International Research Journal of Finance and Economics
ISSN 1450-2887 Issue 89 (2012)

http://www.internationalresearchjournaloffinanceandeconomics.com

Shareholder Value from Sustainability Leadership: Comparing Valuation Ratios within Industry Groups

Timothy S. Clark
The W. A. Franke College of Business, Northern Arizona University
E-mail: Timothy.Clark@nau.edu
Tel: 00-1-928-523-1708

David S. Allen
The W. A. Franke College of Business, Northern Arizona University
E-mail: David.Allen@nau.edu
Tel: 00-1-928-523-7838

Abstract

Clear, empirical answers to the general question "Does it pay to be good?" have eluded researchers. We argue this stems from widely varied financial metrics used as dependent variables, which tend to fail to distinguish an individual firm's periodic results from trends affecting the overall economy, specific industry, or peer group of comparable companies. In this study, we avoid those weaknesses by focusing on *relative valuation*, where valuation ratios across relevant peer groups of firms are compared to reflect relative shareholder value per unit of each financial metric. We focus on firms that have been included in the Dow Jones Sustainability Index, as a proxy for sustainability leadership accounting for social, economic, and environmental performance. We then compare valuation metrics between those leading firms and their non-distinguished peers. Sustainability leaders are found to have significantly higher multiples in key valuation ratios, suggesting that investments incurred to attain sustainability leadership are returned in the form of relatively higher valuation. Therefore, shareholder wealth maximization is shown to be associated with sustainability leadership.

Keywords: Sustainability leadership, valuation ratios

1. Introduction

Extensive research into the impacts of a firm's qualitative attributes, like "sustainability" strategy, has tended to focus on stock-price event studies, differentials in operating results data over time, or similar company-specific financial data that derives primarily from financial statements. Yet a clear answer to the general question "Does it pay to be good?" has been heretofore elusive (Margolis, Elfenbein, and Walsh, 2007). Prior studies have shown mixed, confusing, and even counterintuitive results, commensurate with the complexity and variability of the metrics used as dependent variables (Peloza, 2009). We argue that this aggregate "nonfinding" comes largely because those traditional metrics fail to distinguish individual firms' periodic results from trends affecting the overall economy, specific industry, or peer group of comparable companies—factors that are beyond any one firm's control, yet which affect all firms.

This study focuses on a more relevant and suitable, but as yet overlooked, metric—relative valuation. Relative valuation, as defined by Pinto, Henry, Robinson, and Stowe (2010) refers to differentials in valuation ratios between particular firms and firms in their comparable peer groups. Valuation ratios measure the price of a firm's stock relative to some fundamental determinant of value, such as earnings, book value, sales, and free cash flow. These ratios are among the most popular methods used by investors and financial analysts to assign a value to a firm's stock (Pinto et al., 2010, p. 258). Within 42 industry groups encompassing 435 firms, and across 22 quarters of financial data, we examined differentials in the Price-to-Earnings (P/E) ratio, the Price-to-Book Value (P/B) ratio, the Price-to-Sales (P/S) ratio, and the Price-to-Free Cash Flow (P/FCF) ratio. Since these metrics are ratios on a per-unit basis, they naturally control for size differences in individual firms. Compared across companies within industry groups, these valuation metrics reflect differences in investor sentiment between firms, irrespective of macro factors or cycles affecting entire groups or industries. Significant differences in such valuation ratios between otherwise similar firms would signify fundamentally different perceptions by the investment market, which could have an important bearing on strategic decisions in pursuit of maximizing shareholder value.

Following a review of relevant literature, we describe our study's research methodology. Findings indicate significantly positive differences in valuation between firms considered leaders in sustainability and their industry peers which are not. We then discuss the implication that firms that invest in sustainability leadership may maximize shareholder value by creating higher valuation per unit of financial metric, even if this may reduce certain financial metrics themselves. Limitations and further research potential are also discussed. We conclude with the observation that executives and scholars alike must look beyond income-statement effects of sustainability decisions and consider the broader shareholder wealth-maximization effects that may result from higher valuations.

