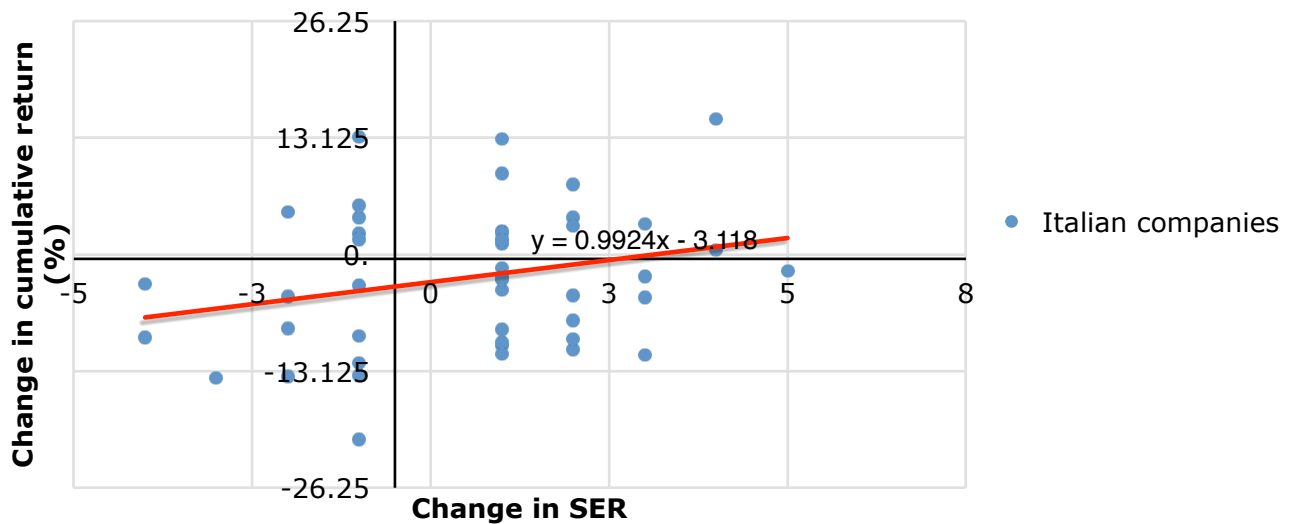
-1.83	5
-17.07	5
15.21	4
10.60	4
0.44	4
-4.57	4
-6.75	4
-6.93	4
4.59	3
3.43	3
-1.72	3
-2.52	3
-4.36	3
-4.88	3
-11.31	3
9.21	2
7.87	2
4.15	2
4.12	2
3.18	2
2.71	2
-4.62	2
-5.96	2
-7.43	2
-9.53	2
-10.68	2
12.97	1
9.11	1
2.64	1
2.42	1
1.69	1
1.65	1

1.19	1
-1.53	1
-2.56	1
-2.87	1
-4.02	1
-5.76	1
-8.45	1
-9.85	1
-9.85	1
-9.86	1
-10.23	1
-11.19	1
13.22	-1
5.48	-1
4.11	-1
2.36	-1
1.72	-1
-3.50	-1
-9.15	-1
-12.17	-1
-12.27	-1
-13.64	-1
-20.85	-1
4.76	-2
-4.71	-2
-8.33	-2
-13.70	-2
-13.95	-3
-3.35	-4
-9.36	-4
-18.71	-5

Results

The correlation between the change in return and change in SER = **+0.3044** is calculated. The correlation shows that, with an increase in SER (more CSR and a more sustainable company), there will be an improvement in stock performance (more return) in the short term, and vice versa. A graph of financial performance against changes in SER is plotted to find out how large SERs can impact the performance:

Difference in Cumulative Return against Change in SER (Italian Companies)



The equation is as follows: $\text{difference in cumulative return (\%)} = 0.6084 (\text{change in SER})$. The result is as expected: the greater the change in SER, the better the financial performance.

2.4 Correlations between SER and a List of Financial Performances

After finding the correlations between SER and stock return in the short and long term, the following financial performances are examined to seek the correlation between these and SER:

- 90 Days Sharpe Ratio
- P/E ratio
- P/B ratio
- NOPAT (Non Operating Profit After Tax)
- Profit Margin
- 90-day volatility

- ROE
- ROA

It is divided into two parts using 2 methods: the relative scoring system and the direct raw data comparison. The correlation is divided into two parts on the basis of the methodology used: one uses a relative scoring system and the other a direct raw data comparison.

