PCA | PENSION CONSULTING ALLIANCE

Sustainability Equity Indexes

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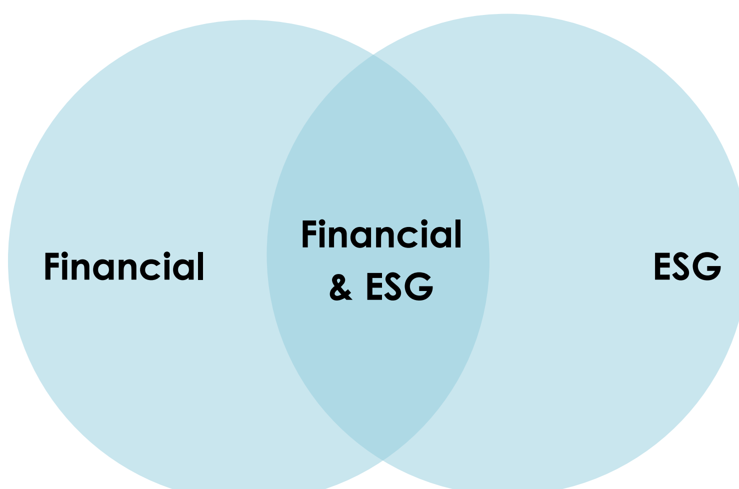

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Executive Summary

Sustainability (Environmental, Social, and Governance ("ESG")) equity indexes have evolved to become a viable option within an institutional investor's investment policy. Sustainability indexes are no longer new – some have been offered for nearly 30 years. In just the last five years, these indexes have matured sufficiently to offer a new range of options that PCA believes can be seriously considered by institutional investors.

- **Continued development and new variants of sustainability indexes are expected.** As of 1Q2018, we identified 42 distinct indexes that reflect E, S, G, and/or ESG themes from FTSE/Russell, MSCI, and S&P Dow Jones Indices ("S&PDJI") combined. Each provider reviewed offers more than one ESG index, at least one low carbon or climate index, and an ex-fossil fuel and ex-coal index among their suite of sustainability indexes**.** The range of indexes include some appropriate for core equity portfolios and some that are narrower theme-based. We anticipate the creation of new sustainability indexes, including more indexes that reduce climate risk while increasing climate opportunity exposure, and new indexes focused on investments in-line with the United Nations ("UN") Sustainable Development Goals ("SDGs", Appendix I) as, for example, S&PDJI's recently announced forthcoming SDG-lens indexes.

- **Investment returns and risk are considered in the design of 25 of 42 sustainability indexes**. We found 14 indexes designed to outperform the financial risk/return of the parent index (integrate) and 11 designed to reflect values and achieve or outperform the risk/return of the parent index (impact).

- **Index construction: reweighting is on the rise, but indexes built by excluding stocks still lead**. A growing number of sustainability indexes preserve the broad market exposure of the parent index (and consequently the parent shareholder proxy voting and engagement potential) by reweighting the constituent stocks by ESG factor/s, rather than excluding or selecting securities by ESG factors. Some ESG indexes also maintain the parent index country, industry, and/or size characteristics to better match the return/risk of the parent index. A few ESG indexes are optimized to track the parent index risk and return within a relatively narrow range.

- **Comparability over time may be a challenge.** Index rule adjustments (e.g., defining materiality; changing weights of underlying E, S, and G factors in the total ESG score; introducing adjustments such as ESG momentum), and data quality improvements (as more companies report on ESG and reporting becomes more standardized) will likely enhance the fit of ESG indexes with institutional investor goals but perhaps at the expense of detailed historical comparability of any given index.

- **Today's E indexes are highly relevant to the 21st century but are not timeless like standard market cap weighted indexes.** Most E indexes capture some aspect of today's global energy transition. Renewable energy is projected to be the world's fastest growing energy source through 2050. Renewable energy jobs exceeded 10 million for the first time in 2017. We believe this energy transition is very long-term, but finite, and may be most relevant during the 21st century. As renewable energy becomes mainstream and fossil fuels decline in market share, indexes that exclude or underweight fossil fuels should trend toward the parent indexes.

- **Fees.** Sustainability index license fees tend to be a few basis points higher than parent indexes, reflecting the research required to develop and maintain sustainability indexes.

Investment Returns and Risk, and ESG Results for 12 Sample Sustainability Indexes

For this report, we investigated the financial and ESG performance of four sustainability indexes from each index provider (FTSE/Russell, MSCI, and S&PDJI). From each provider, we analyzed an ESG index, an ex-fossil fuel index, an index with low carbon, and one additional index as indicated below. We note that the 5-year annualized trailing performance history reviewed here is limited. The five-year performance ending March 30, 2018 includes no significant recession or down market in the U.S. or global developed markets.

FTSE Developed	MSCI World	S&P 500
4Good	ESG Leaders	ESG Factor Weighted
ex-Fossil Fuel	ex-Fossil Fuel	Fossil Fuel Free
Divest Invest 200	Low Carbon Target	Carbon Efficient
Green Revenues	Women Leadership	Fossil Fuel Free Carbon Efficient

Risk and Return Performance – Annualized Trailing Five-Years Ending March 30, 2018

- **Eight of the 12 sustainability indexes outperformed the parent index gross return; six outperformed the risk-adjusted return**. Eight of these 12 sustainability indexes generated higher returns, gross of license fees, than their parent index; four reported lower risk (standard deviation); and six outperformed the parent index on risk-adjusted return (return/risk).

- **Sustainability indexes designed to generate performance near the parent index succeeded.** Two indexes designed for low tracking error show the lowest tracking error among the 12 indexes reviewed: FTSE Green Revenues index (0.10%), and MSCI Low Carbon Target index (0.40%).

- **Market dynamics can overshadow distinctions between primary goals of sustainability indexes.** For this five-year period, the energy market weighed materially on the results for these 12 sustainability indexes. Five of the six sustainability indexes that generated a risk-adjusted return above the parent index exclude fossil fuel reserves companies, including four values-oriented indexes and one impact-oriented index. The outperformance occurred in U.S. large cap and global developed markets.

- **Mixed results of ESG indexes compared to parent indexes reflected index design**. For this five-year period, the S&PDJI ESG Factor Weighted index, which includes nearly all the securities of the parent index, outperformed its parent on gross and risk-adjusted return for both the S&P 500 index (U.S. large cap) and the S&P 1200 index (developed markets). The FTSE4Good Developed Market and the MSCI World ESG Leaders, which each include less than half of their respective parent index securities, slightly underperformed their respective parent indexes.

ESG Scores and Metrics Performance

- **RobecoSAM and MSCI ESG scores for the indexes reviewed clustered in a middle range** near the parent indexes. The MSCI ESG scores for individual companies can range from 0 to10. The MSCI ESG scores for these 15 indexes ranged from 5.0 to 6.6. Similarly, the RobecoSAM ESG scores for these indexes ranged from 57.9 and 64.4, compared to the possible 0 to 100 range.

- **The six sustainability indexes that generated a higher risk-adjusted return than their parent either matched or exceeded their parent ESG score from MSCI and/or RobecoSAM.**

- **Each sustainability index is not necessarily designed to improve all MSCI E, S, and G scores.** Most of the indexes we reviewed received MSCI E, S, and G scores equal to or above the parent index. However, for example, the FTSE Divest Invest 200 had a higher E score but lower S and G scores than the parent FTSE Developed. The S&P 500 ESG Factor Weighted index registered higher S and G scores than the parent but a lower E score.

- **E scores generally reflected carbon emissions and carbon reserves but not necessarily green revenues**. The nine sustainability indexes with higher E scores than the parent index all had lower carbon emissions intensity than the parent. Eight of these had lower carbon reserves intensity than the parent. However, only five had green revenues exposure above the parent.

The civilian firearm producers and retailers weight in ESG indexes is often zero or near zero. For some ex-fossil fuel and low carbon indexes, civilian firearm retailer weights are higher than the parent index.

Introduction

Rapid evolution in index construction and sustainability data have exponentially broadened the type of indexes available to benchmark sustainability equity portfolios and made passive equity sustainability investing viable for a wide range of investor goals. Historically, sustainability equity investing primarily meant investing according to social values, typically labeled socially responsible investing. Investment strategies that went beyond straightforward exclusion of specific securities for a social or environmental value (such as ex-tobacco, ex-controversial weapons, or ex-fossil fuels) were predominantly the purview of active investment managers. Today, in addition to indexes that capture social or environmental values without explicit concern for financial risk and return, indexes are now offered that integrate ESG material risks to seek improved risk-adjusted returns. Other sustainability indexes are designed to generate both a financial and social value/s outcome.

This report examines the equity sustainability index market, as evidenced by the products from three major global index providers – FTSE/Russell, MSCI, and S&PDJI. Our discussion focuses on the potential role of sustainability indexes in passive equity investing for institutional investors. Institutional investors, including pension plans, foundations and endowments, and institutions that manage individual participant-driven investment programs (such as 401k or 529 plans), will vary when considering whether their investment framework might benefit from incorporating any passive equity sustainability strategy. Outside the scope of this review are Smart Beta or factor indexes that incorporate ESG factors.

We refer to all indexes that use an Environmental "E", Social "S", and/or Governance "G" element in index design as sustainability indexes, including "ESG" indexes, which use all three elements. We concentrate on two key questions:

1) How is ESG defined? We categorize sustainability indexes by the primary goal of each index:

   - Integrate – integrate ESG factors to improve risk-return results of a portfolio,

   - Values – express social or environmental value/s, without a constraint to achieve market returns, and

   - Impact – achieve social or environmental goal/s while generating competitive market returns (meet underlying parent index returns).

   For each index, we identify the construction approach and the implications for proxy voting and shareholder engagement.

