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Understanding ESG Investing

INTRODUCTION

Sustainable investing is one of the fastest-growing segments of the asset management industry. It is also one of the most complex. This paper aims to provide some clarity on this increasingly relevant topic.

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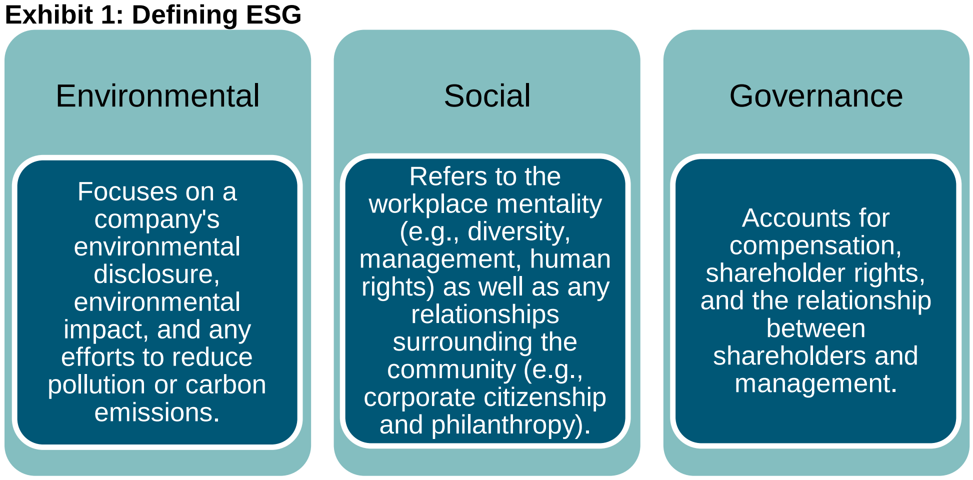
Sustainable investing means looking at "extra-financial" variables, i.e., environmental, social, and governance (ESG) factors (together or separately) when making investment decisions. Such investing may take various forms, from ethical exclusions to comprehensive ESG integration, on the basis of which portfolios may be constructed as best-in-class selection (to maximize extra-financial benefits) or by simply avoiding what may be perceived as unacceptable companies or industries (to either minimize extra-financial detractions or to promote bottom-up ESG change). ESG is a comprehensive field that comprises many dynamics, such as carbon emissions, environmental impact, corporate citizenship, and human capital development. In the industry lexicon, ESG is often distinguished from low carbon (also referred to as "green"). Of course, low carbon is an important component of the environmental dimension of ESG, but it also stands alone in significance due to the global threat of climate change, which is why S&P Dow Jones Indices typically splits sustainability into two categories: ESG and green (low carbon). For our purposes, the environmental dimension of the ESG framework tends to capture more factors, while green tends to focus on a few factors that are considered key in the threat of global climate change. Exhibit 1 further outlines the distinctions between the three dimensions.

