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Sustainability Indices: Investment Solutions for Future Generations

Ever since the launch of the first ethical investment fund by Friends Provident in 1984, socially responsible investing has continued to grow in popularity all over the world, particularly in Europe. Global assets under management, including extra-financial criteria, reached 13.6 trillion[1] in 2012, and mutual fund assets in Europe increased by 19% over just two years, from EUR 199.9 billion in 2010 to EUR 237.9 billion in 2012.[1] Over time, we have also witnessed a progressive evolution in how socially responsible investing is perceived, from a marginal concept to an increasingly mainstream investment approach that explicitly acknowledges the relevance of environmental, social, and governance factors for the investor and for the long-term health and stability of the market as a whole.[2]

In the past, socially responsible investing was synonymous with ethical investing, which involved excluding "undesirable" sectors.

In the past, socially responsible investing was synonymous with ethical investing, which involved excluding "undesirable" sectors. For example, the Friends Provident fund expressly excluded certain "sinful" sectors such as tobacco, pornography, and the arms trade. However, as interest in this investment style has gained momentum in the past two decades, the nature of socially responsible investment has broadened. The style has transformed from an approach that screens out sectors that "do harm" to one that incentivizes and rewards good practices that promote sustainable economic development by balancing the needs of the planet, its people, and the ability for companies to make a profit. This approach is often known as "sustainability investing."

Sustainability investing usually requires considering the environmental, social, and governance factors that may affect investment risk/return, and while there is general agreement on what these factors are, the definition of sustainability investing itself can vary significantly between investors in different countries. Regardless of how sustainability investing is precisely defined, the rationale behind it is simple in that investors can derive moral satisfaction from investing in this manner and they may benefit from the long-term performance of companies that adopt socially and environmentally responsible policies. There is academic research available

[1] European Responsible Investing Fund Survey 2013, ALFI and KPMG, May 2013.

[2] What is Responsible Investment? *Principles for Responsible Investment*, http://unpri.org/wp-content/uploads/1.Whatisresponsibleinvestment.pdf

to support this. For instance, Statman concluded that returns of socially responsible indices were generally higher than those of the S&P 500®.[3] More recent research, written by Eccles et al., showed that high-sustainability firms dramatically outperformed low-sustainability firms, in terms of both the stock market and accounting measures.[4]

SUSTAINABILITY INDICES

There are a variety of ways for investors to get exposure to sustainability-based investments. Some approaches are active and involve fund managers selecting companies that are deemed to have met certain standards, while others are passive, using vehicles such as ETFs, passive funds, and structured products, which derive their exposure from underlying indices. In this article, we focus our attention on passive approaches using indices.

The key question surrounding the construction of sustainability indices is how to measure sustainability accurately.

The key question surrounding the construction of sustainability indices is how to measure sustainability accurately, given the subjective nature of many of its factors and the difficulty in selecting the relevant parameters to measure long-term value creation in different industries. Additionally complex is how to build a portfolio that establishes a link between the market capitalization of companies and their sustainability credentials. This means that for a sustainability index to be effective and meaningful, it should be designed in such a way that allows investors to access their target market, while taking into account the sustainability credentials of the companies in that market.

In comparison with actively managed funds, products based on sustainability indices have a number of advantages. First, index providers explicitly take into account the sustainability credentials of companies in the index construction process. Second, the way in which companies are assessed is transparent, and the impact of subjective judgments is lessened by clearly defined index rules. Third, they serve as an important tool to engage with companies and to incentivize them to adopt policies that contribute to sustainable economic growth.

There is a broad selection of sustainability indices that adopt different methodologies in the market. Some approaches involve selecting companies with the highest sustainability rating, while others reweight the entire universe based on a combination of a company's sustainability rating and its market capitalization. Some approaches select companies based on a wide variety of sustainability criteria, whereas others use only a subset of those criteria. Regardless of the approach used, it is important to

[3] Statman M., *Socially responsible indexes: Composition, performance and tracking error*, May 2005.