2) What are the financial and ESG outcomes compared to the parent indexes? For 12 indexes (four sustainability indexes from each index provider) we:

   - Investigate the index return and risk compared to the parent index, and

   - Analyze the ESG, green revenue, and carbon metrics compared to the parent index.

We thank FTSE/Russell, MSCI, and S&PDJI for providing information on their respective sustainability indexes, including performance data on four sustainability indexes and a parent index from each provider. We thank the following firms for providing sustainability metrics for all the indexes we reviewed: green revenues exposure (FTSE/Russell); overall ESG scores (MSCI and RobecoSAM); E, S, and G scores (MSCI); carbon metrics (MSCI and S&PDJI-Trucost); and exposure to MSCI definition of civilian firearms producers and retailers (FTSE/Russell, MSCI, and S&PDJI).

Sustainability Indexes Overview

The earliest three published (not custom) sustainability indexes that are offered today by FTSE/Russell, MSCI, or S&PDJI were ESG indexes. Each index incorporated Environmental, Social, and Governance issues. The MSCI KLD 400 Social index was launched 28 years ago in 1990, the S&PDJI Dow Jones Sustainability Index ("DJSI") in 1999, and the FTSE/Russell FTSE4Good index in 2001. The first E index – S&P Global Water – came to market in 2007, the first S index – MSCI ex-Controversial Weapons – launched in 2011, and G and Environmental & Social ("ES") indexes appeared by 2015.

First Sustainability Equity Indexes by Category from Major Index Providers
FTSE/Russell, MSCI, S&PDJI

Type	Launch Year	Index Name	Description
ESG	1990	MSCI KLD 400 Social	Include companies with outstanding ESG ratings and exclude companies whose products have negative S or E impacts
E	2007	S&P Global Water	Provide liquid exposure to 50 companies from around the world that are involved in water related businesses
S	2011	MSCI ex Controversial Weapons	Exclude companies in chemical, biological and depleted uranium weapons, cluster bombs, and landmines
G	2015	MSCI World Governance-Quality	Capture both the financial and G aspects of quality investing. G is measured through factors such as independence and diversity of board of directors, ownership and control structure of the company, accounting practices, and auditor opinions
ES	2015	S&P 500 Environmental & Socially Responsible	Exclude tobacco, military, and fossil fuels and then select top 75% of market cap by ES score

Sources: FTSE/Russell, MSCI, and S&PDJI.

The number of sustainability indexes has grown exponentially over the past 20 years, increasing from three in 2001, to seven by 2010, and to 42 distinct sustainability index series available by 1Q2018 from FTSE/Russell, MSCI and S&PDJI. Most sustainability indexes are series because they can be applied to different parent indexes. For this report we use index and index series interchangeably.

Total Number of Sustainability Index Series from FTSE/Russell, MSCI, and S&PDJI

Type of Index	Year First Index Launched	2017 Year-End
Total		**42**
ESG	1990	**13**
E	2007	**19**
S	2011	**5**
G	2015	**3**
ES	2015	**2**

Sources: FTSE/Russell, MSCI, and S&PDJI.

Each firm offers at least two ESG indexes and at least five E indexes. MSCI and S&PDJI also offer specialized S indexes, G indexes, and indexes that combine ES factors.

Nearly half (19) of today's 42 distinct sustainability index approaches fall in the Environmental category. Many of the environmental indexes focus on reducing exposure to carbon emissions or to carbon reserves. Some incorporate reducing carbon exposure and increasing green exposure. The FTSE Green Revenues index concentrates solely on increasing green revenues. The underlying concept is that green revenues are being generated by very large companies, including publicly listed companies, that often have wide-ranging product lines in addition to green revenues, even oil and gas companies. For example, Valero, an energy oil and gas refining company, generated 3.7% of its operating revenue ($3.5 billion) from ethanol biofuel in 2017. Environmental indexes also capture specific submarkets, such as S&PDJI's Global Water and Global Clean Energy.

The 13 sustainability indexes that include ESG factors make them second most common among those currently available through FTSE/Russell, MSCI and S&PDJI. Sustainability indexes that concentrate on individual S, G, or ES concerns comprise the remaining 10 sustainability indexes from these three index providers.

The chart below summarizes the primary objectives and associated financial expectations of sustainability indexes, outlines the construction approaches being used today, and details the general shareholder voting rights and engagement implications of different construction techniques.

Primary Objectives and Construction Implications of ESG Indexes			
	Primary Objective		
	Integrate	**Values**	**Impact**
Construction Approach	Incorporate ESG criteria to enhance long-term return and/or manage ESG financial risk compared to parent index	Align with investor ethical/social/political values	Seek to generate measurable social or environmental benefits and meet or exceed financial returns of parent index
Typical Sustainability Index License Fees			
	Pay a few basis points more than for parent index (more for more complex construction)		
ESG Characteristics			
Exclude	Give up shareholder voting rights and engagement at companies with ESG concerns Portfolio diversification reduced		
Select	Retain shareholder rights and engagement on leaders within theme Portfolio diversification reduced to specific theme		
Reweight	Retain shareholder voting rights and engagement Portfolio diversification reweighted by ESG factor/s		
Matching Parent Index Characteristics			
Optimize	Keep tracking error low		
Maintain	Match parent index industry, country, and/or size weights		
Resulting Financial Expectations	Gross of index license fees, seek higher return, and/or lower risk than parent index; if optimized, meet parent index return and risk, gross of license fees	Potential for lower return and/or higher risk than parent index	Gross of index license fees, meet parent index return and risk

Using this framework, we identify the primary objective and construction approach of sustainability indexes as shown in the table on the following page (see Appendix II for summary of each index).

Primary Objectives of ESG Indexes					
		Primary Objective			Keep Vote to Improve ESG
Index ESG Category and Name	**Construction Approach**	**Integrate**	**Values**	**Impact**	
Total Number of ESG Index Series		**14**	**17**	**11**	
FTSE/Russell					
ESG-ESG	Reweight, Maintain	✓			Yes
ESG-4Good	Exclude, Select		✓		-
E-ex-Fossil Fuel	Exclude		✓		-
E-ex-Coal	Exclude		✓		-
E-Environmental Opportunities	Select			✓	-
E-Divest Invest	Exclude, Select, Reweight			✓	-
E-Green Revenues	Reweight, Maintain			✓	Yes
E-Climate	Reweight, Maintain			✓	Many
MSCI					
ESG-ESG Universal	Exclude, Reweight, Maintain	✓			Many
ESG-ESG Leaders	Select, Maintain	✓			
ESG-ESG Focus	Exclude, Reweight, Optimize	✓			-
ESG-ESG Select	Exclude, Select, Optimize	✓			-
E-Low Carbon Leaders	Exclude, Optimize	✓			-
E-Low Carbon Target	Reweight, Optimize	✓			Many
G-Governance Quality	Reweight	✓			Yes
ESG-SRI	Exclude		✓		-
ESG-KLD 400 Social	Exclude		✓		-
E-ex-Fossil Fuel	Exclude		✓		-
E-ex-Coal	Exclude		✓		-
S-ex-Controversial Weapons	Exclude		✓		-
S-Catholic Values	Exclude		✓		-
S-Islamic	Exclude		✓		-
ES-Sustainable Impact	Select			✓	-
E-Global Environment	Select			✓	-
G-Women's Leadership	Select			✓	-
S&PDJI					
ESG-ESG Factor weighted	Reweight, Maintain	✓			Yes
ESG-DJSI Diversified	Select, Maintain	✓			-
ESG-DJSI Diversified Select	Exclude, Select, Maintain	✓			-
G-LTVC Global	Select	✓			-
S-CAPEX & Human Capital	Select	✓			-
E-Carbon Efficient	Reweight, Maintain	✓			Yes
ESG-DJSI	Select		✓		-
ESG-DJSI ex-'sin' stocks	Exclude		✓		-
E-Fossil Fuel Free	Exclude		✓		-
E-Fossil Fuel Free Carbon Efficient	Exclude, Reweight, Maintain		✓		-
E-Fossil Fuel Free Carbon Effect Select	Exclude, Optimize		✓		-
E-Climate Change Low Vol. High Div.	Select		✓		-
S-Catholic Values	Exclude, Maintain		✓		-
E-Carbon Efficient Select	Exclude, Optimize			✓	-
E-Global Water	Select			✓	-
E-Global Clean Energy	Select			✓	-
ES-Environment & Socially Responsible	Exclude, Select			✓	-

Sources: FTSE/Russell, MSCI, and S&PDJI.

Financial results are considered in the design of 25 of the 42 sustainability index series. We found that, together, FTSE/Russell, MSCI, and S&PDJI offer 14 index series designed to outperform financial risk/return of the parent index (integrate), 11 index series designed to reflect values and achieve risk/return of the parent index (impact), and 17 index series designed to reflect values without explicit consideration of financial results (values).

Index construction techniques also impact shareholder voting and engagement. In contrast to reweighting, when indexes exclude companies to remove exposure to an ESG concern, investors lose the ability to influence the company as a shareholder. For indexes that exclude companies where shareholder engagement and voting is deemed unable or highly unlikely to change the ESG issue, losing voting rights would be of less concern. Selection is often employed in sustainability theme-based portfolios to deliberately select high performers. These indexes typically restrict the portfolio to a minor portion of the parent universe, such as the MSCI Women's Leadership index. Such indexes are typically most appropriate outside an investor's core equity portfolio, thus, leaving the institutional investor with exposure and shareholder rights to underperforming companies in their core portfolio.

Most Integrate indexes are constructed to maintain or optimize results compared to the parent index. Eleven of the 14 integrate-oriented indexes employ either maintain (seven indexes) or optimize (four indexes) construction techniques in relation to the parent index. The three integrate sustainability indexes that do not use a maintain or optimize technique in their construction, combine S or G factors with other financial-oriented metrics to reweight or select stocks. For example, MSCI's Governance Quality index reweights using G factors and traditional financial quality metrics. S&PDJI's Long Term Value Creation ("LTVC") index selects stocks that rank high on RobecoSAM's economic dimension scores and on S&PDJI's financial quality scores. S&PDJI's Capex and Human Capital index selects stocks that are proactively making investments in physical and human capital, using RobecoSAM's human capital score, capital expenditures (capex) revenue effect, and capex R&D growth.

