



Artemis
FINANCIAL ADVISORS LLC

ESG Fund Research

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Modern day responsible investing is no longer about excluding “sin” stocks or investing only in “green” funds, but rather pairing a positive impact on society with favorable investment results, and that ultimately embracing environmental, social and governance (ESG) best practices is good business. In effect, investors are now finding it possible to achieve competitive returns with portfolios that reflect their values.

In recent years, there has been a groundswell of interest in issues such as climate change, water conservation, workplace diversity and human rights, creating an atmosphere ripe for responsible investing in the mainstream. More than \$8.7 trillion was invested using responsible investing criteria in 2016 — a 33% increase since 2014.¹ Taking a holistic approach to discovering funds that integrate fundamental research, ESG analysis and direct company engagement imbues these portfolios with the power to not only influence positive change but maintain a similar (or potentially higher) level of risk-adjusted returns.

We recently took a hard look at the leading US large capitalization ESG index-based funds to find one that we hope to be able to utilize in most all client portfolios. We intentionally excluded all of the very new funds, both because there is little performance data and because we prefer investing in larger funds that have better liquidity, which are past the risk being closed for lack of investor interest.

US Large Company ESG Fund Profiles

1. Calvert US Large-Cap Core Responsible Index Fund (CISIX)

Designed to closely track the Calvert US Large-Cap Core Responsible Index which is derived from the Russell 1000 Index, the fund offers broad exposure to companies that meet the rigorous Responsible Investing principles guided by the Calvert Principles for Responsible Investment (Calvert Principles) provided in [Figure 1](#). The Calvert Principles serve as a framework for considering ESG factors that may affect investment performance. Determinations of whether a company meets the Calvert Principles are made by Calvert’s Responsible Research Review Committee (“3RC”). Fund management conducts deep, proprietary research across approximately 200 peer groups using over 300 key performance indicators (KPIs) to measure material environmental, social, and governance (ESG) factors.²

¹ Sources: US SIF Foundation, Pensions & Investments, as of November 2016

² Source: Calvert Funds



Figure 1. The Calvert Principles



ENVIRONMENTAL SUSTAINABILITY AND RESOURCE EFFICIENCY

- Reduce the negative impact of operations and practices on the environment
- Manage water scarcity and ensure efficient and equitable access to clean sources
- Mitigate impact on all types of natural capital
- Diminish climate-related risks and reduce carbon emissions
- Drive sustainability innovation and resource efficiency through business operations or other activities, products and services



EQUITABLE SOCIETIES AND RESPECT FOR HUMAN RIGHTS

- Respect consumers by marketing products and services in a fair and ethical manner, maintaining integrity in customer relations and ensuring the security of sensitive consumer data
- Respect human rights, respect culture and tradition in local communities and economies, and respect Indigenous Peoples' Rights
- Promote diversity and gender equity across workplaces, marketplaces and communities
- Demonstrate a commitment to employees by promoting development, communication, appropriate economic opportunity and decent workplace standards
- Respect the health and well-being of consumers and other users of products and services by promoting product safety