2. Background

Traditional economic arguments hold that managers should invest only in those strategies that are likely to maximize profitability (Friedman, 1970) in order to maximize shareholder value. But shareholder value is more complicated than profit alone, since it could be maximized by projects that improve a firm's valuation despite incremental expenses that reduce actual financial performance. In the case of sustainability investments, several factors, together or separately, justify investments that could improve the valuation attributed by the investment market despite incremental expenses:

- *Risk mitigation:* sustainability programs that reduce risks of larger problems in the future, such as violations and ensuing litigation (Gardberg and Fombrun, 2006; Sharfman and Fernando, 2008)
- *Preferential investing:* sustainability programs that appeal to selective investors (Mackey, Mackey, and Barney, 2007) by conferring "social approval assets" (Pfarrer, Pollock, and Rindova, 2010)
- *Opportunity development:* sustainability programs that leverage strengths and that position firms for competitive advantage (Porter and Kramer, 2006)

Thus, while investments in sustainability programs could negatively impact near-term financial results, benefits to shareholders could still be realized in the form of markets yielding more value per unit of financial metric for any combination of the factors above. Jiao (2010) found stakeholder welfare to be positively associated with firm valuation, based on independent social choice investment data and firms' Tobin's Q (a ratio similar to Price-to-Book), but the present study extends this to matched groups of industry peers and additional valuation ratios.

Benefits that derive from purely economic rationales for undertaking sustainability strategies, including process efficiency and its associated cost savings, are presumed to be reflected in the results of financial metrics themselves. Thus they should not be double-counted by way of assessing any valuation premium assigned by the investment market. However, economic and noneconomic benefits

from a sustainability strategy that may accrue to far broader stakeholder sets than investors (Sharma and Henriques, 2005) are beyond the scope of the present study.

This concept of relative valuation has been insufficiently addressed by the large body of academic research in the field, which has instead focused primarily on financial accounting data to explore links between corporate social performance and financial performance, leading to incomparable or uninsightful findings (Griffin and Mahon, 1997; Margolis and Walsh, 2003; Orlitzky, Schmidt, and Rynes, 2003). Among other weaknesses, many prior studies have assumed that rising financial performance automatically leads to improved shareholder value—even though some of these scholars are interested in expanding the conceptions of firm performance beyond financial metrics and bottom-line economics. Instead, shareholder value is a function of market valuations applied to financial metrics like earnings, sales, cash flow, and assets, where each multiple varies with the perceived *quality* of each metric (Penman, 1996; Penman and Zhang, 2002) and of the firm's general standing and prospects. The three factors listed above could enhance investor perceptions of the quality of each unit of financial-performance metrics, which would be reflected in valuation ratios applied to those metrics.

Corporate finance professionals pay close attention to their industry-peer companies, and they use these groupings to benchmark their firms' results and to communicate with members of the investment community (Lang and Lundholm, 1996). Investor perceptions of a firm's value, however, include more than bottom-line numbers in isolation. They consider performance relative to similar firms, and they also consider strategic aspects like risk, preferential attributes, and opportunism, defined earlier. Therefore, valuation of these qualities can be best measured by outcome variables more comprehensive than financial accounting data alone. Relative valuation effectively controls for short-term volatility in any one firm's earnings stream, through comparison to valuation of groups of firms with similar business models. So this variable accounts for macro phenomena that affect entire industries or groups, thus distinguishing "signal" from "noise." Clarifying any of these "signals" that relate shareholder value to a firm's sustainability strategies would be a novel and valuable contribution.

Known in certain accounting and finance circles as "benchmark valuation methods," ratios of stock price to accounting data are effective for multifirm comparison (Cheng and McNamara, 2000). Calculating the ratio of a firm's stock price to its earnings or book value, for example, provides multiples that scale to comparable firms of different sizes, asset balances, and shares outstanding. Purnanandam and Swaminathan (2004), for instance, demonstrated the utility of valuation ratios in comparing the initial prices of thousands of public stock offerings, which otherwise would be nearly incomparable.