Values-oriented indexes are typically constructed by excluding securities that conflict with the social or ethical values being sought. Fifteen of the 17 values-oriented sustainability indexes are constructed using exclusion, and two employ selection as the sole construction approach. Eleven of these 15 values sustainability indexes use exclusion as the sole construction approach. Three S&PDJI values indexes exclude securities and employ either a maintain or optimize technique. The S&PDJI Catholic Values index, maintains the sector weights of the parent index. Two S&PDJI E indexes are categorized as values indexes because the construction approach begins by excluding fossil fuels, irrespective of financial analysis. The Fossil Fuel Free Carbon Efficient index maintains industry characteristics of the parent, and the Fossil Fuel Free Carbon Efficient Select index is optimized to keep a low tracking error to the parent index.

Impact indexes often rely on selection in the construction approach. Seven of the 11 impact-oriented indexes are constructed by selecting securities based on sustainability criteria, of which six rely on selection as the sole construction method. Most of these indexes define a strong ESG theme-based, relatively narrowed portfolio, such as S&PDJI's Global Water and Global Clean Energy, MSCI's Global Sustainability and Women's Leadership, and FTSE's Environmental Opportunities and Divest Invest 200. Two FTSE impact-oriented indexes reweight securities and maintain parent index characteristics – the FTSE Green Revenues and Climate Change indexes.

Comparability over time may be a challenge. In our opinion, sustainability index rule adjustments (e.g., defining materiality; refining E, S, and G metrics; adjusting weights of E, S, G factors; introducing new measures, such as ESG momentum), data quality improvements, growing standardized reporting, a growing focus on materiality in reporting (e.g., as codified, for example, by the Sustainable Accounting Standards Board ("SASB")), regulatory changes, and use of today's infant technologies (such as blockchain to gain accuracy, speed, and reduce expense of data gathering) are increasing the fit of sustainability indexes with institutional investor goals. We believe ESG metrics have become mainstream in the global institutional investor market. However, in our opinion, this field is still developing. We anticipate constraints to detailed comparability of sustainability indexes over time.

There are more sustainability index variants to come. We expect new sustainability indexes to be developed. This may include additional indexes that reduce climate risk exposure (such as reducing carbon exposure) and simultaneously increase climate opportunity (such as increasing green revenues exposure). It may also include new indexes that concentrate on investments in-line with the UN SDGs (Appendix I) as exemplified by S&PDJI's recent announcement of forthcoming SDG-lens indexes.

Return and Risk (Annualized 5-Year Trailing Ending March 30, 2018)

For this review, we investigated the financial and ESG performance of 12 sustainability indexes (four from each provider) compared to a parent index. From each firm, we reviewed an ESG index, an ex-fossil fuel index, a low carbon index, and one additional index from each, as shown below. These 12 indexes include a mixture of integrate, values, and impact primary goals, and a variety of construction methods. The parent indexes are the FTSE Developed, MSCI World, and the S&P 500. We note that the performance history reviewed here is limited. The five-year trailing performance ending March 20, 2018 includes no significant recession or down market in the U.S. or global developed markets.

Primary Objectives of Sustainability Indexes		
Index ESG Category and Name	**Construction Approach**	**Primary Objective**
FTSE Developed		
ESG-4Good	Exclude, Select	Values
E-ex-Fossil Fuel	Exclude	Values
E-Divest Invest 200	Exclude, Select, Reweight	Impact
E-Green Revenues	Reweight, Maintain	Impact
MSCI World		
ESG-ESG Leaders	Select, Maintain	Integrate
E-Low Carbon Target	Reweight, Optimize	Integrate
E-ex-Fossil Fuel	Exclude	Values
G-Women's Leadership	Select	Impact
S&P 500		
ESG-ESG Factor weighted	Reweight, Maintain	Integrate
E-Fossil Fuel Free	Exclude	Values
E-Carbon Efficient	Reweight, Maintain	Integrate
E-Fossil Fuel Free Carbon Efficient	Exclude, Reweight, Maintain	Values

Sources: FTSE/Russell, MSCI, and S&PDJI.

Eight of the 12 sustainability indexes outperformed parent gross return; six outperformed risk-adjusted return. As shown in the table on the following page, for the trailing five-year period ending March 30, 2018, eight of these 12 sustainability indexes generated higher returns, gross of license fees, than their parent index and four reported lower risk (standard deviation). Six of these sustainability indexes outperformed the parent index on risk-adjusted return (return/risk). See Appendix III for one-, three-, and five-year results.

Energy market dynamics outweighed index primary goals and index construction methods for this five-year period. The S&PDJI ESG Factor Weighted index was the one sustainability index looked at that outperformed its parent index and did not exclude fossil fuels. The other five of the six sustainability indexes that outperformed on risk-adjusted return exclude fossil fuels. The outperformance was regardless of whether the parent index was confined to a U.S. large cap universe – the S&P 500 – or spanned the global developed markets – the FTSE Developed or the MSCI World universe. Four of the six indexes that outperformed are values ("V") oriented and are constructed including exclusions independent of financial performance. This includes the three ex-fossil fuel indexes, and S&PDJI's Fossil Fuel Free Carbon Efficient index. In addition, FTSE's Divest Invest outperformed. This index has impact ("I") as its primary goal. The FTSE Divest Invest excludes the oil and gas sector, among other exclusions, and invests in green securities. For this period, indexes we reviewed that are constructed based on carbon emissions – MSCI's Low Carbon Target and S&PDJI's Carbon Efficient – slightly underperformed their parent indexes.

Sustainability Indexes Annualized Risk Return Statistics (Five-Years Ending March 30, 2018)									
Name of Index (Primary Goal)	**Tracking Error**	**No. of Firms**	**Average Mkt Cap ($Billions)**	**Return***	**Risk**	**Return/ Risk**	**Sharpe Ratio**	**Max Drdwn**	**Retain Voting Rights to Improve Market**
FTSE DEVELOPED	**0.00%**	**2141**	**$19.0**	**10.37%**	**10.10%**	**102.7%**	**0.99**	**-12.05%**	
4Good (V)	1.40%	878	26.8	10.33%	10.46%	98.8%	0.96	-12.67%	-
ex-Fossil Fuels (V)	0.90%	2051	10.6	11.07%	10.02%	110.5%	1.06	-10.92%	-
Green Revenues (I)	0.10%	2141	19.0	10.34%	10.09%	102.5%	0.99	-11.74%	Yes
Divest Invest 200 (I)	1.90%	205	70.1	11.95%	10.19%	117.3%	1.12	-9.57%	Many
MSCI WORLD	**0.00%**	**1,649**	**$24.1**	**9.70%**	**10.19%**	**95.2%**	**0.91**	**-17.95%**	
ESG Leaders (In)**	0.75%	805	24.3	9.20%	10.00%	92.0%	0.88	-17.26%	-
ex-Fossil Fuels (V)	0.94%	1,577	23.7	10.58%	10.12%	104.5%	1.00	-16.74%	-
Low Carbon Target (In)	0.40%	1,277	27.3	9.72%	10.22%	95.1%	0.91	-17.93%	Many
Women' s Leadership (I)	1.98%*	570	36.0	13.7*	7.97*	171.9%*	1.50*	-8.53	-
S&P 500	**0.00%**	**505**	**$46.7**	**13.31%**	**9.87%**	**134.9%**	**NA**	**-8.66%**	
ESG Factor Weighted (In)	2.22%	501	47.0	13.71%	10.10%	135.7%	NA	-10.97%	Yes
Fossil Fuel Free (V)	0.85%	478	47.0	14.30%	9.91%	144.3%	NA	-8.37%	-
Carbon Efficient (In)	0.82%	500	47.1	13.40%	10.10%	132.7%	NA	-8.66%	Yes
Fossil Fuel Free Crbn Effnt (V)	0.90%	477	47.1	14.42%	10.05%	143.5%	NA	-8.59%	-

Sources: FTSE/Russell, MSCI, and S&PDJI. Green highlight indicates outperformance of parent index; yellow highlight marks underperformance of parent index; no highlight indicates results equal parent index.
**Since May 31, 2016 to March 30, 2018. For this period, the MSCI World return was 14.25%, the Sharpe Ratio was 1.72, and the Max Drawdown was -9.15%.*
***In = Integrate.*

ESG indexes generated gross return and risk-adjusted return mixed results compared to parent indexes. The S&P 500 ESG Factor Weighted index includes all but four of the total 505 securities in the S&P 500 index. For this five-year period, this ESG index outperformed on gross return and, despite slightly higher risk, generated a risk-adjusted return above the S&P 500. For this period, both ESG indexes with a global developed market parent – the FTSE4Good (values primary goal) and the MSCI World ESG (integrate primary goal) – slightly underperformed their respective parent index. In contrast to the S&PDJI ESG Factor Weighted index, these FTSE and MSCI indexes are constructed by selecting strong ESG stocks, such that the number of securities in the ESG index is narrowed to less than half of the parent index.

Although the MSCI ESG Leaders index risk was lower than the parent index, risk was not sufficiently reduced to outweigh the modest underperformance in order to produce a higher risk-adjusted return than the parent index for this period. MSCI's recent review, "*Foundations of ESG Investing Part 3: Integrating ESG into Passive Institutional Portfolios,*" found that between August 31, 2010 and December 31, 2017 the MSCI All Country World Index ("ACWI") ESG Leaders and MSCI ACWI ex-US ESG Leaders indexes narrowly outperformed their MSCI ACWI parent indexes on return, risk, and return/risk, while the MSCI US ESG Leaders index slightly underperformed on return and return/risk, despite a modestly lower risk. MSCI found that the US ESG Leaders underperformance was largely due to a handful of strong tech stocks being excluded due to below-average ESG ratings (including Apple Inc., Facebook Inc., and Amazon.com Inc.) during a strong technology market.