Exhibit 1: Defining ESG

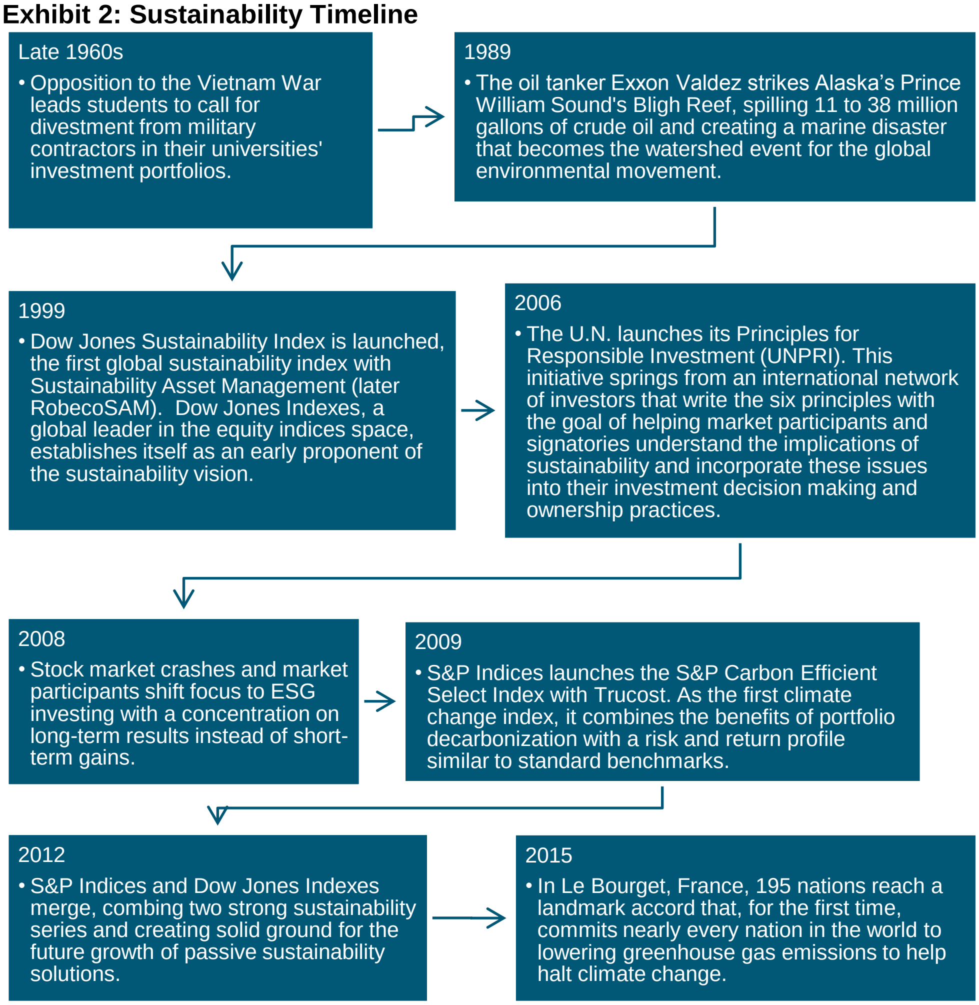


Source: RobecoSAM, "Measuring Intangibles: CSA Methodology." Chart is provided for illustrative purposes.

Within the ESG framework, the environmental component encompasses waste management, water management, and the use of other environmental resources. Social includes stakeholder analysis—customers, employees, and all those affected by the presence of the entity, like people living in the vicinity of an industrial unit. Governance focuses on stakeholder impact as it specifically relates to shareholders and management, while also addressing board structure, management compensation, and shareholder rights. These three factors have combined in different ways to shape distinct periods in the history of the sustainability movement (particularly as it relates to finance). Exhibit 2 is a timeline illustrating the various dynamics.

The modern sustainable investment movement gained traction in the late 1990s with socially responsible investing.

Exhibit 2: Sustainability Timeline



Source: S&P Dow Jones Indices LLC. Chart is provided for illustrative purposes.

THE EVOLUTION OF SUSTAINABILITY INVESTING

As outlined in Exhibit 2, interest in sustainable investing was spurred by divestment in the late 1960s. However, the modern sustainable investment movement gained traction in the late 1990s with socially responsible investing (SRI), which applied a set of screens (negative or positive) to listed securities. One such example would be the Dow Jones Sustainability™ World Enlarged Index ex Alcohol, Tobacco, Gambling, Armaments & Firearms and Adult Entertainment, which is an index that pairs the highest-ranking ESG companies per industry with a negative screen over an existing universe.

As the SRI movement became more widespread, an approach called impact investing emerged with the aim of financing projects that were expected to have measurable positive impacts on well-defined environmental or social goals. This ultimately led to one of the most modern styles in sustainable investing—the view that companies that exemplify sustainable practices are simply better candidates for investment. Increasingly, market participants are using sustainability-screened portfolios as starting points and applying other investment strategies as overlays.