Additional challenges for researchers include finding effective methods to group firms for direct comparison of their valuation ratios. Cheng and McNamara (2000) studied groupings by basic data such as industry membership, size, return on equity, and combinations thereof, but they found insufficient explanatory power. Much more esoteric are groupings based on mobility barriers, isolating mechanisms, and controllable variables as laid out in strategic-groups theory (McGee and Thomas, 1986). In our study, peer groupings are derived from the Global Industry Classification Standard or GICS (Standard & Poor's, 2010), which is independently derived and publicly available.

3. Hypothesis

A firm's inclusion in the Dow Jones Sustainability Index United States or DJSI (SAM Research, 2010) provides the independent variable relating to its sustainability leadership. From the DJSI's inception in 2005 through 2010, 162 companies were included in the index for periods of time ranging between two quarters and all 22 quarters in this study's dataset. Firms are included or excluded in the index according to analyses conducted by SAM Indexes GmbH, which weight criteria in three sustainability-related categories:

- **Economic** (Codes of Conduct/Compliance/Corruption and Bribery; Corporate Governance; Risk and Crisis Management; Industry-Specific Criteria)
- **Environmental** (Environmental Reporting; Industry-Specific Criteria)
- **Social** (Corporate Citizenship/Philanthropy; Labor-Practice Indicators; Human Capital Development; Social Reporting; Talent Attraction and Retention; Industry-Specific Criteria)

Although no index or other independent variable can serve as a perfect proxy for actual sustainability leadership (Waldman, de Luque, Washburn, and House et al., 2006; Waddock and Bodwell, 2007), inclusion in the DJSI is considered to be sufficiently objective and comprehensive for the purposes of this study. Component firms in the index are expected to be distinguished from their peers in one or more of the factors of valuation enhancement mentioned above. Thus DJSI-included firms are expected to have higher valuation relative to their non-included, industry-peer firms.

Hypothesis: *Firms included in the DJSI will tend to have higher valuation ratios than their industry-peer firms not included in the DJSI.*

4. Methodology

4.1. Data Set

Throughout the five-and-a-half-year span of the study (22 quarters), we focused on firms that were included in the DJSI (in contrast to event studies of new inclusion into or exclusion from indexes (Cheung, 2011)). From the DJSI's first quarter, which ended in March 2005, to the quarter that ended in June 2010, 148 firms were included for part or all of the 22 quarters. Omitted from the data set are the 21 firms that made more than one entrance or exit from the index during the study period, and the 15 other firms whose inclusion or exclusion resulted from IPO or acquisition. Of the 126 remaining firms, 49 entered midway through the study's time span, and 20 exited midstream. Finally, we omitted two firms because they had fewer than four industry peers. Thus our focus was on the 54 firms that remained in the index throughout the 22 quarters. We call these firms "*targets,*" and compare them to their respective industry peers.

Each target firm's peer group was also determined through objective, third-party data. The GICS (Standard & Poor's, 2010) is an eight-digit standard classification system that provides a defined peer group for each of the DJSI-included firms. The 54 target firms hail from 40 discrete industries. Within each peer group, we selected up to 10 firms with market capitalizations closest to the target firm. This resulted in 513 peers, of which 365 were unique (due to multiple DJSI targets in some GICS-8 codes) to compare with targets. There was an average of 9.5 peer firms per target firm. Because target firms tend to have larger asset balances than their peer-group averages, which could connote valuation benefits due to information availability (Beyer, Cohen, Lys and Walther, 2010) or analyst coverage (Bowen, Chen and Cheng, 2008), we conclude our findings with verification of no firm-size effect in the study's data set.

