Impact of an economic downturn on Sustainability Index investing by capitalization and industry

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ABSTRACT

Over a decade ago, sustainability was a buzzword relegated to conservationists and environmentalists and ridiculed by many executives and financial analysts as a detriment to profitability (Hussain, 1999). Globalized industrial giants are now embracing their commitment to consumer transparency. This may be attributed to several factors such as risk mitigation, proactive response to evolving government policy, or increased pressure from stakeholders. For example, California adopted Assembly Bill 32 in 2006 which, among other things, established a statewide carbon emissions trading scheme in 2013 to combat the effects of climate change due to carbon emissions. Companies under the legislation will now be required to address the externalities of their business operations.

Expectedly, the internet has contributed to the increasing adoption of sustainability measures. Not only can activists reach millions of eyes with text and pictures using a few simple clicks of a keyboard or mobile device, but they can also interact directly with those companies through social media. Additionally, activist shareholders are becoming more vocal in forcing change through the boardroom.

In 2006, KLD Research & Analytics reported that 79% of companies on the S&P 100 included some type of reporting on sustainability in their core reports. As of April 2012, 53% of all S&P 500 companies published sustainability reports with nearly two-thirds of those reports adhering to Global Reporting Initiative (GRI) standards. This was up from 19% in 2010 according to analysis conducted by the Governance & Accountability Institute (GAI). Additionally, graduate business schools are adopting curriculum that teaches sustainability to tomorrow's business leaders. Programs such as Pepperdine University Graziadio School of Business and Management's Socially, Ethically, and Environmentally Responsible (SEER) Business Strategy Certificate are designed to encourage leadership in profitable yet sustainable business opportunities. It seems that the adoption of sustainable business strategy has hit critical mass and is now the standard rather than the exception.

With this in mind, the authors set out to update and revise previous financial performance analyses with new methods.

Keywords: sustainability, capitalization, downturn, stakeholders, asset

PRIOR WORK

"*Impact of an economic downturn on Sustainability Index Investing by Capitalization and Industry*" is a continuation of several research studies by the author on how corporate sustainability may affect financial performance. After the author's first study in 2008, the worldwide economic and political landscape changed drastically. The United States weathered a severe economic recession with high unemployment, uncertainty, and lost savings. Many global stock markets have slowly but surely rebuilt some confidence in the past five years although the financial crisis in the EU has put a damper on growth and confidence. Indeed, in late March of 2013, the S&P 500 reached record territory and eclipsed its previous high of 1,565.15 from October of 2007. Including dividends and inflation based on the 10% inflation figures from the US Bureau of Labor Statistics, investors in an S&P 500 index fund experienced no appreciation (Bureau of Labor Statistics, 2013). *"The Impact of an economic Sustainability Index Investing by Capitalization and Industry During and Economic Downturn"* reexamines the historical stock price returns and average return on equity (ROE) for American companies listed on the Dow Jones Sustainability Index – United States (DJSI-US). It analyzes companies based on two criteria, market capitalization and industry, in an attempt to identify characteristics of superior financial performance during and after a recession. The study uses data compiled from Q4 2007 through January 2013, a five-year timeframe. The study then compares DJSI-US results to the performance of S&P 500 corporations based on the same criteria.

The authors would like to thank both the Dow Jones Company and Sustainable Asset Management for provision of data currently and in the past.

CORPORATE SUSTAINABILITY

Corporate Sustainability (CS) has accrued many names over the years and encompasses many definitions. People Planet Profits, triple bottom line, corporate citizenship, and 3BL are all terms used to refer to CS. Many companies and stakeholders use the terms to their respective benefit when defining the terms. This case-by-case interpretation and definition should be embraced to match the situation it reflects (van Marrewijk 95-105). As the paradigm shift continues, new business opportunities have arisen. B Labs' private certification service known as "B-Corp Certified," judges and certifies companies who apply based on passage of a standardized set of criteria including transparency, community involvement, and environmental impacts. The increasing focus on corporate sustainability and shareholder value has also provided new market entry options for financial firms. For example, in 2012, Socially Responsible Investments (SRIs) in the US had total assets of approximately $3.74 trillion. This represents a staggering 22% increase since 2009 and an increase of $1 trillion since year end 2007 (The Forum for Sustainable and Responsible Investing, 2012). A number of exchange traded funds (ETFs), mutual funds, and indexes have arisen in response to consumer demand for sustainable investment options. One of the most well-known sustainability indexes is the Dow Jones Sustainability Index. With these new investment vehicles, stakeholders are requiring further analysis of returns to help them make investment decisions. Some analyses have found that companies on the Dow Jones Sustainability World Index tend to be significantly larger, have higher level of growth, and higher ROE than traditional firms (Tracy Artiach, 2009).