For additional perspective on whether the difference in ESG performance primarily reflected the difference in underlying universes – the S&P 500 large cap U.S. universe compared to the FTSE and MSCI World developed market universes – we looked at the S&P 1200 ESG Factor Weighted index. For this period, the ESG index design also outperformed the parent index. As shown in the table on the following page, for this trailing five-year period, the S&P 1200 ESG Factor Weighted index outperformed on gross of license fee returns and incurred slightly higher risk than its parent index to generate an overall higher risk-adjusted return than the parent S&P 1200 index.

Sustainability Indexes Annualized Risk Return Statistics (Five-Year Period Ending March 30, 2018)					
Name of Index (Primary Goal)	Tracking Error	No. of Firms	Return	Risk	Return/ Risk
MSCI WORLD	**0.00%**	**1,649**	**9.70%**	**10.19%**	**95.2%**
ESG Leaders (In)	0.75%	805	9.20%	10.00%	92.0%
ESG Universal (In)	0.73%	1617	9.76%	10.27%	95.0%
S&P 500	**0.00%**	**505**	**13.31%**	**9.87%**	**134.9%**
S&P 500 ESG Factor Weighted (In)	2.22%	501	13.71%	10.10%	135.7%
S&P 1200	0.00%	1221	9.96%	10.10%	0.99
S&P 1200 ESG Factor Weighted (In)	2.20%	1204	10.73%	10.36	1.03%

Sources: FTSE/Russell, MSCI, and S&PDJI.

The financial performance results for MSCI World ESG Leaders compared to the MSCI World ESG Universal illustrates how construction can affect financial results. A key construction approach difference between these two indexes is that the MSCI ESG Universal retained all but 32 of the MSCI World's 1,649 constituents, whereas the ESG Leaders narrows the MSCI World by roughly half. The MSCI ESG Universal excludes the worst ESG rated companies, then reweights by ESG, and maintains parent industry and country weightings. MSCI ESG Leaders selects high performing ESG companies and maintains parent index characteristics. For this period, the MSCI ESG Universal slightly outperformed the MSCI World return based on modest additional risk to bring the risk adjusted return to 95.0%, nearly equal to the MSCI World's 95.2% and above the MSCI ESG Leaders 92.0% risk adjusted return.

Sustainability indexes that were designed to generate performance near parent index performance succeeded. The FTSE Green Revenues (impact) and the MSCI Low Carbon Target (integrate) both matched their parent index Sharpe Ratios and underperformed their parent return/risk measures by a de minimis amount. The FTSE Green Revenues index retains all the securities of the parent index and adjusts to overweight companies with green revenues. MSCI's Low Carbon Target index is optimized to keep its tracking error low. For this period, these two indexes show the lowest tracking error among the 12 sustainability indexes presented above: 0.10% for the FTSE Green Revenues index, and 0.40% for the MSCI Low Carbon Target index.

The MSCI Women's Leadership Index is categorized as having impact as its primary goal. This index selects securities based on the degree of women's leadership in the company. As of March 30, 2018, the index represented 570 securities (less than one-third of the securities in the parent MSCI World index) with an average market capitalization of $36 billion (1.5 times that of the parent index). The Women's Leadership index data extends back to May 31, 2016. Since inception through March 30, 2018, the Women's Leadership index generated slightly lower gross of index fee returns and risk-adjusted returns than the MSCI World parent index, but registered a lower maximum drawdown than the parent index.

ESG Scores

This section explores the overall ESG scores from MSCI and from RobecoSAM for each of the 12 sustainability indexes, compared to their respective parents. MSCI and RobecoSAM ESG scores incorporate individual E, S, and G scores. Please note that each index provider uses its own ESG scores to develop its sustainability indexes. MSCI scores are only used by MSCI. S&PDJI incorporates RobecoSAM ESG scores, which are not used by FTSE/Russell or MSCI. FTSE/Russell generates its own internal ESG rankings and incorporates Sustainalytics ESG research. Comparing two sets of ESG scores for each index provider allows some perspective on how the data construction may or may not be reflected across two distinct ESG scoring systems. For this report, we only had MSCI's data available for individual E, S, and G scores.

For perspective, the MSCI ESG constituent scores can range from 0 to 10. For the 1,649 constituents of the MSCI World index, they ranged from 0.8 to 8.8. Similarly, the RobecoSAM constituent scores can range from 0 to 100. The 505 constituents of the S&P 500 index ranged from 25.0 to 89.5.

MSCI and RobecoSAM ESG scores produce similar but not identical index rankings. We found for the indexes reviewed here, that the ESG scores from MSCI and RobecoSAM, both kept within a narrow middle range of the possible ESG scores from each vendor. As shown below, RobecoSAM scores for these 15 indexes ranged from 57.9 to 64.4. MSCI's scores ranged from 5.0 to 6.6.

Sustainability Indexes
ESG Statistics
(May 31, 2017)

Name of Index	No. of Firms	5-Year Annualized Return/ Risk (%)	MSCI ESG Score	RobecoSAM ESG Score
FTSE Developed	**2141**	**102.7**	**5.5**	**62.6**
4Good	878	98.8	6.1	62.5
ex-Fossil Fuels	2051	110.5	5.5	62.5
Green Revenues	2141	102.5	5.5	62.6
Divest Invest 200	205	117.3	5.6	64.2
MSCI WORLD	**1,649**	**95.2**	**5.5**	**62.6**
ESG Leaders	805	92.0	6.6	64.4
ex-Fossil Fuels	1,577	104.5	5.6	62.5
Low Carbon Target	1,277	95.1	5.6	62.6
Women's Leadership	570	-	6.0	62.5
S&P 500	**505**	**134.9**	**5.0**	**58.6**
ESG Factor Weighted	501	135.7	5.0	59.6
Fossil Fuel Free	478	144.3	5.0	58.6
Carbon Efficient	500	132.7	5.0	57.9
Fossil Fuel Free Carbon Efficient	477	143.5	5.1	57.9

Sources: FTSE/Russell, MSCI, and S&PDJI.
**Periods ending March 30, 2018.*

We observed some differences in ranking among these indexes by MSCI and RobecoSAM ESG scores. For example, as shown in the table on the following page, the FTSE Developed 4Good Index is ranked by MSCI with the highest ESG score among the FTSE indexes reviewed (6.1 compared to the parent index low of 5.5). In contrast, among the FTSE indexes reviewed, the RobecoSAM ESG score for the FTSE

Developed 4Good index shares the lowest rank with the FTSE ex-Fossil Fuels index (62.5). For this period, the FTSE Developed Divest Invest 200 achieved the highest RobecoSAM ESG rating among these FTSE Developed indexes (64.2). In our opinion, ESG ratings are still relatively new to the market, still undergoing development, and still require industry-wide discussion and analysis regarding how best to capture material ESG risks and opportunities. We expect to continue to see such relatively minor differences on ratings of broad market indexes between ESG rating vendors.

The six sustainability indexes that generated a higher risk adjusted return than their parent either matched or exceeded their parent ESG score from one or both MSCI and RobecoSAM. The FTSE Divest Invest 200 exceeded both MSCI and RobecoSAM ESG scores. The MSCI ex-Fossil Fuels and S&PDJI Fossil Fuel Free Carbon Efficient narrowly surpassed the MSCI ESG score of their respective parent index. The S&PDJI ESG Factor Weighted exceeded the RobecoSAM ESG score and matched MSCI's ESG score for the parent index. The S&PDJI Fossil Fuel Free index matched its parent ESG scores from both vendors. The FTSE ex-Fossil Fuels index matched the MSCI ESG Score and slightly underperformed RobecoSAM's ESG score for its parent index.

ESG index ESG scores generally outperformed parent and other sustainability index ESG scores. The FTSE and MSCI ESG indexes registered the highest MSCI ESG scores compared to their respective benchmarks. Using the RobecoSAM ESG scoring, the MSCI ESG Leaders index also registered the highest score among the 15 indexes reviewed here. The FTSE4Good index's RobecoSAM ESG score was just shy that of the FTSE Developed — 62.5 versus 62.6. Based on RobecoSAM ESG scores, the ESG Factor Weighted index generated an ESG score above the S&P 500 and above the three S&P 500 climate related indexes reviewed here. The S&P 500 ESG Factor Weighted MSCI ESG score matched that of the S&P 500's 5.0 score. The difference in S&PDJI ESG Factor Weighted index relative scores by MSCI and RobecoSAM may reflect S&PDJI's use of RobecoSAM's ESG data in index construction.

E, S, and G Individual Ratings

Below, we report the individual MSCI E, S, and G scores, along with the total ESG score for each of the 15 indexes. Like the overall ESG scores, the MSCI individual E, S, and G scores for these 15 indexes cluster in the mid-range of the possible scores.