4.2. Four Different Valuation Metrics

For all 419 firms across the 22 quarters, we observed differentials in four different valuation metrics:

- **Price-to-Earnings (P/E) ratio**, which reflects what investors are willing to pay per unit of earnings. (There were added complications inherent in the P/E metric, due to its tendency to exhibit extreme values, which we discuss later.)
- **Price-to-Book Value (P/B) ratio**, which reflects what investors are willing to pay per unit of net assets.
- **Price-to-Sales (P/S) ratio**, which reflects what investors are willing to pay per unit of sales revenue.

- **Price-to-Free Cash Flow (P/FCF) ratio**, **which** reflects what investors are willing to pay per unit of free cash flow. Free cash flow is operating cash flow that results after capital expenditures.

Since these metrics are ratios on a per-unit basis, they naturally control for size differences between firms. Compared across companies within industry groups, these valuation metrics reflect differences in investor sentiment between firms, irrespective of macro factors or cycles affecting entire groups or industries.

4.3. Accounting Data and Valuation Ratios

Accounting data and valuation ratios were derived from the Telemet Orion database service (www.taquote.com). For each target and peer firm, end-of-quarter valuation ratios were collected from the March quarter of 2005 through the June quarter of 2010. In the case of firms reporting unconventional periods, the quarters with the closest date ranges were matched. Each valuation ratio was calculated by dividing the firm's stock price per share at quarter end by the four-quarter sum of the appropriate per-share accounting figure (earnings, sales, and free cash flow). In the case of the price-to-book ratio, the end-of-quarter stock price was divided by the end-of-quarter book value per share.

4.4. Comparing Valuation Ratios to Matched Peers

The valuation ratios for each DSJI-included target firm were compared to the average ratios for its matched peers. Agrrawal, Borgman, Clark, and Strong (2010) examine several methods for computing averages of valuation ratios, and they show that a simple arithmetic average is biased upwards and assumes investment proportional to the denominator of the fraction (e.g. proportional to earnings for the P/E ratio). Pinto et al. (2010) note that the use of the harmonic mean tends to reduce the effect of large outliers on the computed average. The harmonic mean, which is the reciprocal of the arithmetic mean of reciprocals, is thus the preferred alternative and is used to calculate peer means in this study.

4.5. Treatment of Negative and Extreme Values

A second issue related to valuation ratios is the treatment of negative values. While it is possible to compute a P/E ratio when earnings are negative or near zero, the economic interpretation of the ratio is problematic. It also confounds the interpretation of an average if some valuation ratios in a set are negative. Thus, following Basu (1977), we discarded from our calculations any ratio that took on a negative value in any quarter.

Further complications arise when valuation ratios take on extreme values. The numerator of the fraction, the firm's stock price, is always positive and well above zero, since both the New York Stock Exchange and the NASDAQ, on which all sample firms trade, require firms to maintain a minimum stock price of $1. However, it is possible for the denominator of the valuation ratio to take on values that are near zero, which leads the ratio to approach infinity. Extreme values for either the target firm or its peer group make comparisons difficult to interpret. Thus, following Jagadeesh (2000), we limited the effect of outliers in the valuation ratios by truncating the sample for both targets and their matched peers. We rank-ordered each ratio across all firms and quarters, then eliminated the bottom 1% and top 1% of the sample.

For each DSJI firm across each quarter, we computed the ratio of the firm's quarterly metric (e.g. inverse P/E ratio) to the harmonic mean of its peers. We then averaged these across 22 quarters for each firm to arrive at the firm's average valuation metric relative to its peers. Finally, we averaged across all firms to obtain an overall relative valuation metric.