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The recent implementation of government reforms has also shaped the sustainability movement. According to the World Federation of Exchanges, between 2000 and 2009, the largest listed companies in Central and Eastern Europe significantly improved their financial and extra-financial reporting, which increased disclosure of information on ESG factors. This was largely led by corporate governance reforms implemented across the region by local stock exchanges.[1] This increase in disclosure allows for higher-quality data, which can be beneficial for stakeholders.

THE ROLE OF ESG BENCHMARKS

When sustainable investing began, it was concentrated in the active investment space. Impact investors also focused on private debt and equity offerings in ESG-related projects that demonstrated measurable positive social outcomes. As interest in sustainability continued to increase and more market participants entered the space, liquidity constraints and limited scalability were exposed, resulting in a shift into the realm of publicly listed equities. In turn, growing acceptance of listed securities as the basis for sustainable investment opened the door for a confluence of sustainable investment with another powerful movement—index-based investing.[2]

The first index fund was launched in 1976 by John Bogel at Vanguard. The fund is still operating today and tracks the S&P 500®. It has grown to about USD 229 billion of assets under management as of April 2016. The first exchange-traded fund (ETF) was launched in 1990, followed by the launch of Standard & Poor's Depositary Receipts (SPDRs) in 1993.[3] Index-based investing continued to gain popularity, and today it is a prominent feature of the financial world. As of 2014, 31% of households that owned mutual

1 World Federation of Exchanges, "Exchanges, ESG, and Investment Decisions," September 2010.

2 RobecoSAM, http://www.robecosam.com/en/sustainability-insights/focus-themes/impact-investing/index.jsp.

3 Financial Times, http://www.ft.com/intl/cms/s/0/b3c0c960-a56c-11e4-bf11-00144feab7de.html#axzz49svz4S4C.

funds owned at least one equity index mutual fund, with market participants adding USD 148 billion in net new cash flow to index mutual funds.[4]

Of course, indices serve as the basis for index funds and as benchmarks for active strategies. The growth in active, publicly listed ESG investment opportunities necessitated the development of appropriate benchmarks. Today, ESG indices are used as benchmarks for active strategies as well as forming a basis for index funds. This development has been beneficial to market participants because index-based investing is typically liquid and scalable to a large size.

THE S&P DOW JONES INDICES AND ROBECOSAM PARTNERSHIP

The growth in active, publicly listed ESG investment opportunities necessitated the development of appropriate benchmarks.

S&P Dow Jones Indices entered the sustainability passive investment space in 1999, when it partnered with RobecoSAM to create the Dow Jones Sustainability World Index (DJSI World).[5] The collaboration of these best-in-class companies has resulted in a unique partnership in this space.

Today, RobecoSAM provides the ESG scores that determine the selection or weightings, under different methodologies, for the various Dow Jones Sustainability Indices (DJSI), the S&P Environmental & Socially Responsible Indices, the S&P LTVC Global Index, and the S&P ESG Index Series.

RobecoSAM devised the first universal standardization and integration of the ESG metrics. Based on its Corporate Sustainability Assessment (CSA), an annual ESG analysis of approximately 3,000 listed companies, RobecoSAM has compiled one of the world's most comprehensive databases of financially material sustainability statistics. RobecoSAM is also a signatory of the U.N.-backed Principles for Responsible Investment (UNPRI), the European Social Investment Forum (Eurosif), the Association for Sustainable and Responsible Investment in Asia (ASrIA), and Ceres (the Zurich-based organization founded in direct response to the 1989 Exxon Valdez oil spill).

THE CSA AND SCORING

Every year, RobecoSAM releases the CSA, which identifies 59 different industries and asks a wide range of industry-specific, financially material questions grouped into criteria covering three key dimensions of sustainability.

The CSA is designed through the analysis of company-specific information and questions on economic, environmental, and social issues, with

[4] Investment Company Institute, 2015 Investment Company Factbook, "The Growing Popularity of Index Funds," https://www.ici.org/pdf/2015_factbook.pdf.