Sustainability Indexes
MSCI E, S, and G Scores
(May 31, 2017)

Name of Index	No. of Firms	5-Year Annualized Return/ Risk (%)	ESG Score	E Score	S Score	G Score
FTSE Developed	**2141**	**102.7**	**5.5**	**5.5**	**4.4**	**4.9**
4Good	878	98.8	6.1	6.1	4.7	4.9
ex-Fossil Fuels	2051	110.5	5.5	5.8	4.4	4.9
Green Revenues	2141	102.5	5.5	5.5	4.4	4.9
Divest Invest 200	205	117.3	5.6	6.1	4.3	4.7
MSCI World	**1,649**	**95.2**	**5.5**	**5.5**	**4.4**	**4.9**
MSCI World Highest Constituent Score	1,649		8.8	10.0	10.0	9.5
MSCI World Lowest Constituent Score	1,649		0.8	0.0	0.0	0.0
ESG	805	92.0	6.6	6.1	4.9	5.3
ex-Fossil Fuels	1,577	104.5	5.6	5.8	4.4	4.9
Low Carbon Target	1,277	95.1	5.6	5.7	4.5	4.9
Women's Leadership	570	-	6.0	5.5	4.6	5.4
S&P 500	**505**	**134.9**	**5.0**	**5.4**	**4.2**	**4.6**
ESG Factor Weighted	501	135.7	5.0	5.1	4.3	4.9
Fossil Fuel Free	478	144.3	5.0	5.7	4.1	4.6
Carbon Efficient	500	132.7	5.0	5.5	4.2	4.7
Fossil Fuel Free Carbon Efficient	477	143.5	5.1	5.7	4.2	4.7

Sources: FTSE/Russell, MSCI, and S&PDJI.

Each ESG index scored above its parent index on at least two of three MSCI E, S, and G scores. The FTSE Developed 4Good registered higher E and S scores as well as a G score equal to the FTSE Developed parent index. The MSCI ESG index outperformed the parent MSCI World on all three of MSCI's E, S, and G ratings. The S&P 500 ESG Factor Weighted Index generated higher MSCI S and G score and a lower MSCI E score than the parent S&P 500 index. As mentioned above, FTSE/Russell and S&PDJI rely on their own internal ESG data and that of vendors such as Sustainalytics and RobecoSAM to create their sustainability indexes. Thus, the E, S, and G scores and data FTSE/Russell and S&PDJI use to develop these indexes may differ from MSCI's individual E, S, and G ratings.

Outperformance on ESG scores does not always reflect outperformance on individual E, S, and G scores. These results reflect the concentration on one or more E, S, or G areas in the construction of indexes not specifically designed to improve combined ESG results. For example, the FTSE Developed Divest Invest 200 index focuses on climate change issues and narrowly outperformed the ESG score of the FTSE Developed (ESG score of 5.6 versus 5.5). This overall score reflected a high MSCI E score (6.1 versus the parent score of 5.5), while the MSCI S and G scores were slightly below the parent index.

Each E index scored above its parent index on MSCI's E scores, except the FTSE Green Revenues, which matched the parent index on all E, S, and G scores. The Green Revenues index tilts modestly toward companies large and small with green revenues but does not exclude any high carbon reserves or emissions companies. Today's E ratings tend to focus on company exposure to high carbon reserves and emissions that may be identified as material risks in some industries and not necessarily green revenue material opportunities.

The MSCI Women's Leadership overall MSCI ESG score was higher than the parent MSCI World. This score reflected a higher MSCI S and G score than the MSCI World, with an E score that matched the MSCI World.

Environmental Metrics

In this section, we examine environmental statistics for each index. The table below includes the MSCI E score, the FTSE green revenues exposure metric, MSCI and S&PDJI-Trucost's measures of carbon emissions per million USD invested, and S&PDJI-Trucost's carbon reserves measure of embedded emissions per million USD revenues.

Two indexes generated better 5-year annualized risk adjusted returns and improved every E metric compared to their parent indexes. Compared to their parent indexes, the FTSE Developed Divest Invest 200 and MSCI World ex-Fossil Fuels each show higher E scores, better results on each carbon and green metric, and higher risk adjusted returns.

Eleven of the 12 sustainability indexes' recorded E scores were equal to or higher than their parent indexes. Every sustainability index reviewed here, except the S&P 500 ESG Factor Weighted index, had an MSCI E score equal to or higher than its respective parent index. The S&P 500 ESG Factor Weighted index reported a worse MSCI E score as well as worse carbon and green revenue measures across the board compared to the S&P 500 parent index, while matching MSCI's overall ESG score for the parent index. ESG indexes are not generally geared toward improving one individual E, S, or G element over the combined ESG score.

Sustainability Indexes
Environmental Metrics
(May 31, 2017)

Name of Index	No. of Firms	5-Year Annualized Return/ Risk (%)	MSCI E Score	FTSE Green Revenues Exposure	MSCI Carbon Intensity: Tons CO2 Emissions /mm USD Invested	S&PDJI Carbon Intensity: Tons CO2 Emissions/ mm USD Invested	S&PDJI Carbon Reserves Intensity: Tons CO2 Embedded Emissions/mm USD Revenue*
FTSE Developed	**2141**	**102.7**	**5.5**	**1.52**	**141.8**	**191.2**	**5634.14**
4Good	878	98.8	6.1	1.36	80.5	121.8	6592.44
ex-Fossil Fuels	2051	110..5	5.8	1.61	145.8	160.8	0.08
Green Revenues	2141	102.5	5.5	2.28	120.2	194.4	5567.82
Divest Invest 200	205	117.3	6.1	9.48	56.2	73.7	67.08
MSCI World	**1,649**	**95.2**	**5.5**	**1.48**	**129.9**	**177.9**	**6002.29**
ESG	805	92.0	6.1	1.63	102.2	140.1	5967.23
ex-Fossil Fuels	1,577	104.5	5.8	1.51	103.2	146.0	152.50
Low Carbon Target	1,277	95.1	5.7	1.78	32.8	62.5	611.65
Women's Leadership	570	-	5.5	1.92	132.6	174.5	4237.51
S&P 500	**505**	**134.9**	**5.4**	**1.11**	**103.5**	**132.1**	**2701.98**
ESG Factor Weighted	501	135.7	5.1	1.05	158.0	188.0	3049.68
Fossil Fuel Free	478	144.3	5.7	1.10	84.0	110.8	0.00
Carbon Efficient	500	132.7	5.5	1.05	68.9	91.6	2238.82
FF Free Crbn Efficient	477	143.5	5.7	1.00	50.9	71.4	0.00

Sources: FTSE/Russell, MSCI, and S&PDJI.
**The carbon reserves metrics are as of May 2018.*

Indexes with an E score equal or higher than their parent index generally had better carbon and green metrics than their parent. For the most part, the 11 sustainability indexes with an equal or higher MSCI E score than their respective parent index also generated better carbon and green revenue metrics than the parent index. Three exceptions were:

- The S&P 500 carbon related indexes all scored lower than the S&P 500 on the FTSE green revenues exposure measure.

- The FTSE Developed 4Good Index scored higher than the FTSE Developed on MSCI's E score and on carbon emissions but worse than the parent index on the FTSE green revenues exposure and on S&PDJI carbon reserves measures.

- The FTSE ex-Fossil Fuels, FTSE Green Revenues, and the MSCI Women's Leadership indexes each scored above their respective parent index on MSCI's or S&PDJI's carbon emissions intensity metric but scored marginally below their parent index on the other carbon intensity measure. For example, The FTSE ex-Fossil Fuels index registered an MSCI carbon intensity of 145.8; just higher than the parent's 141.8, and an S&PDJI carbon intensity measure of 160.8 improved over the parent's result of 191.2.

Why is the MSCI ex-Fossil Fuels carbon reserves metric not zero? Why does MSCI's ex-Fossil Fuel index show fossil fuel reserves intensity of 153.50 rather than zero or near zero fossil fuel reserves as might be expected from the index name? The reason is that S&PDJI's definition of fossil fuels reflects all carbon reserves, including reserves that are not used for energy application. For instance, companies holding metallurgical coal reserves (used for iron and steel production rather than energy) are included in S&PDJI's carbon intensity measure. Both FTSE and S&PDJI construct their ex-fossil fuel indexes without distinguishing the use of the carbon reserves. In contrast, MSCI excludes only companies that have proved and probable coal reserves and/or oil and natural gas reserves used for energy purposes. Thus, the MSCI ex-Fossil Fuel index includes exposure to the few companies that have only metallurgical fossil fuel reserves. MSCI's definition replicates the distinction between metallurgical and thermal coal used by many large institutional investors.

Exposure to Civilian Firearms Producers and Retailers

The rising public concern in the United States over mass shootings is raising questions by institutional investors of how effectively engagement and proxy voting can reduce the sales of firearms to civilians and especially young people, particularly with regard to automatic and semi-automatic weapons. We find institutional investors increasingly questioning the extent of their exposure to both producers and retailers of civilian firearms. As examples, we investigated the civilian firearms exposure of the parent and sustainability indexes reviewed here.

As shown in the table on the following page, we found that, overall, the exposure to civilian firearms producers and retailers was small for the FTSE Developed, MSCI World, and the S&P 500, using MSCI's definition of civilian firearms producers and retailers. We further found that indexes designed to look at overall ESG metrics and the MSCI Women's Leadership index reduced exposure to civilian firearms producers and retailers compared to the parent index even though these ESG index designs do not negatively weight companies with civilian firearms in the definitions of strong ESG companies or based on women's leadership. In contrast, low carbon and ex-fossil fuel index company exposures to civilian firearms retailers were mixed. Because the constituent securities in these indexes are reweighted away from fossil fuel companies, the weight of civilian firearms retailers may increase, as was the case for the three S&PDJI carbon related indexes, the MSCI ex-Fossil Fuels index, the FTSE Green Revenues and Divest Invest 200 indexes for this time period.