ABOUT THE DJSI

The Dow Jones Sustainability Indexes are a joint collaboration between S&P Dow Jones Indices and RobecoSAM that identify and index leaders in the corporate sustainability field. DJSI companies pass a methodic and thorough assessment of sustainability benchmarks by RobecoSAM, a leader in sustainable asset management. Corporate governance, climate strategy, and social reporting are just a few of the categories that are assessed. The DJSI World Index was the original sustainable investment index and its history dates back to 1999. The Index now contains approximately 300 of the highest achieving companies on sustainability benchmarks out of the roughly 2500 largest companies listed on Dow Jones. There are now a total of seven indexes segmented by region or country and some indexes are subdivided by excluding US-based companies or only including the largest 40 blue-chip companies, for example. Their newest product is the DJSI Emerging Markets. The DJSI-EM launched in February of 2013 and includes 69 component companies from 12 countries (Dow Jones Sustainability Indices, 2012).

The Dow Jones Sustainability North America Index, created in 2005, consists of 141North American-headquartered companies whose scopes reach across many industries and market capitalization sizes. According to the GAI, 85% of DJSI-North America companies currently release a sustainability report with over 90% of those meeting GRI standards (Governance & Accountability Institute, Inc, 2012).

Of the North American companies, the 118 headquartered in America became the companies for analysis and are referred to as the *DJSI-US*. According to RobecoSAM, the DJSI-US had a total return adjusted price of 137.52 on Jan 2, 2008 which had risen to 145.88 five years later, an increase of 6.08% (Dow Jones Sustainability Indices, 2012).

DESCRIBING THE DATA

For this study, the authors decided to create a portfolio analysis based on the skills of a beginning investor. This hypothetical investor may not understand the intricacies of beta, risk assessment, weighting, and other methods of risk management. Rather, the investor would purchase one share of each company in a given bundle.

Compiling and sorting the data was the most extensive part of the authors' research. In all, 105 of the 118 DJSI-US companies were also listed on the S&P500. Of the 500 companies on the S&P, 18 companies were left out of the analysis due to lack of historical data. Some of these firms were spun off, as was the case with Philip Morris International (PM) and Altria Group (MO), while others had just IPOed, like TripAdvisor in 2011.Next, the historical stock price for January 2, 2008 and ROE based on Q4 2007 SEC filings of each of the 118 DJSI-US and 500 S&P500 listed companies was recorded. The same information was then recorded for January 3, 2013 and Q4 2012, respectively. Additionally, each company's market capitalization and industry classification on January 3, 2012 was recorded. Data was mostly retrieved from Yahoo! Finance, while Wikinvest.com was used to fill in incomplete ROE data where necessary.

Table 1 displays the original industry sub-classifications according to the DJSI and the main classifications used for analyzing results with the S&P 500. It includes the original 18 DJSI-US industries categorized into 7 broader segments. When normalizing S&P industry information, the authors took careful consideration when segmenting companies. Using a corporation's NAICS classification as a base indicator, it was matched to one of the 18 original industries, and the corresponding broader segment.

