THE ENHANCEMENT OF EQUITY VALUATIONS IN DEVELOPED AND EMERGING MARKETS THROUGH THE USE OF SUSTAINABLE INVESTMENT INDICATORS

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Absract

Valuations for publicly-traded companies often include an assessment of intangibles, and intangibles are among the most difficult of assets to value. We focus on the assessment of "sustainability value," which can include going-concern value as well as sustainability evaluated from the perspective of social responsibility. We test developed as well as emerging markets to see whether the inclusion of Environmental, Social, and Governance (ESG) Ratings can improve the predictability of Enterprise Value in relation to Invested Capital. Findings indicate a strong, positive relationship in developed markets and little relationship in emerging markets. Given that emerging markets will soon represent nearly a third of global equity offerings, speculation as to how this relationship may evolve over time may be quite interesting.

Key words: Socially responsible investing, company valuation, ESG.

JEL: Q56, M14

Introduction

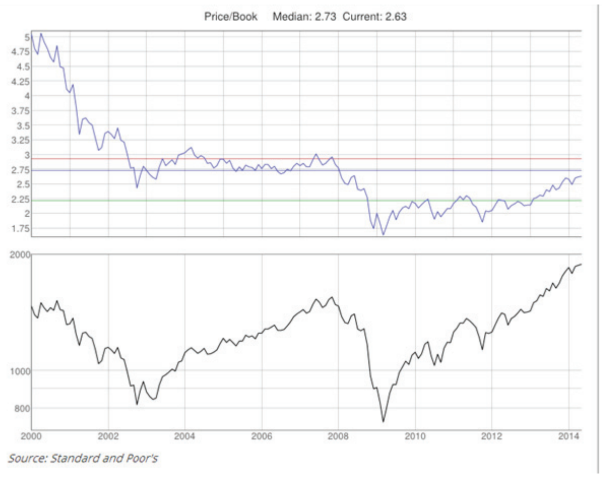
Corporate value is a quantitative representation of the benefits accruing to equity investors. However, the current state of financial reporting – from which valuation is estimated – can be ambiguous as far at the disclosure of sustainability risks. By "sustainability risks," we refer to the likelihood of ongoing operations as well as the ability of the corporation to interact with all aspects of its environment in a sustainable manner. A revised valuation model may offer benefits in refining fair corporate valuations. Our objective in this research is to outline one version of such a model.

Traditional valuation models often employ discount models based on cash dividends or free cash flows, or else the valuations are based on some type of market-multiple analysis. While the process of valuation will always represent a blend of objective and subjective analysis, these valuations may be adequate for many investors. However, given the observation that approximately one-eighth of all managed funds are invested under some mandate of socially responsible investing – and given the close relationship between socially responsible investing and sustainability – we sense a growing need to incorporate metrics into valuation models which can recognize such corporate efforts[1]. Furthermore, traditional valuation models are most accurate with tangible assets, and a consideration of market price-to-book values suggests that intangibles of one form or another may form a significant portion of intangible value. For example, the market price-to-book ratio for the S&P 500 currently stands at 2.63, which translates into only 28% of corporation valuation being determined by asset book values. Thus, the remaining 72% of market capitalization is related to the value of growth opportunities and/or intellectual capital, among other value drivers. [Refer to Figure 1 for trend of S&P 500 market price-to-book ratios and corresponding index levels.] We propose that an assessment of sustainability can be an important aspect of these intangibles. Reasons for the

1. Estimates of one-ninth of professionally-managed funds in the US are invested in socially-responsible investing strategies, as of 2010. Source: US SIF Foundation. In monetary value, KPMG estimates the size of the global sustainable investment market at USD 13.6 trillion as of December 2012.

importance of assessing sustainability might include: 1) Growth estimates in perpetuity should be more justified for companies which have solidified an enhanced relationship with all stakeholders as well as having developed higher standards in sustainability management, and 2) The cost of capital should be reduced for companies with higher sustainability standards, thus impacting terminal value estimates. As a final observation, these intangibles may have a different valuation impact depending upon whether the observations are from developed or emerging markets. But with predictions that emerging markets' current 13% share of global stock markets conservatively growing to at least 31% by 2030, an understanding of how sustainability is factored into value across markets would appear to be a worthwhile endeavor. [1]

Figure 1: Trend of Market Price-to-Book Ratio and Index Levels, S&P 500



Environmental, Social, and Governance (ESG) Ratings as a Sustainability Proxy

At the current time, ESG ratings may represent the best indicator of a corporation's efforts towards sustainability. We propose a model that appears quite simplistic in which a company's market capitalization can be at least partially explained according to its sustainability risk: Higher (Lower) sustainability risk will be reflected in lower (higher) market-to-book ratios. If our thinking is correct that valuation information is embedded in the ESG ratings, our model should reveal the extent of the relationship.

