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Fair weather trends: The environment as an 'optional extra'?

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ABSTRACT

The *Verdurous India Index* consistently outperforms the market proxy when investors appear optimistic, and underperforms during each downturn: 46.50% (benchmark 17.4%), 22.50 (13.1), 15.53 (15.3), 32.65 (28.3) during four distinct growth phases; and −14.66% (benchmark 16.74%), 18.38 (21.97), 10.30 (9.80) during three distinct downturns. The observed cyclicality in returns from the environment-themed index may be construed as a "correction" of sentiment – in either direction – rather than a substantive alteration in the fundamental value of the underlying portfolio. Tobin's 'q' and marginal 'q' analyses of the index relative to the broader markets reveal that investor perceptions relating to 'efficiency of asset use' drag the broader markets down, and along with it the individual firms constituting the index. However, while 44% of the variability in the marginal 'q' is explained by movements in market capitalization of the Verdurous-index-constituents, 56% of the variability was a function of firm-specific management practices. Yet, the robustness of the index portfolio helps negate this impact to a limited extent. The loss in valuation concurrent with exogenous shocks, and a diminished valuation of the broader markets, would imply that the greener among the firms had not adequately or succinctly signaled their firm and sustained commitment to the natural environment to the investor community.

Keywords: Business cycles; Environmental-theme index; Investor sentiment; Marginal Tobin's 'q'

1. Introduction

"The Queen is inseparable from the Church of England", and God is "what is called an optional extra", in the words of the fictional character Sir Humphrey Appleby from *The Bishop's Gambit*, forming part of the BBC's (1986) satirical television series *Yes Prime Minister*. In competitive markets, businesses make investments to enhance shareholder value, or to mitigate risks, or both, and environmental investments should ideally be viewed in the same light. Considering that the natural environment is the source of all raw material that goes into production, and is the sink for all tail pipe emissions, superior environmental credentials of business operations should, be a focal aspect of corporate governance, (McDermott et al., 2002). Unfortunately, to this day, the causal relationship between corporate environmental responsibility and profitability is contested, and empirical findings remain inconclusive (Wahba, 2008).

The "business case" is an important internal driver for sustainability in business operations while reputation, customer expectations, regulation and legislation remain significant external drivers (Lozano, 2015). Investors believe that resources expended towards enhancing environmental sustainability of operations have an opportunity cost and hence, call for environmental positioning to be an integral part of the firm's business strategy, as opposed to being a façade, an add-on, or an afterthought. Improved environmental performance of a firm could result in lower volatility in the abnormal returns earned relative to industry peers, (Halkos and Sepetis, 2007).

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It is frequently argued that the switch from control of waste generation to prevention also provides superior product and better product yields. In theory, therefore, paying adequate attention to environmental protection and resource conservation paves the way to stabilizing business operations, and eventually to, preserving and enhancing market power and shareholder value (Singal, 2014). In reality, however, investors are known to overlook the value-at-risk of over USD 4.20 trillion, or a potentially permanent impairment of assets equal in value to the entire GDP of Japan, if current climate trends led to a 3 deg rise in average global temperatures. Worse, "those doing everything right will be affected by the inaction of others", (Woodley, 2015). When mandated by law, symbolic practices may be designed to demonstrate commitment, without substantive changes to the underlying operations. Singh et al. (2015) find that Indian firms were motivated by image building, regulatory compliance, incident prevention and keeping up with the competition, rather than innovation, cost-savings and longer-term benefits in deploying their environmental management systems and practices. Voluntary measures may be targeted at protecting the organization from reputational harm, and not necessarily to improve environmental performance, (Rodrigue et al., 2012). American airline companies, for instance, did not ban the transport of hunting trophies from Africa until the opposition from the traveling public threatened to impact their economic prospects (M.R., 2015).