For example, we compute the P/E relative valuation metric for target firm "i" in quarter "t" as:

$$RV_{i,t} = \frac{1}{(E/P)_{i,t} \Big/ \left(\sum_{j=1}^{n} (E/P)_{j,t} \Big/ n \right)} \quad (1)$$

Where:
i = DJSI target firm
t = quarter
j = non-DJSI matched peer firm
n = number of non-DJSI matched peer firms
The firm's 22 quarter overall average relative valuation metric is then:

$$\overline{RV_i} = \frac{\sum_{t=1}^{22} RV_{i,t}}{22} \quad (2)$$

Finally, the grand average relative valuation metric across all 54 DJSI firms is:

$$\overline{\overline{RV}} = \frac{\sum_{i=1}^{54} \overline{RV_i}}{54} \quad (3)$$

5. Findings

Summary statistics for the firms in our study and their relative valuation ratios are reported in the first two tables. Firm asset balances at the beginning of the data set are shown in Table 1. Large firms and relatively small firms tended to be grouped in the same industries, although the average target was considerably larger than the average peer. Later, a test was performed to verify that the valuation results were not driven by this difference in firm size.

Table 1: Total Assets* for Firms in the Study, as of DJSI Q1 2005

	Target firms	**Peer firms**
N	54	326
Minimum assets	1,757	45
Maximum assets	1,489,891	1,212,239
Average assets	81,276	19,006
Median assets	21,721	2,466
Standard deviation	233,207	105,694

Note: *Assets in U.S. $ millions

Table 2 reports the relative valuation results computed using Equation 3. Values greater than one indicate that a target's valuation ratios are greater than its peers.' For each of the four valuation metrics, the mean and median is higher for each DJSI target firm than for comparable peer firms. For example, the DJSI target firms have P/E ratios that are, on average, 1.20 times that of their peers.

Table 2: Summary Statistics for DJSI Target Firms' Relative-Valuation Ratios*

	Average Relative P/E	**Average Relative P/B**	**Average Relative P/S**	**Average Relative P/FCF**
Minimum	0.58	0.33	0.41	0.76
Maximum	3.18	4.84	6.49	5.69
Mean	1.20	1.67	1.78	2.07
Median	1.06	1.48	1.46	1.55

Note: * See Equation 3 for the computation of the average relative valuation ratio.

Presented in Table 3 are the results of a nonparametric signs test, where the differences between the valuation ratios of DJSI target firms and their non-DJSI peers are compared. A relative valuation ratio less than 1 implies that the target ratio was less than the geometric mean of its peers, and is counted as negative in the signs test. Where the relative valuation ratio is greater than 1, it is counted as positive, implying the investment market has established higher valuations per unit of financial metric than the average of that target's peer firms. In all four tested ratios, target firms enjoy significantly higher valuation ratios than their peers.

Table 3: Results of a Nonparametric Signs Test

	Average Relative P/E	**Average Relative P/B**	**Average Relative P/S**	**Average Relative P/FCF**
Count if < 1	19	13	11	5
Count if = 1	0	0	0	0
Count if > 1	35	41	43	49
Total	54	54	54	54
% <= 1	35%	24%	20%	9%
% > 1	65%	76%	80%	91%
Z	2.177	3.810	4.355	5.988
p-value (1 tail)	0.0147	0.0001	<0.0001	<0.0001

Note: This table reports the results of a signs test of the null hypothesis that the average valuation ratios for DJSI target firms are less than or equal to those of their non-DJSI peers.

Finally, parametric tests for statistical significance appear in Table 4. Here, the results of a t-test indicate significantly higher valuation ratios for target firms than their comparable peers, consistent with the results in Table 3.

Table 4: Parametric Tests for Statistical Significance

	Average Relative P/E	**Average Relative P/B**	**Average Relative P/S**	**Average Relative P/FCF**
N	54	54	54	54
Sample mean	1.20	1.67	1.78	2.07
Sample standard deviation	0.53	0.96	1.13	1.18
t statistic	2.73	5.15	5.06	6.62
p-value (1 tail)	0.0043	<0.0001	<0.0001	<0.0001

Note: This table reports the results of a t-test of the null hypothesis that the average valuation ratios for DSJI target firms are less than or equal to those of their non-DJSI peers.