[5] At the time the partnership was formed, S&P Dow Jones Indices was Dow Jones and RobecoSAM was SAM.

particular focus on industry-specific criteria that has a material impact on companies' ability to generate long-term value. All surveys and assessments are regularly updated and adapted to capture those new sustainability trends at the forefront of each industry sector that are likely to have an impact on a company's competitive landscape. As such, the CSA enhances companies' understanding of the concept of material sustainability information and promotes best practices of public disclosure. Exhibit 3 provides further details regarding the scoring process.

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Exhibit 3: CSA Scoring Criteria

Economic	Environmental	Social
• Corporate Governance • Code of Conduct, Compliance • Risk and Crisis Management • Innovation Management	• Environmental Management System • Environmental Performance • Climate Strategy • Product Stewardship	• Human Capital Development • Talent Attraction & Retention • Occupational Health & Safety • Stakeholder Engagement • Social Reporting

Source: S&P Dow Jones Indices LLC and RobecoSAM. Chart is provided for illustrative purposes.

These different criteria can be combined to form different scoring systems. Most of our sustainability indices (such as the DJSI or DJSI Diversified Series) include the Total Sustainability Score—the aggregate of all three dimensions. The Environmental & Socially Responsible Indices use the Environmental and Social components, while the S&P LTVC Global Index only incorporates the Economic dimension score.

The Media and Stakeholder Analysis, based on ongoing monitoring of news events by RepRisk, further helps to verify a company's involvement in sustainability and management of critical economic, social, and environmental issues or crises. Furthermore, a third party, Deloitte LLP, audits the entire CSA process, completing a broad scope of quality checks on an annual basis.

Passive investing in listed securities might pair well with ESG investing, as high-scoring ESG companies tend to provide greater transparency than private companies. The degree of transparency is high here, since companies that participate in the CSA and assess themselves must believe that they will do well. Additionally, the companies' self-reporting and disclosure are considered alongside an examination of media coverage, stakeholder commentary, and other publicly available sources examined by RepRisk ESG Business Intelligence.

THE UNPRI AND THE DJSI RESPONSE

As mentioned in Exhibit 2, the establishment of the UNPRI marked a key point in the sustainable, responsible, and impact investment movement. The six principles appear in Exhibit 4, along with summaries of how S&P Dow Jones Indices views the role of benchmark providers. Although the principles are voluntary, they offer a menu of possible actions across asset classes for incorporating ESG issues into investment practices. Tailored to fit each organization's investment strategy, approach, and resources, the principles are designed to be compatible with the investment styles of large, diversified, institutional investors operating within a traditional fiduciary framework. Both RobecoSAM and S&P Dow Jones Indices are signatories.

The establishment of the UNPRI marked a key point in the sustainable, responsible, and impact investment movement.

Exhibit 4: UNPRI and DJSI Incorporation of Principles

UNPRI PRINCIPLE	DJSI BENEFITS
1. We will incorporate ESG issues into investment analysis and decision-making processes.	The DJSI Series represent the best-in-class benchmarks for investment decisions and adherence to funds' listed charter purposes.
2. We will be active owners and incorporate ESG issues into our ownership policies and practices.	Use of the DJSI Series—either as a benchmark for active funds or as a basis for passive funds—is a proactive choice for market participants seeking to incorporate ESG issues into their ownership policies and practices. It is also a good platform to engage with companies and challenge them on areas of improvement.
3. We will seek appropriate disclosure on ESG issues by the entities in which we invest.	The DJSI Series is based on a RobecoSAM online questionnaire (CSA) that is supported by extensive company documentation. The companies' self-reporting and disclosure are then considered alongside an additional examination of media coverage, stakeholder commentary, and other publicly available sources examined by RepRisk ESG Business Intelligence.
4: We will promote acceptance and implementation of the principles within the investment industry.	Passive managers can use the DJSI Series to create relevant investment vehicles, thus helping investors with UNPRI acceptance and implementation. Active managers can use the DJSI Series as benchmarks or references to demonstrate their adherence to fiduciary standards and help support mainstreaming of sustainability investment.
5: We will work together to enhance our effectiveness in implementing the principles.	One of the best ways to heighten the effectiveness of the principles is through educating investors. Making sustainability indexing an industry standard furthers this education goal.
6: We will each report on our activities and progress toward implementing the principles.	Reporting—through both company questionnaires and information gathered from objective, third-party agencies—is an integral part of how RobecoSAM keeps its databases updated. Companies' participation in the RobecoSAM surveys illustrates their effort to join in the global UNPRI.