Table 1: Industry Classifications & Sub-Classifications

1 **Finance**
- a Banks
- b Insurance
- c Financial Services

2 **Energy**
- a Oil & Gas
- b Utilities

3 **Industrials**
- a Industrial Goods & Services
- b Chemicals
- c Basic Resources

4 **Consumer Goods**
- a Personal & Household Goods
- b Food & Beverage
- c Telecommunications
- d Media

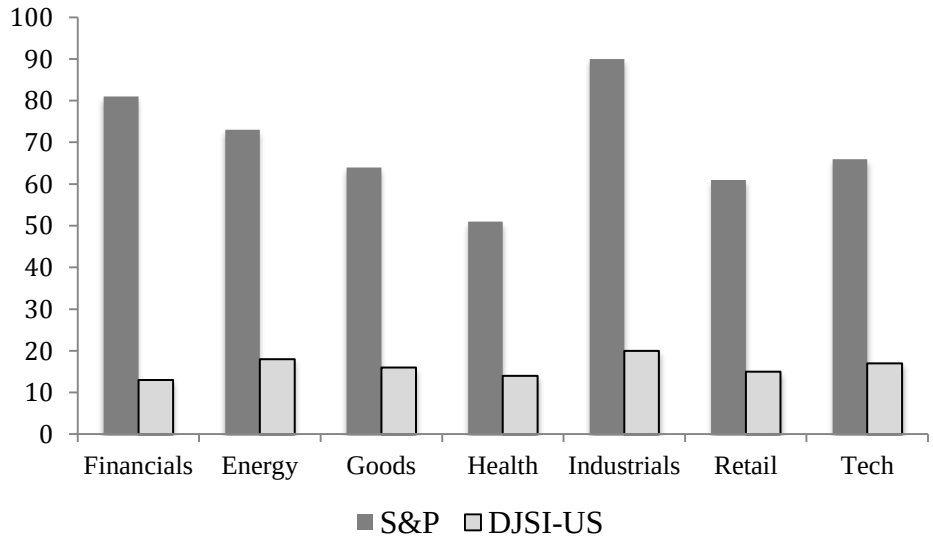
5 **Consumer Discretionary**
- a Retail
- b Travel & Leisure
- c Real Estate
- d Automotive

6 **Health Care**

7 **Technology**

The number of companies falling within an industry segment is reported in Figure1. The largest category is Industrials for both indexes while Health and Finance were each smallest in the S&P and the DSJI-US, respectively.

Figure 1: Industry Segments



The second segment of analysis chosen by the authors was market capitalization, displayed in Table 2. Conventional wisdom states that smaller cap stocks, while more volatile in relation to the S&P, offer investors greater rewards. The DJSI-US components had a 2013 market capitalization range of $1.05 billion to nearly $400 billion. Table 2 describes the market capitalization makeup of the DJSI-US for January of 2008 and 2013.

Table 2: DJSI-US Market Capitalization Stats

	Market Capitalization (Billions)					
	January 2	Full	Mean	Median	Largest	Smallest
DJSI-US	2008	$4,465.27	$40.05	$17.79	$407.32	$1.15
	2013	$5,029.12	$44.12	$18.54	$399.63	$1.05
S&P 500	2008	$10,478.17	$21.97	$10.04	$407.32	$1.13
	2013	$13,437.85	$28.17	$12.92	$477.66	$1.86

One point to note for the analysis is that some companies changed market capitalization segments from 2008 to 2013. Companies with large stock price increases during the timeframe likely moved into higher capitalizations segments, while the opposite generally holds true for equities that saw substantial stock price devaluation. For example, Ford Motors in January 2008 had an average market capitalization of under $20 billion, placing it firmly in the Medium category. However, by January of 2013, Ford's market capitalization increased to $51 billion, placing it in the middle of the large capitalization segment.

Table 3: Market Capitalization Segments

S	**M**	**L**	**XL**
$1 - $10 billion	$10.1 - $25 billion	$25.1 - $75 billion	> $75 billion