[4] Eccles R, Ioannou I, and Serafeim G., *The Impact of a Culture of Sustainability on Corporate Behavior and Performance*, Harvard Business School, Working Paper 12-035, November 2011.

highlight that these indices have to be built on robust sustainability assessments, which can then be used as a basis for benchmarks and quantitative investment solutions.

DOW JONES SUSTAINABILITY INDICES: AN OVERVIEW

One of the reasons why the DJSI series has gained widespread acceptance among practitioners lies in the reliability of the analytical inputs used to construct the index.

S&P Dow Jones Indices offers a number of sustainability benchmarks, among which the most well known is the Dow Jones Sustainability™ World Index (the DJSI World). Launched in 1999, the index was the first global sustainability index and is highly recognized within the investment community, according to the Rate the Raters survey.[5] One of the reasons why the DJSI series has gained widespread acceptance among practitioners lies in the reliability of the analytical inputs used to construct the index. These inputs are provided by RobecoSAM, a high-profile investment specialist focused exclusively on sustainability investing. Each year, RobecoSAM invites 3,000 of the world's largest publicly listed companies to participate in the Corporate Sustainability Assessment (CSA). Participating companies have to answer a series of questions about the economic, social, and governance policies for their business activities, as well as provide documented evidence to substantiate their answers. In 2014, RobecoSAM received responses from 830 of the invited companies, which represented about 50% of the total market capitalization of the S&P Global LargeMidCap benchmark. This relatively high participation rate means that an in-depth analysis of the sustainability profiles of the participating companies is possible. In addition, RobecoSAM analyzes those companies that did not take part in the assessment but are large in terms of market capitalization in their respective region or sector.

The DJSI World is constructed by selecting the top 10% of companies with the highest sustainability rating within their respective industries (see Exhibit 1). Apart from the global version of the index, there are also versions that focus on specific regions (such as emerging markets, Europe, etc.) as well as country indices. There are versions that include additional ethical overlays, such as filtering out companies in certain industries that are considered to be "sinful" (e.g., weapons, alcohol, adult entertainment).

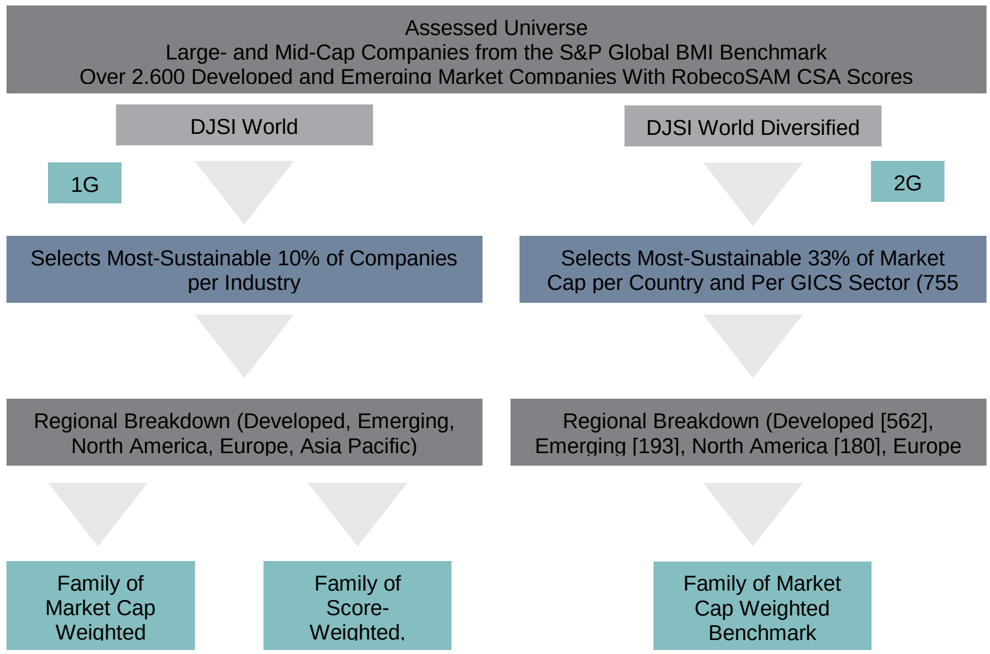
In addition, there are other types of sustainability indices that focus on the differing needs of investors. For example, S&P Dow Jones Indices and RobecoSAM developed the Dow Jones Sustainability Diversified Indices,[6] which have a broader universe and a lower tracking error to the benchmarks. The DJSI World Diversified selects companies based on their sustainability score until 33% of the market capitalization within each country and sector is covered. This index ensures close tracking of the benchmark broad-market index, the S&P Global LargeMidCap (see Exhibits