ACCOUNTABLE GOVERNANCE AND TRANSPARENCY

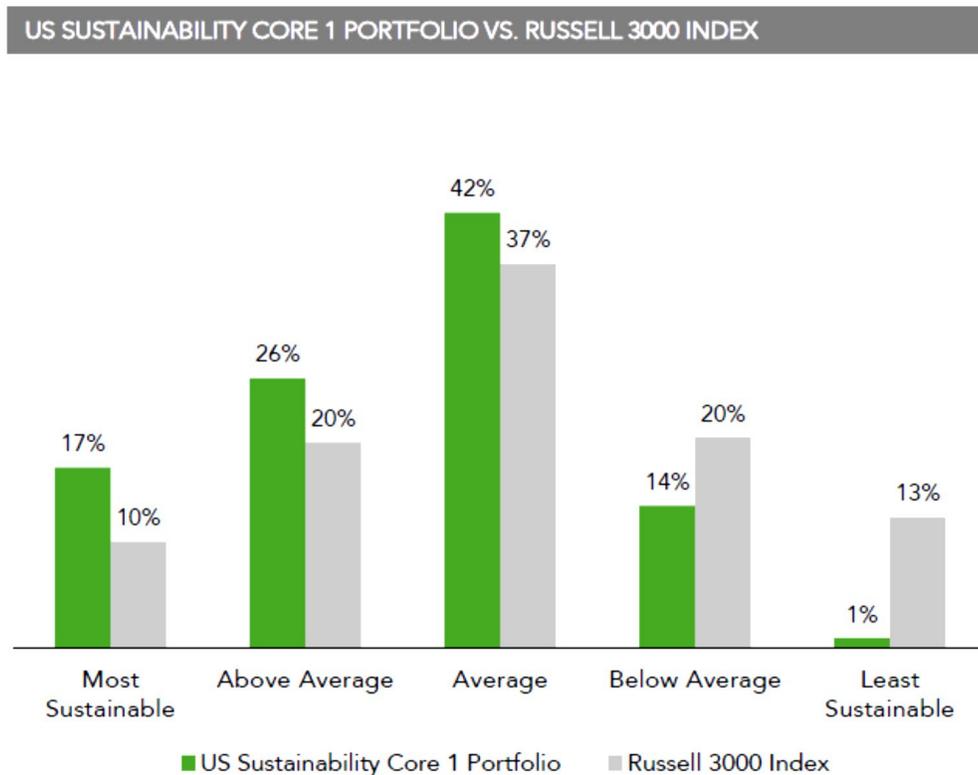
- Provide responsible stewardship of capital in the best interests of shareholders and debtholders
- Exhibit accountable governance and develop effective boards or other governing bodies that reflect expertise and diversity of perspective and provide oversight of sustainability risk and opportunity
- Include environmental and social risks, impacts and performance in material financial disclosures to inform shareholders and debtholders, benefit stakeholders and contribute to strategy
- Lift ethical standards in all operations, including in dealings with customers, regulators and business partners
- Demonstrate transparency and accountability in addressing adverse events and controversies while minimizing risks and building trust

2. DFA US Sustainability Core Portfolio (DFSIX)

The DFA US Sustainability Core Portfolio integrates Dimensional Fund’s patented core equity methodology emphasizing the dimensions of higher expected returns – smaller stocks, low relative price (value) stocks, and high profitability stocks – with sustainability considerations focused on greenhouse gas emissions intensity and potential emissions from reserves. The fund’s strategy is, therefore, designed largely to decrease exposure to companies that are significant contributors to emissions or those with large fossil fuel reserves. DFA begins by taking the universe of companies represented by the Russell 3000 Index and assigns scores based on proprietary sustainability criteria created by Dimensional. Companies with high scores relative to their sector peers receive a greater weight, while those with low scores receive a lesser weight or are excluded as shown in [Figure 2](#).



Figure 2. Weight Distribution by Sustainability Score



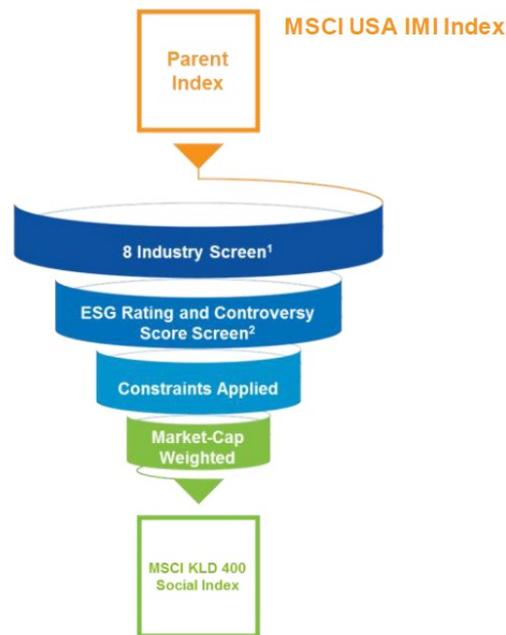
3. iShares MSCI KLD 400 Social ETF (DSI)

The MSCI KLD 400 Social ETF tracks 400 US companies that exhibit positive ESG criteria. The fund begins with the parent index MSCI USA IMI and uses MSCI ESG Business Involvement Screening Research to exclude companies (Value-Based Exclusion Criteria) with negative environmental or social impact including alcohol, gambling, tobacco, military weapons, civilian firearms, nuclear power, genetically modified foods (GMOs), and adult entertainment (the specific exclusion criteria, such as revenue thresholds, vary by industry). The fund then uses MSCI ESG Ratings to identify companies that demonstrate an ability to manage ESG risks and opportunities, requiring a rating above B to remain in the index and above BB to be considered for inclusion. MSCI ESG Controversies Scores are also applied to assess controversies concerning the negative environmental, social, and/or governance



impact of company operations, products and services (MSCI ESG Controversies Score falls on a 0-10 scale, with “0” being the most severe controversy). Lastly, the fund applies sector weighting constraints of +/- 25% absolute difference versus the parent index and will hold no less than 200 large- and mid-cap stocks.