To verify that the relative valuation results in Table 3 and Table 4 were not driven by firm size, we regressed each valuation ratio on firm size to determine the relationship, if any. The data for all firms is aggregated over the 22 quarters in the sample, and the following regression was performed:

$$valuation\ ratio_{i,t} = intercept + slope(total\ assets_{i,t})$$ Equation (4)

Table 5 shows that for every valuation measure, the slope coefficient is negative and significant. This indicates that, for our sample of targets and peers, valuation ratios tend to decrease as firm size increases. The results in Tables 3 and 4 show higher valuation ratios for the targets. Since the targets tend to be larger than their peers, the higher valuations ratios observed for the targets cannot be due to a firm-size effect.

Table 5: Valuation Ratios Regressed on Total Assets*

Valuation Ratio	**n**	**R-square**	**Intercept**	**Slope**	**Slope**		
					Standard Error	**t**	**p value**
P/E	9,630	0.0034	22.93	-7.24E-06	1.26E-06	-5.73	<0.0001

Table 5: Valuation Ratios Regressed on Total Assets* - continued

P/B	10,964	0.0046	3.21	-1.22E-06	1.72E-07	-7.13	<0.0001
P/S	11,219	0.0000	0.02	-3.49E-07	1.10E-07	-3.17	0.0015
P/FCF	10,259	0.0000	0.40	-1.23E-05	3.50E-06	-3.51	0.0004

Note: This table reports the results of regressing quarter-end valuation ratios on quarter-end firm size, measured by total assets. *Assets in U.S. $ millions.

The findings strongly support the hypothesis that the investment market tends to assign higher valuation ratios to DJSI-included firms than their comparable non-DJSI peers.

6. Discussion and Conclusion

While prior studies have tended to find insufficient or conflicting evidence to link corporate social performance to corporate financial performance, this study finds empirical evidence to support a link between sustainability leadership and improved valuation. Many prior studies have been limited by focusing on financial performance in periodic financial statements, but in this study we looked at the more comprehensive valuations the investment market assigns to those financial metrics in comparison to similar firms. After all, shareholder value is a function of more than accounting data; it includes market perceptions of a firm's qualitative attributes, such as risk and perceived growth, which are not recorded in its quarterly filings. These perceptions act like a multiplier on actual financial results to yield ultimate shareholder value.

According to our study results, even where financial results may not show positive returns from a firm's sustainability investments, it is possible that higher valuations accorded to the firm may yet yield higher shareholder value overall. Evidence for this is reflected in valuation multiples. In our study, all four valuation ratios provided statistically significant support for the idea that achieving sustainability leadership is a strategy that is consistent with maximizing shareholder value. Inasmuch as this finding diverges from traditional arguments, where strategies with social or environmental intentions beyond economic objectives are inappropriate for publicly held corporations, it is expected to contribute to an ongoing effort to expand the notion of what being a "good" business means for stakeholders—especially investors.

These findings are based on a data set drawn from the constituents of only one proxy of sustainability leadership: inclusion in the Dow Jones Sustainability Index. While the DJSI inclusion algorithm includes economic, environmental, and social sustainability factors, additional research contributions would result from analysis of each of these elements separately. Further, additional study can readily focus on constituents of similar indexes, such as the FTSE4Good, the FTSE KLD 400 Social Index, and the Calvert Social Index, which have different criteria for index inclusion/exclusion. Even constituent firms of popular-press lists, like *Fortune* magazine's annual list of "World's Most-Admired Companies" *(Fortune* magazine, 2010), could be tested for valuation differences with non-listed firms. Similar findings from more than one index or list would provide convergent validity to these initial findings.

Further, firms that enter or exit the focal index can be compared against their peer group in corresponding time frames, controlling for index effects (Cheung, 2011). To strengthen the research stream, a firm's peer groups could be determined with means other than GICS codes or with size cutoffs that yield more similarly sized firms. Also, inclusion of valuation ratios beyond the four used here would also enrich the robustness of any further findings.