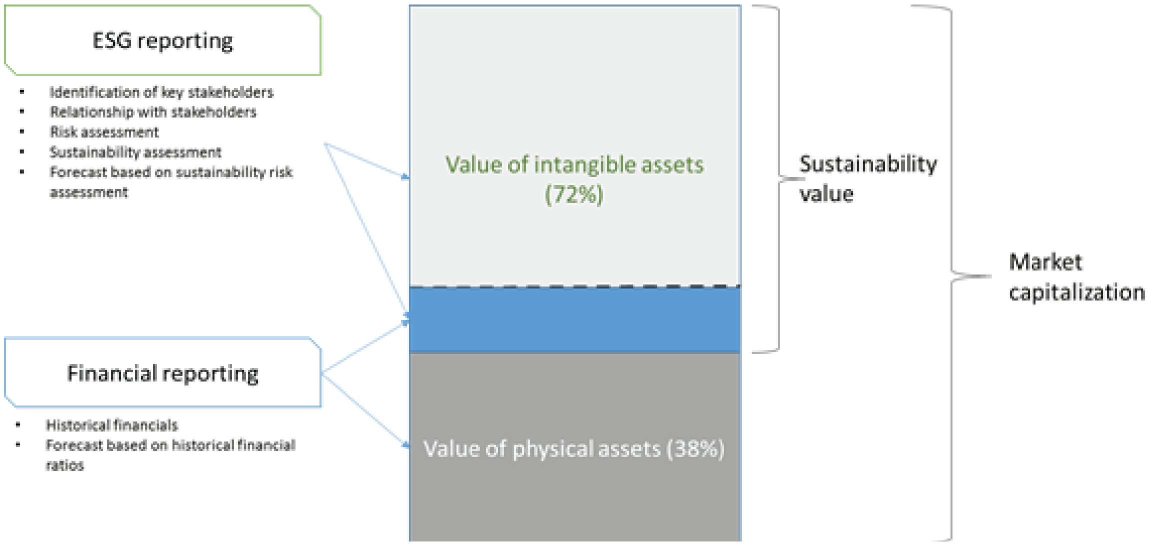
Brief Literature Review

The relationship between corporate social responsibility and market value is unclear. Nearly 25 years ago, Patten (1990) found evidence that investors used social responsibility information in valuations. From a theoretical perspective and based on neoclassical theory, the goal of corporate management should be maximization of shareholder value and any resources expended on social responsibility might be considered "wasted." (See, for example, Baumol (1991), Palmer et al. (1995), or Walley & Whitehead (1994), who claim that responsible behavior increases costs, or Schleifer (2004) who claims that unethical behavior should be appreciated by investors). Martin Curran and Moran (2007) find that firms listed on an index do not derive significant financial return from signaling their corporate social responsibility. On the other hand, environmentally-responsible behavior might reduce waste and/or protect against future litigation, thus increasing value (Godfrey et al., 2009, or similarly, Konar and Cohen, 2001) who show that lack of attention to environmental issues reduces corporate valuation derived from intangibles. El Ghoul et al. (2011) find that firms with better corporate social responsibility scores obtain cheaper equity financing and have higher valuations. In fact, the preponderance of studies which approach valuation from an ecological perspective, such as Bird et al. (2007) or Guenster et al. (2011) find a positive relationship between social responsibility and market value.

1. The Case for Emerging Market Equity. Schroder Fund Advisors LLC, New York, NY, December 2012.

The Model and Data:

Financial reporting can explain only the value of physical assets and a portion of the value of intangible value; ESG reporting helps to justify sustainability value.