Figure 3. How the MSCI KLD 400 Social Index Is Built



4. iShares MSCI USA ESG Select ETF (SUSA)

Like the MSCI KLD 400 Social ETF, the fund begins with parent index MSCI USA IMI, however, it pairs down the list to 250 companies and applies its value-based hard exclusion to only companies involved in tobacco. Companies involved in alcohol, gambling, nuclear power, conventional firearms and nuclear weapons may be subject to ineligibility based on varying criteria (e.g., revenue, emissions, manufacturing). The MSCI USA ESG Select ETF then ranks the 250 US companies on five factors: ability to meet environmental challenges, managing community impact, labor management and supply chain records, product quality and safety records, and governance and ethics practices. Weights of individual securities are capped at 5% and sectors cannot deviate more than 3% from the parent index, creating a higher degree of correlation to the broader US stock market.

5. Vanguard FTSE Social Index Fund (VFTNX)

The fund tracks the FTSE4Good US Select Index, which starts with parent index FTSE USA, and excludes firms with businesses tied to tobacco, alcohol, nuclear power, adult



entertainment, and gambling. It also avoids stocks involved in controversies related to labor standards, human rights, and environmental impact. Unlike many of its peers, which target stocks with positive ESG characteristics, this fund’s screens primarily filter out stocks with undesirable ESG characteristics. This less stringent approach improves diversification, but it also dilutes the portfolio's exposure to exemplary ESG firms. About 70% of the assets from its selection universe, the FTSE USA Index, are currently included in the portfolio. As a result, its performance is highly correlated with that index.

Performance

Research suggests that companies with high scores for their ESG commitments tend to have better management, higher expected growth and lower cost of capital — which may translate into better financial results for investors. For example, initiatives to reduce and reuse waste, improve energy efficiency or conserve natural resources can produce savings that flow to a company’s bottom line. Likewise, companies with strong corporate governance may avoid costly workforce problems or regulatory sanctions. [Chart 1](#) illustrates the analysis of a large number of US stocks from 1993 to 2014, ranked on the strength of their ESG commitments. The stocks were grouped into the top 20% of the universe (top ESG score) versus the bottom 20% (bottom ESG score) with the top 20% vastly outperforming the bottom.

Chart 1. Firms with strong ESG scores significantly outperform those with weak scores



Source: Calvert Funds



As shown in [Table 1](#), performance for the select funds has largely been in-line with the S&P 500 over multiple time periods. In fact, on a 10-Year annualized basis, three out of the five funds outperformed the S&P 500, with the Vanguard FTSE Social Index as the clear winner.

Table 1. Performance

Annualized Returns ¹ (%) as of March 31, 2019		YTD	1 Year	3 Years	5 Years	10 Years
Calvert US Large Cap Core Responsible	CISIX	14.2	9.7	13.5	10.8	16.4
DFA US Sustainability Core	DFSIX	14.2	6.7	13.2	9.5	16.2
iShares MSCI KLD 400 Social ETF	DSI	13.9	9.7	12.9	10.1	15.2
iShares MSCI USA ESG Select ETF	SUSA	15.1	8.5	13.3	10.3	14.9
Vanguard FTSE Social Index I	VFTNX	13.8	10.7	14.9	11.5	17.2
S&P 500 TR USD		13.7	9.5	13.5	10.9	15.9

¹Returns for periods shorter than one year are not annualized

Fundamental Characteristics

[Table 2](#) exhibits the differing fundamental qualities of the ESG funds as compared to the S&P 500. As noted, relative volatility (measured by standard deviation) is slightly higher in these funds, however on a risk-adjusted basis (measure by Sharpe ratio) they do not fall too far behind the index (or above, in the case of the Vanguard FTSE Social Index). The table also demonstrates the vast liquidity of most these funds based on total assets. Concentration risk may be concern for the two MSCI funds given their lower number of holdings, particularly the MSCI USA ESG Select ETF at 113 companies.