Data from valuation ratios can be difficult to manage and interpret, notably with the P/E ratio since the earnings figure can be near zero or negative, causing extreme values without valid meaning. In this study, we eliminated negative ratios and truncated the top and bottom 1% of the remainder, then used harmonic means for the comparisons. Further research should scrutinize this study's approach and explore possible derivations to improve the robustness of findings.

If our study's basic finding is supported by further research, the next question will be at least as important: To what extent do investments incurred to achieve sustainability leadership provide positive returns to investors? Prior studies have shown that operating expenses allocated to "nonmarket" activities tend to draw down the bottom line in excess of related boosts to revenue or profitability (Baron, 1995). However, shareholder wealth may still increase if investors assign a higher valuation multiple to lower earnings.

If further empirical evidence of such phenomena can be found, especially for cases where the investments are in discretionary areas like sustainability leadership, the findings will have important implications relating to much of the strategic management research conducted since Friedman's seminal 1970 work ("The Social Responsibility of Business Is [Only] To Increase Its profits.") Increases in shareholder value provide the more comprehensive metric, and may happen in spite of (or, indeed, because of) investments that do not necessarily contribute to bottom-line profit.

References

[1] Agrrawal, P., R. Borgman, J. Clark, and R. Strong, 2010. "Using the Price-to-Earnings Harmonic Mean to Improve Firm Valuation Estimates", *Journal of Financial Education*, 36, pp. 98-110.

[2] Baron, D.P., 1995. "Integrated Strategy: Market and Non-market Components", *California Management Review*, 37(2), pp. 47-65.

[3] Basu, S., 1977. "Investment Performance of Common Stocks in Relation to Their Price-Earnings Ratios: A Test of the Efficient Market Hypothesis", *The Journal of Finance*, 32(3), pp. 663-682.

[4] Beyer, A., D.A. Cohen, T.Z. Lys and B.R. Walther, 2010. "The Financial Reporting Environment: Review of the Recent Literature", *Journal of Accounting and Economics*, 50, pp. 296-343.

[5] Bowen, R.M., X. Chen and Q. Cheng, 2008. "Analyst Coverage and the Cost of Raising Equity Capital: Evidence from Underpricing of Seasoned Equity Offerings", *Contemporary Accounting Research*, 25(3), pp. 1-49.

[6] Cheng, C.S.A. and R. McNamara, 2000. "The Valuation Accuracy of the Price-Earnings and Price-Book Benchmark Valuation Methods", *Review of Quantitative Finance and Accounting*, 15(4), pp. 349-370.

[7] Cheung, A.W.K. 2010. "Do Stock Investors Value Corporate Sustainability? Evidence from an Event Study", *Journal of Business Ethics*, 99(2), pp. 145–165.

[8] *Fortune* magazine, 2010. "World's Most-Admired Companies", Accessed October 2011 at http://money.cnn.com/magazines/fortune/mostadmired/2010.

[9] Friedman, M., 1970. "The Social Responsibility of Business Is To Increase Its Profits", *The New York Times Magazine*, September 13, pp. 122--126.

[10] Gardberg, N.A. and C.J. Fombrun, 2006. "Corporate Citizenship: Creating Intangible Assets across Institutional Environments", *Academy of Management Review*, 31(2), pp. 329-346.

[11] Griffin, J.J. and J.F. Mahon, 1997. "The Corporate Social Performance and Corporate Financial Performance Debate: Twenty-five Years of Incomparable Research", *Business & Society*, 36(1), pp. 5-31.

[12] Jegadeesh, N., 2000. "Long-Term Performance of Seasoned Equity Offerings: Benchmark Errors and Biases in Expectations", *Financial Management*, 29(3), pp. 5-30.

[13] Jiao, Y., 2010. "Stakeholder Welfare and Firm Value", Journal of Banking & Finance, 34, pp. 2549-2561.