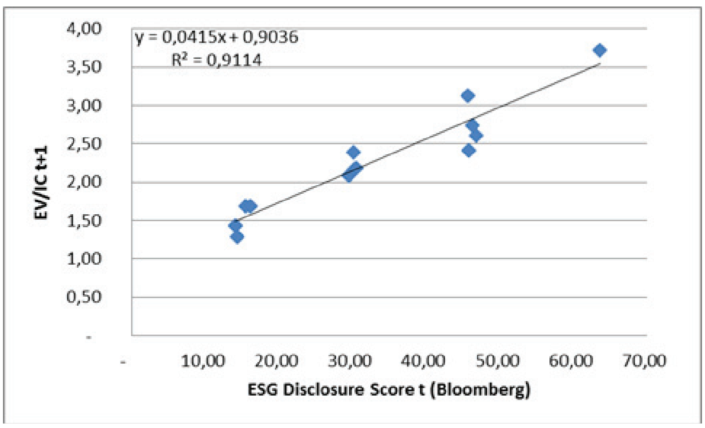
Hypothesis to be tested: The level of disclosure of ESG factors contains information value about the corporation's future market capitalization. Note that the ESG score is obtained from Bloomberg LP, as the ESG Disclosure Score. The range is from 0 to 100, with a score of zero indicating no disclosures from the corporation and a score of 100 indicating that the corporation has made disclosure of all ESG factors.

Model and Data: To test the hypothesis, companies are first divided into four ESG disclosure categories; category 1 for disclosure scores ranging from 0 to 20, category 2 for disclosure scores ranging from 21 to 40, category 3 for disclosure scores from 41 to 60, and category 4 for disclosure scores greater than 60. The average ESG disclosure score during the five-year interval from 2007 through 2011 is then calculated for each company, as well as the company's average Enterprise Value/Invested Capital multiple for period t+1 during the same interval. Linear regression is used, where the dependent variable is the Enterprise Value/Invested Capital multiple (EV/IC) for period t+1 and explanatory variable is the company's ESG Disclosure Score from period t. The data set is comprised of 40 mega-caps taken from the S&P500 from the period 2007 – 2011.

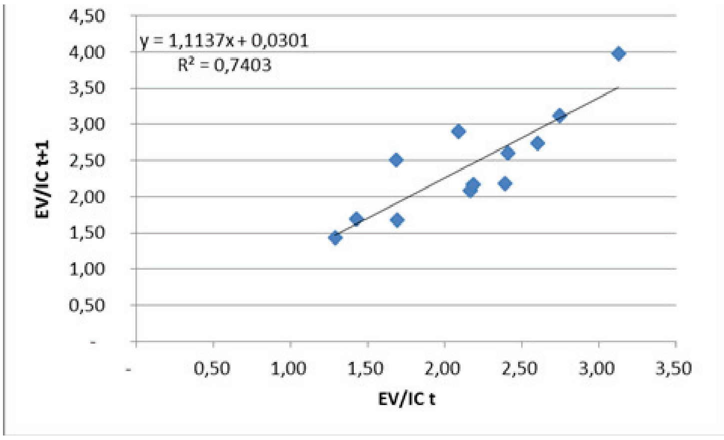
Preliminary findings indicate that:

- the level of disclosure of ESG factors has a significant impact on future market capitalization of a company.
- investors are using ESG factors as an input parameter in valuation models for estimation of a fundamental value of a company.
- the more ESG information disclosed by the company, the more that investors have transparency for sustainability-risk assessment.

Regression Results from S&P 500 Mega-Caps Data Set:

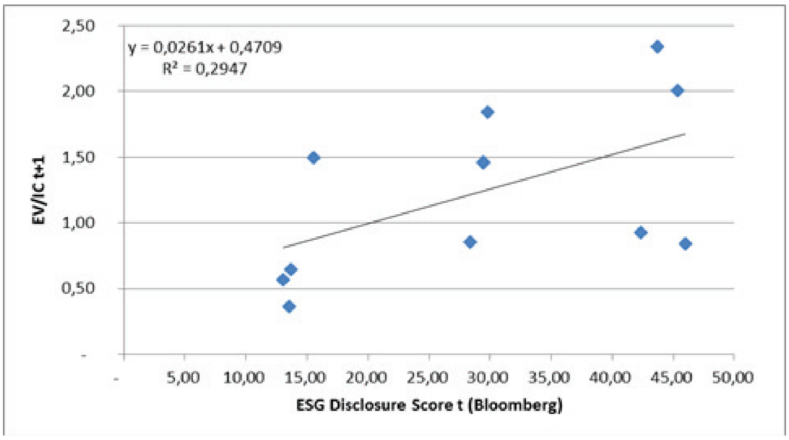


These preliminary results are compared to a naïve regression analysis in which the EV/IC ratio in period t+1 is regressed on the EV/IC ratio from time period t. These results are indicated below and indicate that adding the ESG Disclosure Score provides an increase in explanatory power.