Sustainability Indexes Civilian Firearms Producers and Retailers Exposure Examples (March 31, 2018)									
				Number of Companies (#) and Market Cap Weight (Wgt%) of Civilian Firearms					
				Producers		Retailers		Producers and Retailers	
Name of Index	**No. of Firms**	**5-Year Annualized Return/ Risk (%)**	**ESG Score**	**#**	**Wgt**	**#**	**Wgt**	**#**	**Wgt**
FTSE Developed	**2141**	**102.7**	**5.5**	**2**	**0.0129**	**2**	**0.365**	**4**	**0.378**
4Good	878	98.8	6.1	0	0	0	0	0	0
ex-Fossil Fuels	2051	110.5	5.5	2	0.0129	2	0.350	4	0.363
Green Revenues	2141	102.5	5.5	2	0.0124	2	0.357	4	0.369
Divest Invest 200	205	117.3	5.6	0	0	1	0.531	1	0.531
MSCI World*	**1,650**	**95.2**	**5.5**	**1**	**0.0001**	**2**	**0.0038**	**3**	**0.0039**
ESG	833	92.0	6.6	1	0.0002	0	0	1	0.0002
ex-Fossil Fuels	1,576	104.5	5.6	1	0.0001	2	0.0042	3	0.0043
Low Carbon Target	1,305	95.1	5.6	0	0	2	0.0036	2	0.0036
Women's Leadership	531	-	6	0	0	0	0	0	0
S&P 500	**505**	**134.9**	**5.0**	**0**	**0**	**2**	**0.67**	**2**	**0.67**
ESG Factor Weighted	501	135.7	5.0	0	0	2	0.18	2	0.18
Fossil Fuel Free	478	144.3	5.0	0	0	2	0.70	2	0.70
Carbon Efficient	500	132.7	5.0	0	0	2	0.76	2	0.76
Fossil Fuel Free Carbon Efficient	477	143.5	5.1	0	0	2	0.80	2	0.80

Sources: FTSE & S&PDJI civilian firearms exposures. MSCI definitions: the definition of firearms that is used may vary among providers. For this analysis, we used the MSCI ESG Research definitions of civilian firearms producers and retailers, which are typically defined separately from controversial weapons. These definitions are: ***Civilian Firearms Producer*** *– companies that manufacture firearms and small arms ammunitions for civilian markets. The research does not cover companies that cater to the military, government, and law enforcement markets.* ***Civilian Firearms Retailer*** *– companies that derive any amount of annual revenues from the distribution (wholesale or retail) of firearms or small arms ammunition intended for civilian use.* ***Civilian Firearms – Any Tie*** *– companies that have an industry tie to the manufacture or retail of civilian firearms.* ***Controversial Weapons*** *– companies involved with the production of cluster bombs, landmines, depleted uranium weapons, or chemical and biological weapons.*
**Please note, MSCI firearms data for this table is as of May 2018.*

For example, the FTSE Developed index includes two manufacturers and two retailers of civilian firearms. Combined, these four companies accounted for 0.4% of the market cap of the FTSE Developed. In comparison, the FTSE4Good and the Divest Invest 200 indexes have zero exposure to manufacturers and, respectively, have exposure to zero and one retailer/s of civilian firearms. Thus, while the FTSE4Good index is not designed to exclude civilian firearms, the criteria used to select strong ESG companies ended up eliminating civilian arms producers and retailers. In contrast, the Divest Invest 200 index weight of civilian firearms retailers increases compared to the parent index as the universe is narrowed to 205 of the 2141 FTSE Developed companies. The remaining companies are then reweighted (see Appendix II for details).

The S&P 500 contained no producers of civilian firearms, and thus, all the sustainability index variants have zero exposure to producers of civilian firearms. The S&P 500 included two retailers of civilian firearms, Walmart and The Kroger Co. Together, both multi-line large cap retailers accounted for 0.7% of the total S&P 500 market capitalization. Because S&PDJI takes an approach to the sustainability indexes reviewed here that primarily reweights (rather than excludes) securities, all the sustainability indexes examined here include both Walmart and The Kroger Co. However, in the ESG Factor Weighted Index, the civilian firearms market cap weight is reduced significantly to less than one-third of its S&P 500 weight, despite the index design that includes no criteria to underweight civilian firearms producers or retailers. In contrast, the weight of civilian firearms retailers in each of the three S&P 500 carbon-related indexes reviewed here increases slightly compared to the parent index, as constituent securities are reweighted away from fossil fuel reserves and carbon emissions.

Conclusion

The widening range of sustainability indexes presents new possibilities for passive equity investing to integrate financial impact and ESG issues. Passive sustainability equity investing may be accomplished with much lower fees than active management; however, sustainability index license fees are typically a few basis points above the parent index. Consideration of any specific sustainability index, either as part of a core equity portfolio or as a satellite holding, should carefully review the primary investment goals and how the index construction effects risk, return, diversification, shareholder voting and engagement, ESG exposure on the issues of concern, and index license fees.

The ESG indexes designed to integrate ESG metrics to enhance returns of the parent index that we reviewed did not always achieve that goal during the 5-year period reviewed, which included no significant recession or down market. We believe these results may reflect the continued modification of ESG index construction and, more generally, that overall ESG indexes, depending on construction method, may be similar to value or growth indexes – the factors being used may go in and out of favor in the market.

The outperformance of ex-fossil fuel indexes during the five-year period reviewed, in our opinion, highlights how broad macro factors may overwhelm any sustainability index design. The outperformance reflects recent pricing in oil and gas markets and may also have captured an element of the long-term energy transition away from dependence on fossil fuels that is currently underway.

Going forward, we anticipate both refinement of existing sustainability index approaches and the introduction of new indexes.

Appendix I: UN Sustainable Development Goals

The Sustainable Development Goals (SDGs) are a new, universal set of goals, targets, and indicators that UN member states will be expected to use to frame their agendas and political policies over the next 15 years. The 17 SDGs are listed below. Within the goals are 169 targets that put some specifics to these broad goals. The U.N. states that "responsible business and investment will be essential to achieving transformational change through the SDGs. For companies, successful implementation will strengthen the enabling environment for doing business and building markets around the world."

1. **No Poverty**. End poverty in all its forms everywhere.
2. **Zero Hunger.** End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.
3. **Good Health and Well Being.** Ensure Healthy lives and promote well-being for all ages.
4. **Quality Education**. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
5. **Gender Equality**. Achieve gender equality and empower all women and girls.
6. **Clean Water and Sanitation**. Ensure availability and sustainable management of water and sanitation for all.
7. **Affordable and Clean Energy**. Ensure access to affordable, reliable, sustainable, and modern energy for all.
8. **Decent Work and Economic Growth**. Promote sustained, inclusive, and sustainable economic growth; full and productive employment; and decent work for all.
9. **Industry, Innovation, and Infrastructure.** Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
10. **Reduced Inequality**. Reduce inequality within and among countries.
11. **Sustainable Cities and Communities**. Make cities and human settlements inclusive, safe, resilient, and sustainable.
12. **Responsible Production and Consumption**. Ensure sustainable consumption and production patterns.
13. **Climate Action**. Take urgent action to combat climate change and its impacts.
14. **Life Below Water**. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.
15. **Life on Land**. Protect, restore, and promote sustainable use of terrestrial ecosystems; sustainably manage forests; combat desertification; halt and reverse land degradation; and halt biodiversity loss.
16. **Peace and Justice Strong Institutions**. Promote peaceful and inclusive societies for sustainable development; provide access to justice for all; and build effective, accountable, and inclusive institutions at all levels.
17. **Partnerships for the Goals**. Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Appendix II: ESG Indexes

This appendix provides summary descriptions of the indexes provided by FTSE/Russell, MSCI, and S&PDJI. The indexes are grouped by index provider, alphabetically – FTSE/Russell, MSCI, and S&PDJI. Within each set of index provider's information, their ESG indexes are grouped into three categories that highlight the broad primary objective for using ESG information to construct the index. These include:

Integrate – incorporate ESG criteria to enhance long-term return, and/or manage ESG financial risk

Values – align with investor ethical/social/political values

Impact – generate measurable social or environmental benefits and financial returns

The information for each index includes the index's E, S, and G segment; name; year launched; summary description; and summary construction approach.

FTSE/RUSSELL ESG INDEXES

INTEGRATE

FTSE ESG, 2017. The FTSE ESG index series is designed to help investors align investment and ESG objectives in a broad benchmark whilst maintaining industry neutrality. Company weights are "tilted" using FTSE/Russell's ESG Ratings. Subsequently, industry neutral re-weighting is applied so that the industry weights in each index match the underlying index universe. As a result, the FTSE ESG Indexes are expected to have risk/return characteristics similar to the underlying universe, with the added benefit of improved ESG metrics. Approach: reweight by ESG, maintaining industry and country weights of parent index.

E-FTSE Divest-Invest, 2016. The FTSE Divest-Invest index series is designed to incorporate a combination of rules-based strategies to reduce exposure to companies from certain ICB subsectors associated with a High Carbon Economy and obtain increased exposure to companies engaged in the transition to a Low Carbon Economy ("LCE"). Securities in the following sectors and subsectors of the Industrial Classification Benchmark ("ICB") System which are ineligible for inclusion: Oil & Gas Producers (ICB 0530); Oil Equipment, Services & Distribution (ICB 0570); Coal (ICB 1771); and General Mining (ICB 1775). Excluded companies are replaced, one by one, by the eligible company with the highest Low Carbon Economy Industrial Indicator ("LOWCII") factor until all removed companies are replaced. The constituent weights of replacement companies are calculated in proportion to their LOWCII factors and then scaled to replace the total weight of the excluded securities. The remaining constituents (i.e., non-replacement companies) are weighted by investable market capitalization. Approach: exclude by E, select by E, then reweight.

E-FTSE Green Revenues, 2016. The FTSE Green Revenues index series is designed to obtain increased exposure to companies engaged in the transition to a green economy, based on FTSE/Russell's Green Revenues data model. All constituents of the parent index are included. Constituent weights (where applicable) are based on each constituent's LOWCII factor. A company's LOWCII factor is defined as the ratio of revenues as classified by the Low Carbon Economy Industrial Classification System ("LCE ICS") to total revenues. Approach: reweight by ESG, maintaining industry and country weights of parent index.