RESULTS

Table 4: Industry Analysis

	n	Avg ROE 1/2/2008	Avg ROE 1/3/2013	Avg % point change	Avg Stock Return
Financials S&P	81	11.81%	10.44%	-1.37	2.97%
Financials DJSI	13	6.09%	11.65%	5.56	-16.25%
Energy S&P	73	18.54%	10.01%	-8.19	26.42%
Energy DJSI	18	20.13%	13.37%	-6.76	31.17%
Goods S&P	64	20.93%	26.31%	5.37	59.66%
Goods DJSI	16	21.67%	33.22%	11.55	54.42%
Health S&P	51	16.23%	18.22%	1.99	52.86%
Health DJSI	14	18.79%	21.67%	2.88	24.64%
Industrials S&P	90	22.67%	24.08%	1.42	36.02%
Industrials DJSI	20	20.86%	19.69%	-1.17	24.57%
Retail S&P	61	20.76%	20.51%	-0.25	77.94%
Retail DJSI	15	20.66%	10.32%	-10.34	24.03%
Tech S&P	66	18.49%	17.85%	-0.64	52.95%
Tech DJSI	17	23.56%	19.32%	-4.24	55.25%

Table 5: Market Capitalization Analysis

	n	Avg ROE 1/2/2008	Avg ROE 1/3/2013	Avg % point change	Avg Stock Return
S S&P	238	16.32%	21.03%	4.72	63.21%
S DJSI	25	12.22%	14.83%	2.60	60.69%
M S&P	139	20.00%	17.14%	-2.82	19.36%
M DJSI	45	19.38%	18.62%	-0.76	26.25%
L S&P	73	21.38%	25.99%	4.61	29.21%
L DJSI	29	21.21%	21.74%	1.33	19.62%
XL S&P	27	21.32%	17.22%	-4.10	17.53%
XL DJSI	16	24.38%	19.15 %	-5.93	7.75%

ANALYSIS & CONCLUSIONS

This analysis entailed several hypothetical portfolios segmented by either market capitalization or industry classification. The portfolios contained one share of each company contained within a segment and purchased on January 2nd, 2008. They were then subsequently sold on January 2nd, 2013.The cost and effects of brokerage fees, transaction costs, and taxes are not included in these results, which were surprising. The broader S&P500 and the companies grouped within regularly outperformed the DJSI-US and its respective segments. DJSI-US companies with a market capitalization between $10.1 and $25 billion in 2008 did indeed outperform the S&P by nearly 7%. However, in only two industries did the DJSI-US outperform the S&P: technology and energy. Even in these two segments, the DJSI-US only outperformed by a few percentage points, whereas in the other segments the DJSI-US typically underperformed by double digits. The DJSI-US's two worst performing segments were health and retail, providing lower stock returns of approximately 28 and 54 percentage points, respectively.

Analyzing ROE data involved calculating the numerical difference from Q4 2007 to Q4 2012. Among the entire data set from both indexes, ROE was much lower in 2012 than in 2007. This may be caused in part by the timeframe starting at the beginning of the stock market downturn. Only eight of the twenty-two segments had an average positive change in ROE over the timeframe. The best performing segments for ROE were consumer goods and healthcare with both the DJSI and S&P equities in these segments having positive change. In fact, corporations dealing mainly with consumer goods performed quite well in both stock price returns and average increases in ROE. These results seem counterintuitive since one would likely think that consumer goods companies would suffer due to shrinking household budgets during a recession. The DJSI-US outperformed the S&P within the consumer goods segment, with the DJSI group showing an average increase six points higher than its S&P alternative. This may indicate that these DJSI-listed companies could experience greater financial returns and be in better financial shape as the economic recovery takes root in the coming years. However, the DJSI-listed consumer goods companies as a group were lower than their S&P counterparts by two percentage points. Although the DJSI health sector also outperformed the S&P in terms of ROE growth, the corresponding stock price performance was not above average. It actually underperformed the S&P by nearly 25 percentage points.

S&P Dow Jones Indices reports in their publicly available DJSI-US white sheet that, as of March 29, 2013, 5 year returns of the index total 4.68%. By comparison, had an investor invested in the same companies contained in the index without using professional risk management techniques and weighting, they would have seen an average return of 5.97% over the five-year timeframe of January 2008 through January 2013. On the other hand, investing in the individual 500 components of the S&P 500 resulted in an average annual gain of 8.61%. However, investing in a weighted S&P index such as Vanguard's 500 Index Fund Investor Class(VFINX)during the same time period resulted in relatively flat performance of -0.98%.This may indicate that investors could see higher returns if they invested in the individual companies. However, as the common disclaimer states, "Past performance is no indication of future results."

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