Relative Score Assigned (from 1 to 9 for each Quarter)

After assigning the score (1 to 9) to the SER for each company and for each period of time, a **relative score** for each individual financial performance for a specific period of time is assigned. **The higher score is assigned to the company with the best financial performance in a single quarter.** This is done to minimise the cyclical effect from different periods of time on the financial performance. It is also used to minimise the outlier effect to ensure that the outliers are fairly compared in a single scoring scale e.g. some industries may perform so much better that they will be harder to compare in terms of raw data. Finally, the financial performance and the SER can be better compared when SERs are assigned on the basis of a 1 to 9 scale.

The score for the financial performance in each quarter (each quarter involves 40 companies) is assigned according to the proportion of total SERs.

Proportion of Total SERs

SER	Score	# of Data Pts	Proportion	Approximate Number of Data in a Scale of 40
EEE	9	0	0.00%	0
EEE-	8	24	1.62%	1
EE+	7	96	6.49%	3
EE	6	211	14.26%	6
EE-	5	272	18.38%	7
E+	4	235	15.88%	6
E	3	265	17.91%	7
E-	2	146	9.86%	4
SOSP	1	231	15.61%	5
Total Data Pts:		1480	100.00%	40

The following is an example on how to score the financial performance within a quarter. The first step is to convert all SERs from letter grades to numbers based on a 1 to 9 scale. The financial performance within the quarter is then ranked and standardised with a scale of 40 to fit the SER score. However, for some quarters and financial performances, there are not enough data points to fully fit the SER score table.

The formula for standardised ranking is: rank * 40 / maximum rank in a quarter.

The final step is to assign a score to each company based on the first quarter data for 2004:

Date	Company	SER Conversion	90D Sharpe Ratio	Sharpe Ratio Rank	Standardised Sharpe Ratio	Sharpe Ratio Score	
31/3/2004	Alleanza Assicurazioni		2	0.23	8	8.65	6
31/3/2004	Ras		2	0.36	5	5.41	6
31/3/2004	Assicurazioni Generali		4	-0.20	23	24.86	3
31/3/2004	Atlantia		5	0.12	10	10.81	5
31/3/2004	Autogrill		1	0.07	11	11.89	5
31/3/2004	Banca Antonveneta		5	0.01	12	12.97	5
31/3/2004	Banca Fideuram		3	-0.20	22	23.78	3
31/3/2004	Banca Intesa		3	-0.43	32	34.59	1
31/3/2004	Banca Mps		5				
31/3/2004	Banca Popolare di Milano		6	-0.33	28	30.27	2
31/3/2004	Banche Popolari Unite		6	-0.53	35	37.84	1
31/3/2004	Banco Popolare di Verona e Novara		7	-0.18	21	22.70	4
31/3/2004	Benetton		1	-0.20	24	25.95	3
31/3/2004	Bnl		3	-0.13	19	20.54	4
31/3/2004	Finmeccanica		3	-0.03	14	15.14	5
31/3/2004	Capitalia		3	-0.23	25	27.03	3
31/3/2004	Edison		1	-0.32	27	29.19	3
31/3/2004	Enel		4	1.29	1	1.08	7
31/3/2004	Eni		8	0.44	3	3.24	7
31/3/2004	Fastweb		1	-0.05	16	17.30	4
31/3/2004	Fiat		3	-0.34	30	32.43	2
31/3/2004	Finmeccanica		1	-0.02	13	14.05	5
31/3/2004	Fondiaria-Sai		1				
31/3/2004	Gruppo Editoriale L'Espresso		1	-0.16	20	21.62	4
31/3/2004	Italcementi		1	-0.04	15	16.22	5
31/3/2004	Luxottica		1	-0.34	29	31.35	2
31/3/2004	Mediaset		2	-0.24	26	28.11	3