[5] The 2013 GlobeScan/SustainAbility Study "Polling the Experts", a part of "Rate the Raters" project. http://www.sustainability.com/

[6] This includes DJSI World Diversified and its subindices.

2 and 3). For many investors, this is an important consideration when deciding which index to choose.

Exhibit 1: Index Construction Methodologies of DJSI World and DJSI World Diversified



Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2014. Charts and tables are provided for illustrative purposes.

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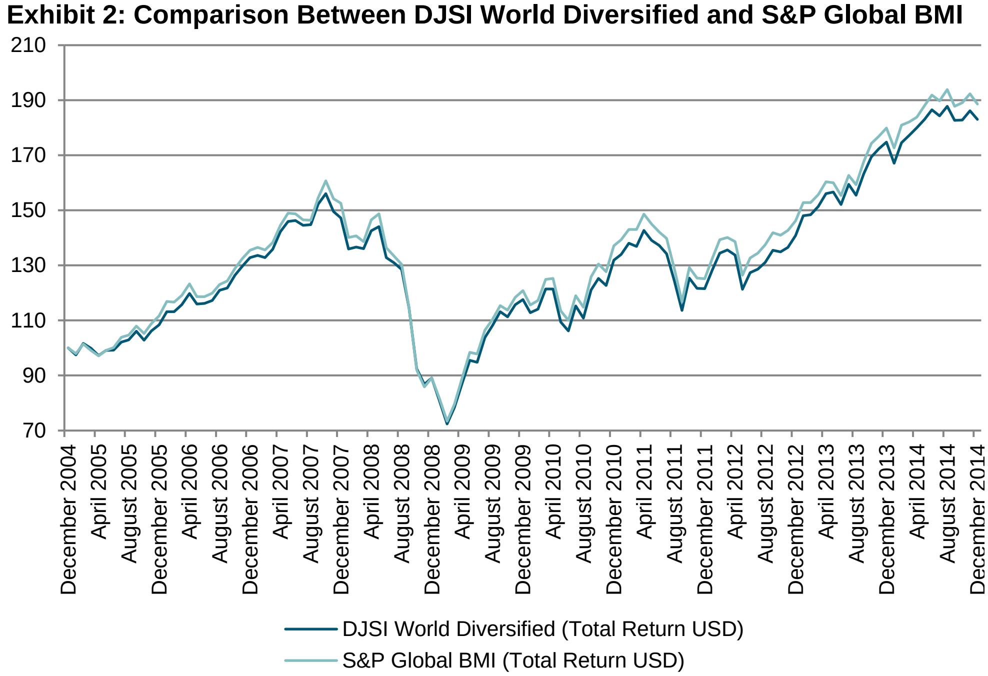
Exhibit 2: Comparison Between DJSI World Diversified and S&P Global BMI



Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2014. Charts and tables are provided for illustrative purposes. Past performance is no guarantee of future results. These charts and tables may reflect hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Exhibit 3: Comparison Between DJSI Diversified and S&P LargeMidCap Indices

TOTAL RETURN (USD)	ANNUALIZED RETURN (%)	ANNUALIZED VOLATILITY (%)	TRACKING ERROR (%)
DJSI Europe Diversified	6.19	17.65	1.33
S&P Europe LargeMidCap	6.15	17.36	-
DJSI World Diversified	6.23	16.23	0.469
S&P Global LargeMidCap	6.55	16.57	-

Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2014. Charts and tables are provided for illustrative purposes. Past performance is no guarantee of future results. These charts and tables may reflect hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

S&P CARBON EFFICIENT INDICES

Besides comprehensive sustainability indices, S&P Dow Jones Indices has also developed a series of carbon-efficient indices to address investor desire to support environmentally friendly companies and reduce carbon-related risks. The S&P Carbon Efficient Indices are designed in such a way that they take into account the carbon footprint of each company, while closely tracking the respective benchmark. The carbon footprint of each company within the benchmark is determined by an independent specialist research provider, Trucost, and it is adjusted by the revenue of the company. In deciding the carbon footprint of a company where data is not available, Trucost considers a number of factors, such as the sector that the company operates in, the company's supply chain, and the products the company makes.

The objective of carbon efficient indices is to favor companies that adopt "green" policies, while excluding or underweighting those companies deemed to be less carbon efficient within the same sector.

The objective of carbon efficient indices is to favor companies that adopt "green" policies, while excluding or underweighting those companies deemed to be less carbon efficient within the same sector. The overall carbon footprint reduction of the companies within the S&P Carbon Efficient Indices is estimated to be around 30-50% versus their respective benchmarks. Optimization models are also used in order to keep the tracking error of the carbon efficient indices and their benchmarks to a minimum. For instance, the tracking error of the S&P U.S. Carbon Efficient Index (versus that of the S&P 500) was 0.85% over the past 10 years.

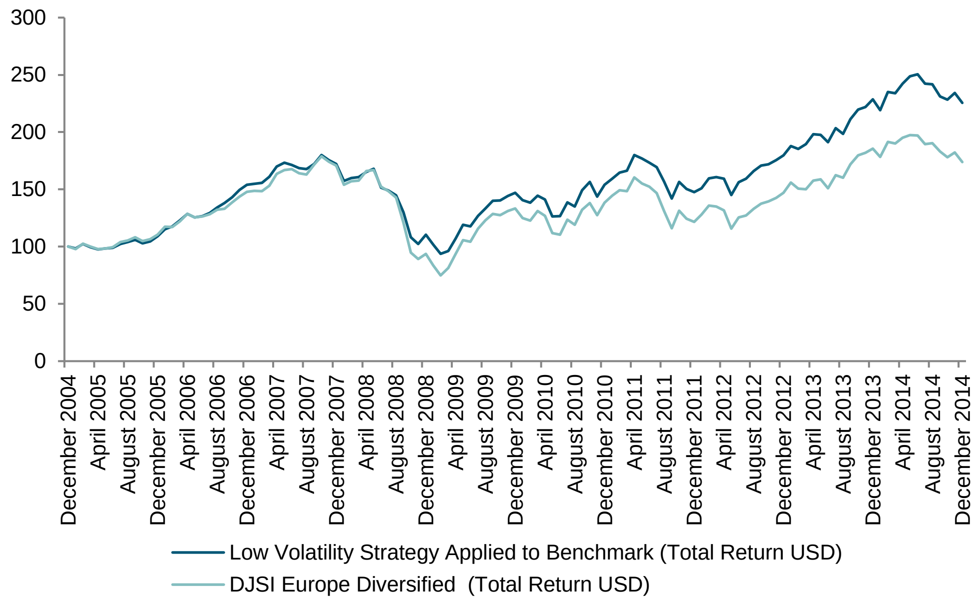
CASE STUDY: APPLYING STRATEGIES TO SUSTAINABILITY INDICES

Investors and fund managers have long been applying different strategies to their equity portfolios in an effort to enhance portfolio return or reduce portfolio volatility, and in recent years, low volatility strategies have gained immense popularity across the world, as some investors have started to focus on reducing the risk of their investment portfolios. Moreover, there is mounting evidence that low volatility strategies outperform because some investors seem to prefer highly volatile stocks that give them the potential for a lottery-type payoff and hence, create the possibility of systematically pushing up the prices of these stocks.