[14] Lang, M.H. and R.J. Lundholm, 1996. "Corporate Disclosure Policy and Analyst Behavior", *Accounting Review*, 71(4), pp. 467-492.

[15] Mackey, A., T.B. Mackey, and J.B. Barney, 2007. "Corporate Social Responsibility and Firm Performance: Investor Preferences and Corporate Strategies", *Academy of Management Review*, 32(3), pp. 817-835.

[16] Margolis, J.D. and J.P. Walsh, 2003. "Misery Loves Companies: Rethinking Social Initiatives by Business", *Administrative Science Quarterly*, 48, pp. 268-305.

[17] Margolis, J. D., H.A. Elfenbein, and J.P. Walsh, 2007. "Does It Pay to Be Good? A Meta-analysis and Redirection of Research on the Relationship between Corporate Social and Financial Performance", Harvard University working paper.

[18] McGee, J. and H. Thomas, 1986. "Strategic Groups: Theory, Research, and Taxonomy", *Strategic Management Journal*, 7(2), pp. 141-160.

[19] Orlitzky, M., F.L. Schmidt, and S.L. Rynes, 2003. "Corporate Social and Financial Performance: A Meta-Analysis", *Organization Studies*, 24(3), pp. 403-411.

[20] Peloza, J. 2009. "The Challenge of Measuring Financial Impacts from Investment in Corporate Social Performance", *Journal of Management*, 35(6), pp. 1518-1541.

[21] Penman, S.H. 1996. "The Articulation of Price-Earnings Ratios and Market-to-Book Ratios and the Evaluation of Growth", *Journal of Accounting Research*, 34(2), pp. 235-259.

[22] Penman, S. H. and X.J. Zhang, 2002. "Accounting Conservatism, the Quality of Earnings, and Stock Returns", *The Accounting Review*, 77(2), pp. 237-264.

[23] Pfarrer, M. D., T. G. Pollock, and V. P. Rindova, 2010. "A Tale of Two Assets: The Effects of Firm Reputation and Celebrity on Earnings Surprises and Investors' Reactions", *The Academy of Management Journal*, 53(5), pp. 1131 – 1152.

[24] Pinto, J.E., E. Henry, T.R. Robinson, and J.D. Stowe, 2010. *Equity Asset Valuation*. Hoboken, NJ: Wiley (2nd Edition).

[25] Porter, M.E. and M.R. Kramer, 2006. "Strategy and Society: The Link Between Competitive Advantage and Corporate Social Responsibility", *Harvard Business Review*, 84(12), pp. 78-92.

[26] Purnanandam, A.K. and B. Swaminathan, 2004. "Are IPOs Really Underpriced?", *Review of Financial Studies*, 17(3), pp. 811-848.

[27] SAM Research. 2010. Sustainable Asset Management, sustainability investing, indexes, overview. Accessed October 2011 at http://www.sam-group.com.

[28] Sharfman, M. P. and C.S. Fernando, 2008. "Environmental Risk Management and the Cost of Capital", *Strategic Management Journal*, 29, pp. 569-592.

[29] Sharma, S. and I. Henriques, 2005. "Stakeholder Influence Strategies on Sustainability Practices in the Canadian Forest Products Industry", *Strategic Management Journal*, 26(2), pp. 159-180.

[30] Standard & Poor's. 2008. Global Industry Classification Standard Methodology. Accessed March 2012 at https://www.sp-indexdata.com/idpfiles/emdb/prc/active/methodology/Methodology_GICS_Web.pdf

[31] Waddock, S.A. and C. Bodwell, 2007. *Total Responsibility Management: The Manual*. Sheffield, UK: Greenleaf Publishing.

[32] Waldman, D.A., M.S. de Luque, N. Washburn, and R.J. House et al., 2006. "Cultural and Leadership Predictors of Corporate Social Responsibility Values of Top Management: A GLOBE Study of 15 Countries", *Journal of International Business Studies*, 37, pp. 823-837.