E-FTSE Climate, 2017. The FTSE Climate index series is designed to hedge climate risks and gain exposure to upsides that climate change may bring to companies. This index series considers green revenues alongside carbon emissions and fossil fuel reserves. The index series methodology is designed to reflect the performance of a global and diversified basket of securities where their weights are varied to account for risks and opportunities associated with climate change. Approach: reweight by E, maintaining industry and country weights of parent index.

FTSE-ESG FTSE4Good, 2001. The FTSE4Good index series is designed to measure the performance of companies demonstrating strong ESG practices. The FTSE ESG Ratings are used as the core basis to determine the constituents of the FTSE4Good index. Each company in the research universe is given a FTSE ESG Rating ranging from 0 to 5, with 5 being the highest rating. Companies involved in tobacco and controversial weapons are excluded. Approach: exclude by ESG.

FTSE/RUSSELL ESG INDEXES

VALUES

FTSE ex-Fossil Fuels, 2014. This index series is a capitalization-weighted index designed to represent the performance of constituents of the parent index after the exclusion of companies that have a certain revenue and/or reserve exposure to oil, gas, and coal. A company is categorized as an Excluded Company if it satisfies the following conditions: (1) classified as in the ICB subsectors – Exploration & Production (Standard Industrial Code "SIC" 0533), Integrated Oil & Gas (0537), Coal Mining (SIC Code: 1771), and General Mining (SIC Code: 1775); and either have (2) revenues arising from Bituminous Coal and Lignite Surface Mining SIC Code: 1221), Bituminous Coal Underground Mining (SIC code: 1222), Anthracite Mining (SIC code: 1231), Crude Petroleum and Natural Gas (SIC code: 1311), and Natural Gas Liquids (SIC code: 1321) based on the companies' most recent published Annual Report and Accounts; or 93) proved and probable reserves in coal, oil, or gas based on the companies' most recent published Annual Report and Accounts. Approach: exclude.

FTSE ex-Coal, 2014. This index Series is a capitalization-weighted index designed to represent the performance of constituents of the parent index after the exclusion of companies that have a certain revenue and/or reserve exposure to coal. A company is categorized as an excluded company if it satisfies the following conditions: (1) classified as in the ICB subsectors – Coal Mining (1771) and General Mining (1775); and either have (2) revenues arising from Bituminous Coal and Lignite Surface Mining (SIC code: 1221), Bituminous Coal Underground Mining (SIC code: 1222), Anthracite Mining (SIC code: 1231); or (3) proved and probable reserves in coal based on the companies' most recent published Annual Report and Accounts. Approach: exclude.

E-FTSE Environmental Opportunities, 2018. The FTSE Environmental Opportunities All-Share index comprises all companies globally that have at least 20% of their business derived from environmental markets and technologies as defined by the FTSE Environmental Markets Classification System (EMCS). These include Renewable and Alternative Energy, Energy Efficiency; Water Infrastructure and Technology; Waste Management and Technologies; Pollution Control; Environmental Support Services; and Food, Agriculture and Forestry. Approach: select.

MSCI ESG INDEXES

INTEGRATE

ESG-MSCI ESG Universal, 2013. This index series is designed to increase the weightings of companies with robust ESG characteristics, including those that show improvement in the direction of their rating over the most recent 12 months, while reducing the weight of those companies who lag their industry peers in terms of ESG quality. Companies who are involved in controversial weapons and violations of international norms are ineligible for inclusion. Approach: exclude, reweight by ESG, maintain similar sector and country exposures to parent index.

ESG-MSCI ESG Leaders, 2013. The MSCI ESG Leaders index is designed to represent the performance of companies that have high Environmental, Social and Governance (ESG) performance. The MSCI ESG

Leaders indexes aim to target sector weights that reflect the relative sector weights of the underlying indexes to limit the systematic risk introduced by the ESG selection process. Overall the MSCI ESG Leaders indexes target coverage of 50% of the underlying MSCI parent index. Approach: select by ESG, maintain.

ESG-MSCI ESG Select, 2013. The MSCI ESG Select index is designed to maximize its exposure to positive environmental, social and governance (ESG) factors while exhibiting risk and return characteristics similar to those of the underlying market capitalization weighted index. The index is constructed by selecting constituents of a market capitalization weighted index through an optimization process that aims to maximize exposure to ESG factors for a target tracking error budget under certain constraints. The index is sector-diversified and targets companies with high ESG ratings in each sector. Tobacco and Controversial Weapons companies are not eligible for inclusion in the index. Approach: exclude, select by ESG, optimize for low tracking error.

ESG-MSCI ESG Focus, 2013. These indexes are designed to target companies with positive environmental, social and governance (ESG) factors while closely representing the risk and return characteristics of the underlying market. Each index is constructed through an optimization process that aims to maximize its exposure to ESG factors, subject to a target tracking error and other constraints. The indexes are sector-diversified and are designed to over-weight companies with high ESG ratings and under-weight companies with low ratings. Tobacco and Controversial Weapons companies are not eligible for inclusion. Approach: exclude, reweight by ESG, optimize for low tracking error.

E-MSCI Low Carbon Leaders, 2014. This index addresses two dimensions of carbon exposure – carbon emissions and fossil fuel reserves – providing clients with an effective tool for limiting the exposure of their portfolios to carbon risk. By excluding companies with the highest carbon emissions intensity and the largest owners of carbon reserves per dollar of market capitalization, the index aims to achieve at least 50% reduction in its carbon footprint. The index also aims to maintain wide and consistent market exposure by minimizing the tracking error relative to the MSCI ACWI Index. Approach: exclude by E, then optimize for low tracking error.

E-MSCI ACWI Low Carbon Target, 2014. This index is a benchmark for investors who wish to manage potential risks associated with the transition to a low carbon economy. The index aims for a tracking error target of 0.3% (30 basis points) while minimizing the carbon exposure. By overweighting companies with low carbon emissions (relative to sales) and those with low potential carbon emissions (per dollar of market capitalization), the index reflects a lower carbon exposure than that of the broad market. Approach: reweight by E, then optimize for low tracking error.

G-Governance-Quality, 2015. This index aims to reflect the performance of a strategy that is seeking to capture both the financial and corporate governance aspects of Quality investing. The financial aspects of the Quality factor are captured using the same fundamental data as used in the MSCI Quality Index – return on equity, financial leverage and earnings variability. The standard of corporate governance is captured through measures such as independence and diversity of board of directors, ownership and control structure of the company, accounting practices, and auditor opinions. Approach: reweight by G and quality.

MSCI ESG INDEXES

VALUES

ESG-MSCI KLD 400 Social, 1990. The MSCI KLD 400 Social index is a capitalization weighted index of 400 U.S. securities that provides exposure to companies with outstanding ESG ratings and excludes companies whose products have negative social or environmental impacts. This index is designed for investors seeking a diversified benchmark comprised of companies with strong sustainability profiles, while avoiding companies incompatible with values screens. Launched in May 1990 as the Domini 400 Social index, it is one of the first Socially Responsible Investment ("SRI") indexes. Approach: exclude.

ESG-MSCI SRI, 2014. This index is a capitalization weighted index that provides exposure to companies with outstanding ESG ratings and excludes companies whose products have negative social or environmental impacts. The index is designed for investors seeking a diversified SRI benchmark comprised of companies with strong sustainability profiles, while avoiding companies incompatible with values screens. Approach: exclude.

E-MSCI Ex Coal, 2014. This index represents the performance of the broad market, while excluding companies that own coal reserves. It is a benchmark for investors who aim to eliminate coal reserves exposure from their investments due to concerns about the contribution of these reserves to climate change. Approach: exclude.

E-MSCI ex-Fossil Fuels, 2014. The index represents the performance of the broad market, while excluding companies that own oil, gas, and coal reserves. It is a benchmark for investors who aim to eliminate fossil fuel reserves exposure from their investments due to concerns about the contribution of these reserves to climate change. Approach: exclude.

S-MSCI ex-Controversial Weapons, 2011. This index excludes companies from the parent index that are involved in the production of cluster bombs, landmines, chemical and biological weapons, and depleted uranium weapons. Approach: exclude.

S-MSCI Catholic Values Custom, 2014. Index constituents are selected from the MSCI ESG index, which is made up of securities selected using an ESG Best-in-Class methodology. The index excludes companies involved in the following activities: abortion, abortifacients, contraceptives, stem cells and animal testing as well as adult entertainment, alcohol, tobacco, gambling, civilian firearms, nuclear power, military weapons or genetically modified organisms (GMO). The constituents of the index are weighted according to their free float adjusted market capitalization. Approach: exclude by S and ESG.

S-MSCI Islamic, 2016. The MSCI World Islamic index reflects Sharia investment principles and is designed to measure the performance of the large and mid-cap segments of the 23 Developed Markets (DM) countries that are relevant for Islamic investors. The index applies stringent screens to exclude securities based on two types of criteria: business activities and financial ratios derived from total assets. The methodology for the MSCI Global Islamic index follows Sharia investment principles and does not allow investment in companies that are directly active in, or derive more than 5% of their revenues from, such business activities as alcohol, tobacco, pork-related products, conventional financial services, defense/weapons, gambling, or adult entertainment. In addition, the MSCI Global Islamic index does not allow investment in companies deriving significant income from interest or companies that have excessive leverage. MSCI uses three financial ratios to screen for such companies: (1) total debt over total assets; (2) the sum of a company's cash and interest-bearing securities over total assets; and (3) the sum of a company's accounts receivables and cash over total assets. None of these financial ratios may exceed 33.33%. Finally, if a company derives part of its total income from interest income and/or from prohibited activities, Sharia investment principles state that this proportion must be deducted from the dividends paid out to shareholders and given to charity. MSCI therefore applies a dividend adjustment factor to all reinvested dividends. Approach: Exclusion.