Source: S&P Dow Jones Indices LLC and UNPRI. Table is provided for illustrative purposes.

THE DJSI SERIES

The DJSI Series is now the longest-running collection of global ESG benchmarks worldwide, and it has become a key reference point for market participants that want to make ethical, social, and governance frameworks part of their investment process.

DJSI WORLD

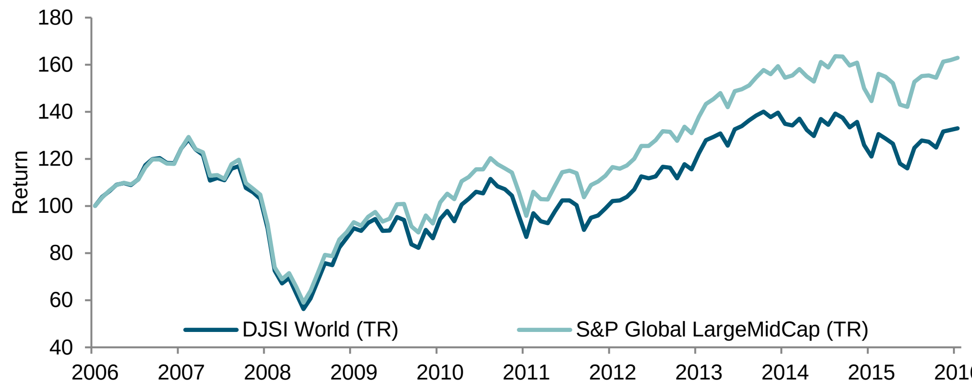
Each year, about 3,000 companies are evaluated for potential inclusion in Dow Jones Sustainability Indices. The indices seek to track the performance of the world's best-in-class ESG performers.

The DJSI World selects the top 10% of best-in-class companies globally based on RobecoSAM CSA classic scores. There is no regard for market-cap size or country exposures, which may result in high tracking error.

The DJSI World selects the top 10% of best-in-class companies globally based on RobecoSAM CSA classic scores.

There are also indices within the DJSI Series for developed countries, emerging markets, and three regions: North America, Europe, and Asia Pacific. There are certain country indices as well.[6] The DJSI Series seeks to serve market participants who want a best-in-class per industry approach. Target audiences include those looking for a corporate ratings system, pure SRI market participants, and active managers.

Exhibit 5: 10-Year Historical Performance of the DJSI World



Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2016. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

As illustrated in Exhibit 5, the DJSI World performance has varied over the past 10 years, but it largely mimics the S&P Global LargeMidCap. From 2006 to 2008, the DJSI World slightly outperformed the benchmark.