Table 2. Fundamental Characteristics

<i>As of March 31, 2019</i>	Calvert US Large Cap Core Responsible CISIX	DFA US Sustainability Core DFSIX	iShares MSCI KLD 400 Social ETF DSI	iShares MSCI USA ESG Select ETF SUSA	Vanguard FTSE Social Index VFTNX	S&P 500 TR USD
Risk Characteristics						
3-Year Standard Deviation (%)	11.2	12.1	10.9	10.9	10.8	10.7
3-Year Sharpe Ratio (%)	1.07	0.98	1.06	1.09	1.22	1.12
Fund Characteristics						
Annual Dividend Yield	1.16	1.17	1.46	1.53	1.63	1.85
Expense Ratio	0.19	0.25	0.25	0.25	0.12	—
Size Characteristics						
Number of Holdings	738	2,188	406	133	508	505
Assets in Top 10 Holdings (%)	20.1	17.0	26.2	28.5	23.0	21.3
Total Assets (\$M)	1,538.9	1,921.4	1,339.0	926.0	5,138.7	—

Style Analysis

Although these funds are billed as large-cap blends, they each exhibit varying size and style tilts as shown in [Table 3](#), which may impact performance due to the influence of macroeconomic factors. For example, the MSCI KLD 400 Social ETF and Vanguard FTSE Select Social Index both skew slightly toward growth which may cause relative outperformance in a strong cyclical market. DFA US Sustainability Core holds greater mid- and small-cap names, as a function of their methodology to capture the smaller cap premium.

Table 3. Style Analysis

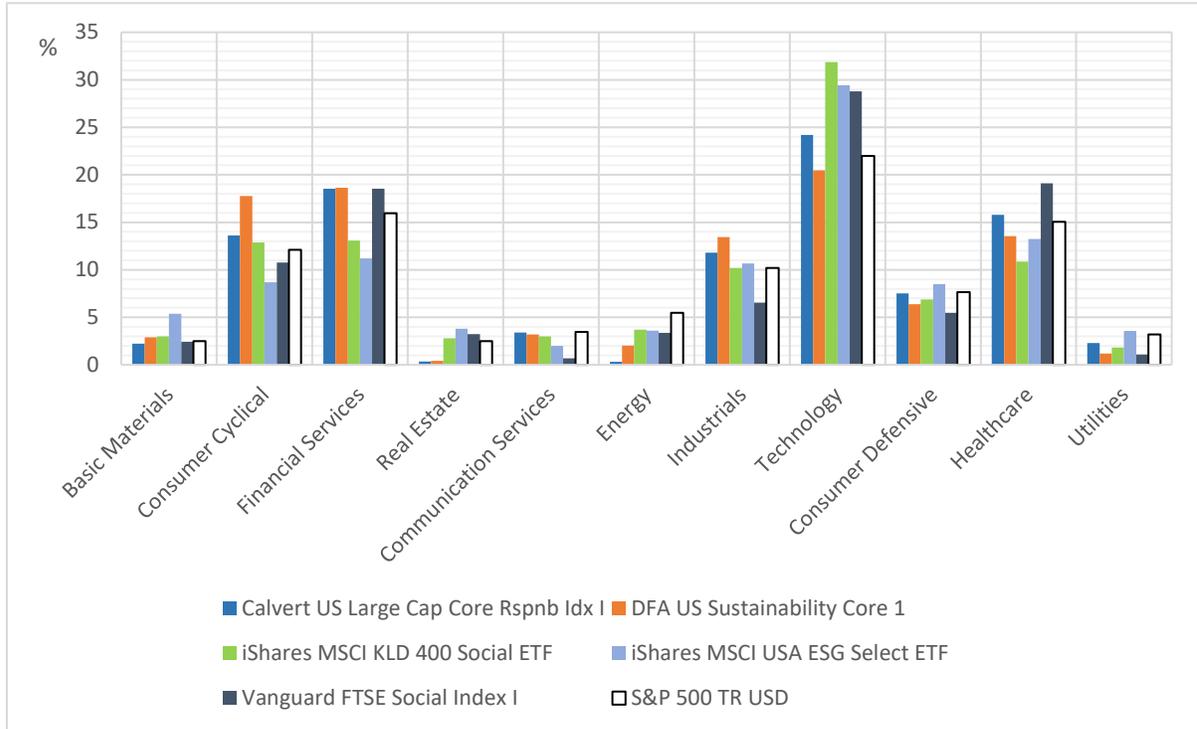
	Calvert US Large Cap Core Responsible CISIX	DFA US Sustainability Core DFSIX	iShares MSCI KLD 400 Social ETF DSI	iShares MSCI USA ESG Select ETF SUSA	Vanguard FTSE Social Index VFTNX	S&P 500 TR USD
<i>As of March 31, 2019</i>						
Style Characteristics						
Large	77.0	61.0	87.0	82.0	87.0	91.3
<i>Value</i>	36.0	28.5	35.5	37.0	38.5	43.9
<i>Growth</i>	41.0	32.5	51.5	45.0	48.5	47.4
Mid/Small	22.0	37.0	13.0	18.0	13.0	9.7
<i>Value</i>	10.5	19.5	7.5	10.5	7.5	5.6
<i>Growth</i>	11.5	17.5	5.5	7.5	5.5	4.2