MSCI ESG INDEXES

IMPACT

E-MSCI Global Environment, 2009. The MSCI Global Environment indexes are comprised of securities of companies that derive at least 50% of their revenues from environmentally beneficial products and services. The indexes are based on key environmental themes: alternative energy, sustainable water, green building, pollution prevention, or clean technology. The indexes aim to serve as benchmarks for investors seeking exposure to companies whose primary source of revenues increase the efficient use of scarce natural resources or mitigate the impact of environmental degradation. MSCI calculates the Global Environment index and five thematic sub-indexes. Approach: exclude.

ES-MSCI Sustainable Impact, 2016. The MSCI ACWI Sustainable Impact index is designed to identify listed companies whose core business addresses at least one of the world's social and environmental challenges, as defined by the UN SDGs. The sustainable impact categories include: nutritious products, treatment of major diseases, sanitary products, education, affordable housing, loans to small and medium size enterprises, alternative energy, energy efficiency, green building, sustainable water, and pollution prevention. To be eligible for inclusion in the index, companies must generate at least 50% of their sales from one or more of the sustainable impact categories and maintain minimum ESG standards. Approach: exclude.

G-MSCI Women's Leadership, 2017. The MSCI World Women's Leadership index is based on the MSCI World index, its parent index, which includes large and mid-cap stocks across 23 Developed Markets (DM) countries. The MSCI World Women's Leadership index aims to represent the performance of companies that exhibit a commitment towards gender diversity among their board of directors and among the leadership positions. The index aims to include companies which lead in their respective countries in terms of female representation in board and leadership positions. Approach: exclude.

S&PDJI ESG INDEXES

INTEGRATE

ESG-S&PDJI ESG Factor Weighted, 2016. This index is designed to isolate ESG as its own "factor" and weight the companies in the index according to those factor scores. Constituents are weighted according to their ESG factor score with respect to other companies in their Global Industry Classification ("GIC") sector. Approach: reweight by ESG, maintaining industry weights.

ESG-S&PDJI DJSI Diversified, 2013. This index is designed with a sustainable tilt while minimizing country, industry, and size biases relative to traditional global benchmarks. The top 50% (based on ESG score) of companies in the parent index per GICs sector and country are selected. Approach: exclude by ESG, maintaining country, industry, and size weights of parent index.

ESG-S&PDJI DJSI Diversified Select, 2013. This index is designed with a sustainable tilt and ethical exclusions while minimizing country, industry, and size biases relative to traditional global benchmarks. First, alcohol, tobacco, gambling, armaments and firearms, and adult entertainment are excluded. Then, the top 50% of companies in the parent index are selected based on ESG score. Approach: exclude, then reweight by ESG maintaining country, industry, and size weights of parent index.

G-S&PDJI LTVC, 2016. This index is designed to measure companies that anticipate and manage current and future economic and governance risks. Constituents are selected based on their RobecoSAM Economic Dimension score and their S&P Quality Score. The top 150 ranked stocks are selected as the current year "vintage." The entire portfolio consists of three such "vintages." Approach: select by G and Economic Dimension.

S-S&PDJI CAPEX & Human Capital, 2016. This index is designed to measure the performance of Japanese companies that are proactively making investments in physical and human capital. The top 200 constituents are selected based on their RobecoSAM human capital score, capital expenditures ("capex") revenue effect, and capex R&D growth. Approach: exclude by S and capex.

E-S&PDJI Carbon Efficient, 2015. This index is designed to reduce exposure to carbon inefficient companies by reweighting. Approach: reweight by E, maintain.

S&PDJI ESG INDEXES

VALUES

ESG-S&PDJI DJSI Index,1999. This index is designed to measure the "best-in-class" companies based on RobecoSAM's Sustainability score. The top 10% of companies in the parent index, based on ESG score are selected. Approach: select by ESG.

ESG-S&PDJI DJSI excluding Alcohol, Tobacco, Gambling, Armaments & Firearms and Adult Entertainment, 2008. This index is designed to measure the "best-in-class" companies based on RobecoSAM's sustainability score while applying ethical exclusions. First, alcohol, tobacco, gambling, armaments & firearms, and adult entertainment are excluded; then the top 10% of companies based on ESG score are selected. Approach: exclude.

E-S&PDJI Fossil Fuel Free, 2015. This index is designed to exclude companies that own fossil fuel reserves. Approach: exclude by E.

E-S&PDJI Fossil Fuel Free Carbon Efficient, 2015. This index is designed to exclude companies that own fossil fuel reserves and reduce exposure to carbon inefficient companies by reweighting. Approach: exclude by E, then reweight by E, then maintain.

E-S&PDJI Fossil Fuel Free Carbon Efficient Select, 2016. This index is designed to exclude companies that own fossil fuel reserves and reduce exposure to carbon inefficient companies by excluding the highest emitters. Approach: exclude by E, then optimize.

E-S&PDJI Climate Change Low Volatility High Dividend, 2016. This index is designed to measure the performance of the least volatile, high yielding companies that also have a low carbon footprint. Stocks are first selected on low carbon numbers, then by highest dividend, then by low volatility. Each reason has a set number of stocks in the final index. Approach: select by E, high dividend yield, and low volatility.

S-S&PDJI Catholic Values, 2015. This index is designed to exclude certain activities that are not aligned with the Responsible Investment Guidelines of the United States Conference of Catholic Bishops. The index excludes companies involved in abortion, stem cell research, adult entertainment, controversial weapons, child labor, contraception, nuclear weapons, and military sales. Companies are then reweighted to maintain the sector weights of the parent index. Approach: exclude by S, maintain sector weights of parent index.

S&PDJI ESG INDEXES

IMPACT

E-S&PDJI Carbon Efficient Select, 2015. This index is designed to reduce exposure to carbon inefficient companies by excluding the highest emitters. Approach: exclude by E, optimize.

E-S&PDJI Global Water, 2007. This index is designed to provide liquid exposure to 50 companies from around the world that are involved in water related businesses and is linked to the UN SDGs. The index selects the top 50 qualifying companies based on companies whose primary business is water. Twenty-five companies are selected from 'Water Equipment & Materials' and 25 companies from 'Water Utilities & Infrastructure.' Approach: select by E.

E-S&PDJI Global Clean Energy, 2007. This index is designed to provide liquid exposure to 30 companies from around the world that are involved in clean energy-related businesses and is linked to the UN SDGs. Selects the top 30 qualifying companies based on companies whose primary business is clean energy. Approach: select by E.

ES-S&PDJI Environmental & Socially Responsible, 2015. This index is designed to measure the performance of securities that meet environmental and social sustainability criteria. First, tobacco, military, and fossil fuels stocks are excluded, then the top 75% of market cap by ES score are selected. Approach: exclude, select by ES.

Appendix III: Performance and Risk Data for 1-, 3-, and 5-Year Trailing Periods Ending March 30, 2018

Annualized Performance and Risk Data (periods ending March 30,2018)															
	FTSE Developed					MSCI World					S&P 500				
Name of Index	**FTSE Developed**	**4Good**	**ex-Fossil Fuels**	**Green Revenues**	**Divest Invest 200**	**MSCI World**	**ESG Leaders**	**ex-Fossil Fuels**	**Low Carbon Target**	**Women Leadership**	**S&P 500**	**ESG Factor Weighted**	**Fossil Fuel Free**	**Carbon Efficient**	**Fossil Fuel Free Carbon Efficient**
Annualized Return*															
1-Year Return	14.76%	14.29%	14.93%	14.73%	13.54%	13.59%	13.11%	13.81%	13.10%	13.34%	13.99%	14.65%	14.76%	14.05%	14.72%
3-Year Return	8.38%	8.26%	9.12%	8.85%	9.91%	7.97%	7.46%	8.39%	7.88%	NA	10.78%	10.03%	11.44%	11.15%	11.73%
5-year Return	10.37%	10.33%	11.07%	10.34%	11.95%	9.70%	9.20%	10.58%	9.72%	NA	13.31%	13.71%	14.30%	13.40%	14.42%
Since May 31, 2016 Return						14.25%				13.70%					
Risk (Standard Deviation)															
1-Year Risk	7.71%	8.12%	7.84%	7.91%	8.52%	8.30%	8.11%	8.22%	8.19%	8.48%	8.47%	7.91%	8.42%	8.26%	8.21%
3-Year Risk	10.45%	10.74%	10.46%	10.50%	10.53%	10.62%	10.46%	10.57%	10.63%	NA	10.26%	10.41%	10.29%	10.43%	10.35%
5-Year Risk	10.10%	10.46%	10.02%	10.09%	10.19%	10.19%	10.00%	10.12%	10.22%	NA	9.87%	10.10%	9.91%	10.10%	10.05%
5-Year Tracking Error	na	1.60%	1.09%	0.59%	2.35%	na	0.75%	0.94%	0.40%	1.98*	na	2.22%	0.85%	0.82%	0.90%
5-Year Max Drawdown	-12.05%	-12.67%	-10.92%	-11.74%	-9.57%	-17.95	-17.26	-16.74	-17.93	NA	-8.36%	-10.97%	-8.37%	-8.66%	-8.59%
5-Year Return/Risk	102.7%	98.8%	110.5%	102.5%	117.3%	95.2%	92.0%	104.5%	95.1%	NA	134.9%	135.7%	144.2%	132.7%	143.5%
5-Year Sharpe Ratio	**0.99**	**0.96**	**1.06**	**0.99**	**1.12**	**0.91**	**0.88**	**1.00**	**0.91**	**NA**	**Na**	**NA**	**NA**	**NA**	**NA**
Since May 31, 2016- Sharpe Ratio						**1.72**				**1.50**					
No. of Constituents	2,141	878	2,051	2,141	205	1,649	805	1,577	1,277	570	505	501	478	500	477
Avg Mkt Cap ($Billions)	$19.0	$26.8	$10.6	$19.0	$70.1	$24.1	$24.3	$23.7	$27.2	$36.0	$46.72	$46.99	$47.03	$47.06	$47.10

Sources: FTSE/Russell, MSCI, and S&PDJI.