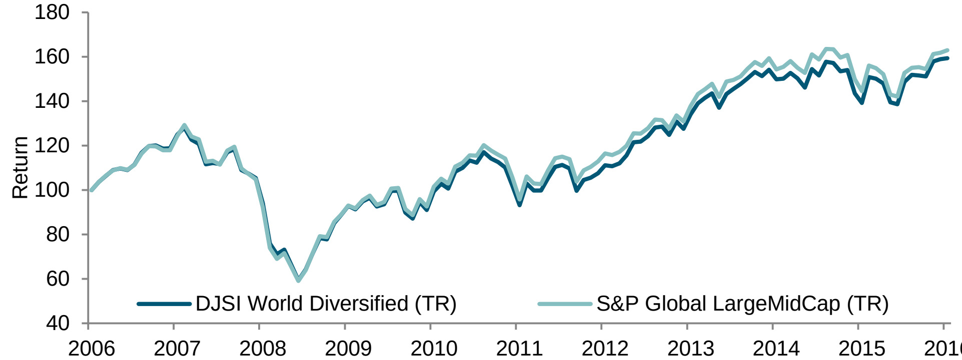
DJSI WORLD DIVERSIFIED

For the DJSI World Diversified, the universe is the same as that of the DJSI World, but the top 33% of companies by market cap per country and per GICS® sector are selected. This index allows for simple slicing and dicing because all regional and country indices are subsets of the DJSI World Diversified. Additionally, it results in a low tracking error, since regional and sector allocations are the same as the underlying benchmark. Only the constituent weights are redistributed per sector and region. The DJSI World Diversified seeks to serve market participants who want a best-in-class per region and sector approach. Target audiences include risk-

[6] Regional and country indices are not subsets of the DJSI World, but separate members of the family, because they have different selection thresholds.

averse pension funds that are interested in the sustainability financial market. The low tracking error is easily seen in Exhibit 6.

Exhibit 6: 10-Year Historical Performance of the DJSI World Diversified



Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2016. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Target audiences include risk-averse pension funds that are interested in the sustainability financial market.

The differences between the DJSI World, DJSI World Diversified, and S&P Global LargeMidCap are further revealed in Exhibit 7.

Exhibit 7: Performance

PERIOD	DJSI WORLD	DJSI WORLD DIVERSIFIED	S&P GLOBAL LARGEMIDCAP
ANNUALIZED RETURN (%)			
1-Year	9.92	14.50	12.74
3 -Year	2.84	5.96	5.74
5-Year	8.89	11.32	11.19
10-Year	2.89	4.77	5.00
ANNUALIZED RISK (%)			
1-Year	16.48	15.44	15.55
3-Year	12.93	11.93	11.78
5-Year	14.83	13.55	13.52
10-Year	18.05	16.75	17.00
RISK-ADJUSTED RETURN			
1-Year	0.60	0.94	0.82
3-Year	0.22	0.50	0.49
5-Year	0.60	0.84	0.83
10-Year	0.16	0.28	0.29
TRACKING ERROR (%)			
1-Year	2.51	1.01	-
3-Year	2.43	1.60	-
5-Year	2.50	1.44	-
10-Year	2.58	1.61	-

Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2016. Index performance based on total return in USD. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

While 2016 has been slightly volatile, the DJSI World Diversified performed better than the benchmark. Again, the low tracking error of the DJSI World Diversified as compared to the benchmark is well depicted.

CONCLUSION

While the sustainable investing movement is new to the financial space, it has grown rapidly and has had an impact beyond the markets, as illustrated by the UNPRI and COP22 in November 2016.

Millennial market participants were almost twice as likely to invest in companies or funds that target specific social or environmental outcomes.

The future of sustainable investing looks bright. According to the Morgan Stanley Institute for Investing, 65% of individual market participants expect sustainable investing to increase in the next five years. Morgan Stanley also found that millennial market participants were almost twice as likely to invest in companies or funds that target specific social or environmental outcomes.[7]

Currently, S&P DJI has over 150 sustainability indices, including carbon efficiency, fossil fuel free, impact investing, and sustainable indices with a quantitative overlay.

We expect to see further growth in passive investing ESG markets, as their rules-based methodologies allow for greater transparency than active investing. As demand continues to shift and shape sustainable investing, we look forward to addressing these changes with our ever-expanding offerings.

[7] Morgan Stanley Institute for Investing, "Sustainable Signals: The Individual Investor Perspective."

PERFORMANCE DISCLOSURE

The Dow Jones Sustainability World Diversified Index was launched on May 30, 2013. 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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