Further, tighter environmental regulations promulgated in the future, and more stringent enforcement of existing environmental norms, could necessitate substantial investments by rival firms, drive weaker rivals out of business, or both. True environmental performance of an economy is therefore indexed by the eco-sensibility of mainstream businesses, by the level and consistency of stakeholder involvement, and by the extent of information readily and transparently made available to society (Srinivasan, 2008). Theoretical formulations may or may not be entirely substantiated by empirical evidence, though. Additionally, the rigor with which the environmental externality is internalized could vary over the business cycle, subject to the nature of the externality and the state of the macro-economic environment (Bowen and Stern, 2010). Also, the firm's relative maturity within the lifecycle and ongoing financial performance could reciprocally influence its environmental outcomes, (Elsayed and Paton, 2009). Al-Tuwajri et al. (2004) have observed that "good" environmental performance was significantly associated with "good" economic performance. Clarkson et al. (2011) observe a similar association for a sample of polluting industries for the period 1990–2003 but caution that a "green" strategy could not be easily mimicked. King and Lenox (2001) believe that the association between lower emissions and higher market valuation might not be directly *causal* and choosing to "be green" could be a function of firm specific, industry-specific and economy-wide parameters. Hassel et al. (2005), on the other hand, observe that environmental performance increased costs and hence had a negative influence on the market value of a selection of Swedish firms.

In the context of market indices, Statmen (2006) observes that the environment heavy DS 400 index returned more than the benchmark S&P 500 between May 1990 and April 2004 but not in each sub-period. More generally, she finds that socially responsible indices earned superior returns during growth phases of the business cycle. This paper investigates if, in practice, investors in Indian markets tended to view environmental conservation as an 'optional extra' superimposed onto routine business operations. The analysis is substantiated with decade-long data from tracking the Verdurous India Index, a custom-built, green stock-market index incorporating both environmentally sensible manufacturing process as well as conventionally defined green product firms. A few other 'sustainability' indices routinely (i) include corporate governance and social performance measures as well ("ESG indices), (ii) cover sectors such as Renewable Energy and Waste Recycling which are known to limit harm to the natural environment, and (iii) tend to rely on disclosures by the companies themselves. The index analyzed herein is the first of its kind (Srinivasan, 2008), incorporating the best performers from mainstream industry viz., cement, automotive etc., assessed by qualified independent agencies and ranked in order of their environmental credentials. A broad-based green index, thus serves as a genuine barometer of environmental performance of a contemporary economy.

2. Enlarging 'sustainability' indices

'Sustainability' stock-market indices form part of the group of "theme indices", and highlight environmental credentials and help channel investments to reward superior performers. Such indices often incorporate clean energy, waste management, water and waste-water treatment, recycling and resource recovery, environmental information technology, and other 'pure play enviro' companies (REF, 2011). Further, indices that seek to 'represent the earth' are diversified across global markets and across facets of corporate governance to include for the strength of climate change strategies, human resource development, knowledge management, stakeholder relations etc. Stocks forming part of such indices are chosen on the strength of the environmental qualifications of their product viz., wind turbines, solar PV modules etc. Among other things, it would be difficult to assess whether the cleanliness of the industry within which a chosen firm operates ("industry effects") leaves a causal impact on economic valuation, independent of firm-specific effects.

Consequently, broad-basing of such indices to recognize the environmental performance of mainstream industry is essential for such indices to be truly representative of all production operations within the economy. A broad-based environmental index helps identify leaders and laggards, relative to peers, within each industry segment. Such an expanded index provides an objective and numerical basis for lenders and equity investors to make educated resource allocation decisions.

Global indices such as the Dow Jones Sustainability Indices (DJSI) and the MSCI Global Sustainability Indices aim to track the performance of the companies in terms of their social, economic, environmental and governance record. The constituents of DJSI are selected using a Total Sustainability Score computed by evaluating the responses to elaborate questionnaires submitted by company sources. Further, these responses are validated by secondary data available in the public domain. One of the key features of index construction is that only the larger among the companies in an industry segment are included within the index, thereby inducing competition amongst candidate companies. Sub-categories of DJSI indices are formed based on geographic location of the participants and the stage of development of the countries of their origin (RobecoSAM, 2015). Likewise, the constituents