To examine whether low volatility strategies may apply to sustainability benchmarks, we have created a simulation that involves selecting the 100 least-volatile stocks from the DJSI Europe Diversified. The portfolio is rebalanced every six months, and the securities in the portfolio are weighted by the inverse of volatility, which means that less-volatile stocks are attributed a higher weight than the more volatile ones. The results show that, compared to the benchmark, the annualized excess performance of the strategy is 2.78%, with a corresponding decrease in volatility of 17.47% (see Exhibits 4 and 5). This suggests that traditional equity strategies may apply equally well to a sustainability benchmark as to a traditional benchmark.

Low volatility strategies have gained immense popularity across the world, as some investors have started to focus on reducing the risk of their investment portfolios.

Exhibit 4: Performance of a Hypothetical Low Volatility Strategy Versus its Sustainability Benchmark



Source: S&P Dow Jones Indices LLC, Barclays. Data from December 2004 to December 2014. Charts and tables are provided for illustrative purposes. Past performance is no guarantee of future results. These charts and tables may reflect hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Exhibit 5: Performance and Risks of a Hypothetical Low Volatility Strategy Versus its Sustainability Benchmark

TOTAL RETURN (USD)	ANNUALIZED RETURN (%)	ANNUALIZED VOLATILITY (%)	TRACKING ERROR (%)
Benchmark	5.70	20.49	0.28
Low Volatility Strategy Applied to Benchmark	8.48	16.91	0.50

Source: S&P Dow Jones Indices LLC, Barclays. Data from December 2004 to December 2014. Charts and tables are provided for illustrative purposes. Past performance is no guarantee of future results. These charts and tables may reflect hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

FUTURE DEVELOPMENTS

Sustainable investing is expected to continue to experience significant growth in the next few years, as more investors look to integrate social and environmental criteria into investment decisions with the ultimate goal of aligning financial activities with these objectives. For this reason, innovations can be expected in this space as investors become more accustomed to the current offerings in the market and may start to look for customized versions of sustainability indices that meet their investment objectives.

PERFORMANCE DISCLOSURE

The Dow Jones Sustainability Index Europe Diversified Index ("the Index") was launched on May 30, 2013. The S&P Europe BMI LargeMid Cap Index ("the Index") was launched on December 31, 1992. The Dow Jones Sustainability Index World Diversified Index ("the Index") was launched on May 30, 2013. The S&P Europe BMI LargeMid Cap Index ("the Index") was launched on December 31, 1992. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance. The back-test calculations are based on the same methodology that was in effect on the index Launch Date. Complete index methodology details are available at www.spdji.com.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the Index is set at a fixed value for calculation purposes. The Launch Date designates the date upon which the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its datafeed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Past performance of the Index is not an indication of future results. Prospective application of the methodology used to construct the Index may not result in performance commensurate with the back-test returns shown. The back-test period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper for the Index, available at www.spdji.com for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Another limitation of using back-tested information is that the back-tested calculation is generally prepared with the benefit of hindsight. Back-tested information reflects the application of the index methodology and selection of index constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities, fixed income, or commodities markets in general which cannot be, and have not been accounted for in the preparation of the index information set forth, all of which can affect actual performance.

The Index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices LLC maintains the Index and calculates the Index levels and performance shown or discussed, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US $100,000 investment for a 12-month period (or US $10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US $1,650), the net return would be 8.35% (or US $8,350) for the year. Over a three year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US $5,375, and a cumulative net return of 27.2% (or US $27,200).

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It is not possible to invest directly in an index. Exposure to an asset class represented by an index is available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor, and S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. Prospective investors are advised to make an investment in any such fund or other vehicle only after carefully considering the risks associated with investing in such funds, as detailed in an offering memorandum or similar document that is prepared by or on behalf of the issuer of the investment fund or other vehicle. Inclusion of a security within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice.

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