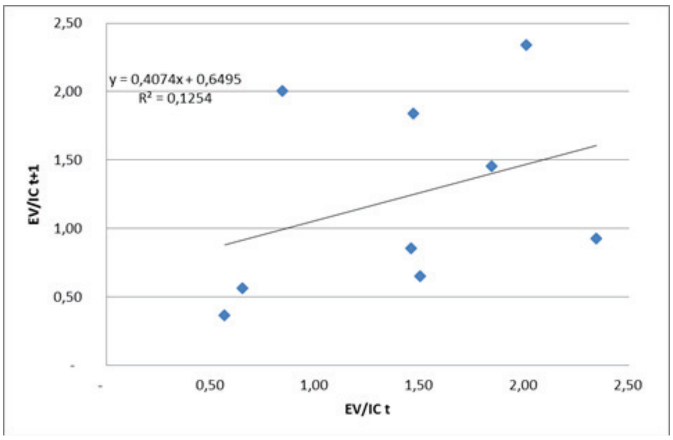


Having confirmed the existence of a significant, positive relationship between ESG ratings and market capitalization (i.e., EV/IC) in a developed market, we intend to test the relationship in emerging markets. The hypothesis and testing methodology remain the same, and we include the following preliminary results for equities from the Russian market.

Research results for Russia: ESG Disclosure Score in time t used to explain EV/IC in time period t+1:



These results, which vary markedly from the results in the US market, are now compared to a naïve regression model performed for the Russian market on the same data set, where the EV/IC ratio in time period t is used to explain the EV/IC ratio in time period t+1.



Although the regression of ESG disclosure scores in Russia cannot explain nearly as much as a similar regression for the US market, the explanatory power of model is enhanced. We are encouraged by this finding, as we suspect the use of ESG disclosures to intensify in emerging markets, thus further enhancing the ability to assess or predict corporate valuations in these markets.

Conclusions and next steps

Preliminary findings of our research indicate that:

- the level of disclosure of ESG factors has a significant impact on future market capitalization of a company.
- investors are using ESG factors as an input parameter in valuation models for estimation of a fundamental value of a company.
- the more ESG information disclosed by the company, the more that investors have transparency for sustainability-risk assessment.

Our next steps will be to expand the study to include data from other markets, both developed and emerging, as well as extending the period studied through 2013 (database currently covers 2008 – 2011). Given the growing significance of emerging markets in global market capitalization, having an enhanced understanding of how ESG Disclosure Scores can serve as a guide to more accurate corporate valuations should fill an important information gap.

References

1. Bird, R., Hall, A. D., Momentè, F., & Reggiani, F. (2007). What corporate social responsibility activities are valued by the market? Journal of Business Ethics, 76(2), 189-206.
2. Baumol, W. J., & Blackman, S. A. B. (1991). Perfect markets and easy virtue: Business ethics and the invisible hand. Cambridge, MA: Blackwell.
3. Godfrey, P. C., Merrill, C. B., & Hansen, J. M. (2009). The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. Strategic Management Journal, 30(4), 425-445.
4. Guenster, N., Bauer, R., Derwall, J., & Koedijk, K. (2011). The Economic Value of Corporate Eco-Efficiency. European Financial Management, 17(4), 679-704.
5. Konar, S., & Cohen, M. A. (2001). Does the market value environmental performance? Review of economics and statistics, 83(2), 281-289.
6. KPMG: http://www.kpmg.no/arch/_img/9834869.pdf.
7. Martin Curran, M., & Moran, D. (2007). Impact of the FTSE4Good Index on firm price: An event study. Journal of environmental management, 82(4), 529-537.
8. Palmer, K., Oates, W. E., & Portney, P. R. (1995). Tightening environmental standards: the benefit-cost or the no-cost paradigm? Journal of Economic perspectives, 9, 119-132.
9. Patten, D. M. (1990). The market reaction to social responsibility disclosures: the case of the Sullivan Principles Signings. Accounting, Organizations and Society, 15(6), 575-587.
10. El Ghoul, S., Guedhami, O., Kwok, C. C., & Mishra, D. R. (2011). Does corporate social responsibility affect the cost of capital? Journal of Banking & Finance, 35(9), 2388-2406.
11. Schroder Fund Advisors LLC, “The Case for Emerging Market Equity,” December 2012. New York, NY.
12. Shleifer, A. (2004). Does competition destroy ethical behavior? (No. w10269). National Bureau of Economic Research.
13. US SIF Foundation’s 2012 Report on Sustainable and Responsible Investing Trends in the United States.
14. Walley, N., & Whitehead, B. (1994). It’s not easy being green. The Earthscan reader in business and the environment, 36-44.