Sector Exposure

The effects of the ESG screens of these funds will introduce prominent sector biases as compared to the S&P 500. As illustrated in [Chart 2](#), the most notable overweights are in the technology, healthcare, and financial sectors, as these firms tend to have smaller environmental impacts than average. The energy sector shows the most persistent underweight across all the funds as this represents the collective producers of harmful emissions in the carbon, coal, and oil/gas industry.



Chart 2. Sector Exposure



Impact and Engagement

The most powerful agent of change is through active engagement with fund companies, which can encourage companies to improve corporate behaviors and contribute to a more sustainable and equitable society. The most visible forms of shareholder advocacy are proxy voting and shareholder resolutions, particularly in the areas of climate change and gender pay equality. As shown in [Table 4](#), Calvert US Large Cap Core Responsible actively engages with companies to influence positive social and environmental practices. Equally important is the notion that responsible investing can make a difference and that difference represent a measurable, positive impact when compared to traditional investment universes. Given the recent reports on climate change, funds are finding more financial risks associated with fossil fuel ownership and high carbon footprints and have begun a movement to divest from these companies. [Table 4](#) shows the results of the efforts of these funds to reduce their carbon profiles. DFA US Sustainability Core appears to show a clear edge with a lower carbon footprint (emissions per unit of investment) and carbon intensity (emissions per unit of revenue) relative to the S&P 500 and on absolute basis. Conversely, the two MSCI funds show relatively poorer metrics than their counterparts as they tend to lean more toward Social and Governance issues. Also included in the table is a summary version of the value-based exclusion screens and other controversial issues tackled by the different funds.



Table 4. ESG Metrics

	Calvert US Large Cap Core Rspnb Idx CISIX	DFA US Sustainability Core 1 DFSIX	iShares MSCI KLD 400 Social ETF DSI	iShares MSCI USA ESG Select ETF SUSA	Vanguard FTSE Social Index VFTNX	S&P 500 TR USD
As of March 31, 2019						
Engagement¹						
Environmental Proposals (% of Proxy Votes in favor)	100.0	86.4	65.0	100.0	0.0	—
Gender Pay Equality (% of Proxy Votes in favor)	100.0	0.0	85.7	71.0	0.0	—
Impact						
Fossil Fuel Stock Ownership (% of companies) ²	2.25	2.74	5.46	7.26	4.42	10.00
Carbon Footprint (metric tons CO ₂ e/\$1M USD invested) ²	50.0	37.0	59.0	48.0	54.0	90.00
Carbon Intensity (metric tons CO ₂ e/\$1M USD revenue) ²	91.0	47.0	125.0	79.0	110.0	172.0
Impact Comparison						
Fossil Fuel Stock Ownership (% Lower vs. S&P 500)	7.97	7.47	4.74	2.95	5.79	—
Carbon Footprint (% Lower vs. S&P 500)	44.0	58.9	34.4	46.7	40.0	—
Exclusion Screen Applied						
Adult Entertainment			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Alcohol			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Civilian Firearms			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Gambling			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Genetic Engineering			<input checked="" type="checkbox"/>			
Nuclear Power			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Tobacco	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Military Weapons			<input checked="" type="checkbox"/>			
Controversial Issues						
Involvement in fossil fuel reserves, coal, nuclear generation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Large-scale data privacy and security concerns	<input checked="" type="checkbox"/>					
Extensive and ongoing product safety controversies	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Land use and biodiversity		<input checked="" type="checkbox"/>				
Human rights issues and violations	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
Operational waste		<input checked="" type="checkbox"/>				
Potential for catastrophic environmental events					<input checked="" type="checkbox"/>	
Ongoing labor standard issues				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Management and board diversity					<input checked="" type="checkbox"/>	
Toxic spills and releases		<input checked="" type="checkbox"/>				
Water management		<input checked="" type="checkbox"/>				
Governance and ethics practices				<input checked="" type="checkbox"/>		
¹ Engagement reflects the percentage of votes that are in favor of a proposed resolution in 2018						
² www.fossilfreefunds.org						