31/3/2004	Mediobanca	3	0.39	4	4.32	6
31/3/2004	Mediolanum	2	-0.75	37	40.00	1
31/3/2004	Mondadori	1	0.13	9	9.73	6
31/3/2004	Pirelli	3	-0.12	18	19.46	4
31/3/2004	Rcs	1	-0.11	17	18.38	4
31/3/2004	San Paolo Imi	4	-0.43	33	35.68	1
31/3/2004	Seat Pagine Gialle	2				
31/3/2004	Snam Rete Gas	6	0.53	2	2.16	7
31/3/2004	St Microelectronics	1	-0.45	34	36.76	1
31/3/2004	Telecom Italia	2	0.32	6	6.49	6
31/3/2004	Tim	2	0.28	7	7.57	6
31/3/2004	Tiscali	1	-0.35	31	33.51	2
31/3/2004	Unicredit	5	-0.72	36	38.92	1

Empty cells show lack of data for their respective companies.

The correlation between SER score and financial performance is calculated. The results are shown in the table below.

Correlations between SER and Financial Performance - Relative Score Method

Correlation	90D Sharpe Ratio	P/E	P/B	NOPAT	Profit Margin	90D Volatility	ROE	ROA
Relative Score Method	3.01%	-18.20%	-27.57%	20.64%	2.86%	-9.48%	-13.95%	-4.30%

Source: Standard Ethics Filings, Bloomberg Terminal and Self-Calculations

Direct Comparison between SER and Raw Data

This method is employed to calculate the correlation between SER and the raw data (financial performance) directly, so as to (1) avoid the statistical bias of ranking the financial performance while there can be numerous ways of ranking leading to different results, and (2) truly compare SERs and financial performances with the assumption that the other effects are minimal.

After assigning SER scores and directly comparing them against the raw data, the following results are achieved:

Correlations between SER and Financial Performance from Raw Data:

Correlation	90D Sharpe Ratio	P/E	P/B	NOPAT	Profit Margin	90D Volatility	ROE	ROA
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Raw Data Method	-2.87%	-4.42%	-27.34%	9.52%	-5.06%	1.49%	-14.50%	-6.41%
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Source: Standard Ethics Filings, Bloomberg Terminal and Self-Calculations

Results

Correlation	90D Sharpe Ratio	P/E	P/B	NOPAT	Profit Margin	90D Volatility	ROE	ROA
Relative Score	3.01%	<u>-18.20%</u>	<u>-27.57%</u>	<u>20.64%</u>	2.86%	-9.48%	-13.95%	-4.30%
Raw Data	-2.87%	-4.42%	<u>-27.34%</u>	9.52%	-5.06%	1.49%	-14.50%	-6.41%

Due to the highly negative correlation of P/E and P/B ratios, the higher the SER (a more sustainable company), the more a company is undervalued. Furthermore, due to the highly positive correlation of NOPAT, companies with higher SERs (more ethical companies) tend to be operating more efficiently.

2.5 Regression of SER against a List of Financial Performances

So far, the analysis has demonstrated a relation between financial performances and corporate governance. The mechanism through which corporate governance influences a company will be explored in this section.

The performance of most companies is affected by various factors other than corporate governance. Their impact has to be accounted for in order to illustrate the marginal effect of corporate governance. This is done by including these factors as explanatory variables in a multivariable regression of financial performance against SER. The regression coefficient of SERs will then show its influence on the performance measure; the statistical significance of the coefficient will indicate whether such influence is meaningful. In Standard Ethics studies, the structural growth, operational performance and financial structure of a company are the factors that will be taken into account.

The first factor, Structural Growth (GROWTH), captures the effect on financial performance of increased operational capability and competitiveness due to the scale increase of a business. The structural growth of a company at year-end is the ratio of its total assets at that year-end to its total assets at the previous year-end.

The second factor, Operational Performance (OPER), shows the impact of the operational health of a company on its performance. The operational performance of a company at year-end is the ratio of the operating margin to the net sales at that year-end.

The last factor, Financial Structure (FIN), describes the impact of a company's capital strength on analysts' view of the company itself. The financial structure of a company at year-end is the ratio of its total debt to its total equity.

For the purposes of regression, the variable of interest, SER, is converted into numeric scores from 1 to 9 in a manner similar to the previous regression tests. The converted score is the CSR.

All the explanatory variables are listed below:

Measures	Variable
CSR	SER Conversion
GROWTH	Structural Growth
OPER	Operational Performance
FIN	Financial Structure

The following financial performance indicators are chosen:

Measures	Variable
ROA	Return on Asset
NOPAT	Net Operating Profit After Tax
ROD	Return on Debt
ROE	Return on Equity
PE	Price to Earnings Ratio
PB	Price to Book Ratio

A linear multivariable regression is run for each financial performance measure against CSR, GROWTH, OPER and FIN.

Results

The following table summarises the results of the regression. t-values of the regression coefficients are in brackets. *, ** and *** indicate 10%, 5% and 1% significance respectively.

	ROA	ROE	ROD	NOPAT	PE	PB
Intercept	6.9119 (4.83)***	22.1339 (4.82)***	424.6946 (1.32)	23.8615 (0.10)	53.5925 (0.66)	2.2836 (4.81)***
CSR	-0.3879 (-3.41)***	-1.4897 (-4.08)***	-68.4092 (-2.67)***	85.1713 (4.28)***	95.2548 (-0.81)	-0.1482 (-3.93)***
GROWTH	-2.3508 (-1.78)*	-3.4249 (-0.81)	-133.277 (-0.45)	123.7679 (0.54)	6.5645 (0.09)	-0.1859 (-0.43)
OPER	13.9221 (5.23)***	150.0598 (3.35)***	728.334 (0.23)	-9522.42 (-3.91)***	-500.279 (-0.63)	8.4059 (1.82)*
FIN	0.0036 (4.51)***	0.0055 (2.17)**	7.204 (40.19)***	-0.2491 (-1.79)*	-0.1768 (-0.39)	0.0008 (3.16)***
R_sq	0.1995	0.1223	0.8631	0.1367	0.0042	0.1074
Adjusted R_sq	0.1891	0.1088	0.861	0.1233	-0.0112	0.0936
N	264	264	264	264	264	264

The regression coefficient corresponding to CSR is highly significant when the financial performance employed is NOPAT or PE, giving t-statistics of 2.69 and 3.70 respectively. The results might suggest that the SER factor has significant effect on the operational health and expected earnings of a company.

However, the CSR regression coefficient is insignificant in regressions using ROA, ROE and ROD. It is interesting to note that, compared to NOPAT and PE, all these terms measure the return of a company. This distinction suggests that the SER factor does not affect a company's profitability.

The correlation between each pair of the explanatory variables is listed in the table below. The lack of significant correlation between the explanatory variables ensures that any conclusion on CSR factor is not due to a proxy effect.

	CSR	GROWTH	OPER	FIN
CSR	1	-0.031	-0.103	-0.035
GROWTH	-0.031	1	0.186	-0.019
OPER	-0.103	0.186	1	-0.014
FIN	-0.035	-0.019	-0.014	1

6. Conclusions

In the initial stage of the analysis, a positive correlation between CSR and cumulative returns in a group of Italian companies with SER ratings was identified. In each case, correlation ranges from 0.2 to 0.3 where long and short-term performance is considered. The results support the assumption whereby CSR has a positive relationship with the financial performance of a company. With a broader variety of SER data, it would be possible to verify whether the results can be reproduced in other markets.

The correlational and regression studies that followed identified a positive relationship between CSR and net-operating profit after tax as well as a negative relationship between CSR and price-to-earnings and price-to-book ratios. The results are consistent with the insight whereby companies at their high-growth stage tend to have less sophisticated corporate governance, which can have a negative effect on the financial performance.

In short, CSR is essential for profit-making and survival of businesses. Without morality in business decisions, businesses will face difficulties in maintaining their reputation in the marketplace, recruiting talent and enjoying good standing in the community. Hence, morality is essential to building a high-performing company that is going to survive and thrive over the long term. This will be reflected in its financial performance. This paper has tried to show that Corporate Social Responsibility is a vital element for corporations. It has also shown that there are many different areas on which a company may choose to focus its Corporate Social Responsibility. "Social Responsibility is an investment combining investors' financial goals with their obligation and dedication to factors ensuring the well-being of society such as environmental friendly practices, economic growth and justice". These elements are not only aspects of Corporate Social Responsibility, but also show the ethical standards of a company. In conclusion, Corporate Social Responsibility and high ethical standards are not an option but an obligation for businesses.