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MULTI-ASSET PERSPECTIVES

An ETF investor's guide to sustainable investing

Introduction

Sustainable investing is gaining in popularity globally, driven by investors' desire to support more responsible companies, mitigate risk, and access new return drivers. Galvanized by global regulatory support and improved breadth and quality of environmental, social, and governance (ESG) data, a growing number of investors are adopting sustainable investment strategies.¹ In fact, at the most recent International Monetary Fund (IMF) meetings in October 2018, the IMF underscored the importance of sustainable development goals.²

Given the rise of ESG, it is critical to understand the potential portfolio impact. This paper takes a look at the evolution of ESG products and highlights the various exposures that investors gain.

ESG investing overview

Exchange-traded products that seek to track ESG indexes make such investing easily accessible across asset classes and regions, many with minimal operational costs. In equities, various iShares ESG ETFs have delivered risk/return characteristics in line with conventional, broad market benchmarks while at the same time overweighting higher-rated ESG companies.

While gaining diversification benefits, the funds have shown the largest performance differential in international developed markets with a one year return of 3.02% vs. 2.74% generated by traditional portfolios. (Chart 1). Research also shows an overlap between ESG and the quality style factor, meaning that layering an ESG strategy could add factor loads to a traditional factor approach.

The evolution of sustainable funds

While global assets under management that focus on sustainable investing have reached \$23 trillion, European and US mutual funds and exchange traded funds combined (Chart 2) have gathered only \$750 billion or 3.3%. This highlights the potential growth for ETF as an investing vehicle in this space. Increased focus by companies continues to drive interest: scraping of US earnings call transcripts saw that S&P 500 firms now cite ESG-related terms ten times per conference call on average, up from six a decade ago.³

ESG investing has been more prominent in Europe for years. U.S and European ESG mutual funds and exchange traded funds data combined reveal that Europe currently makes up 71% of the total sustainable assets (Chart 2). In the global exchange-traded product landscape, flow data show that U.S. investors lagged European peers in sustainable investing. Europe has led adoption in ESG strategies because local regulations require that companies pay attention to ESG metrics and reporting. For instance, a French law requires large investors to disclose the carbon footprint of their assets. As a result, ESG strategies with exposure to European companies benefit from complete and accurate data that, in return, drives better results in company screening.

Chart 1: No sacrifice required?

Comparison of traditional indexes and ESG-focused equity ETFs by region, 2017-2018

	U.S.		International Developed		Emerging Markets	
	Traditional (MSCI USA)	iShares ESG MSCI USA ETF	Traditional (MSCI EAFE)	iShares ESG MSCI EAFE ETF	Traditional (MSCI EM)	iShares ESG MSCI EM ETF
1-Year Return (NAV) ¹	17.87%	18.20%	2.74%	3.02%	-0.81%	-0.99%
1-Year Volatility ¹	8.71%	9.05%	9.12%	8.98%	13.29%	13.59%
1-Year Sharpe Ratio ¹	1.7	1.7	0.1	0.2	-0.1	-0.1
Price-to-earnings ¹	22.8	25.2	14.9	15.6	12.7	12.7
MSCI ESG Quality Score ²	5.3	6.5	6.6	7.7	4.3	6.0
MSCI ESG Quality Score Percentile rank ²	-	98th	-	99th	-	97th
% of Fund or Index Covered by MSCI ESG Research ²	100%	99.0%	100%	99.6%	100%	99.6%
Lipper Peer Group (Number of funds in group) ²	N/A	Equity US (2695)	N/A	Equity Global ex US (754)	N/A	Equity Emerging Mkts Global (826)

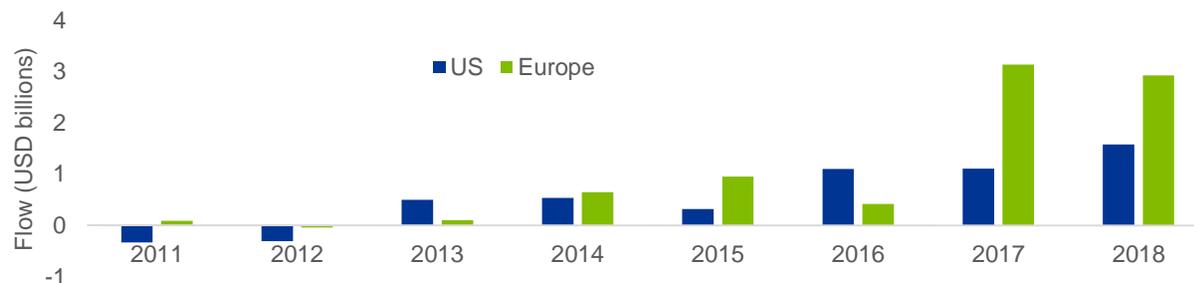
Index performance is for illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. The performance quoted represents past performance and does not guarantee future results. Investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than the original cost. Current performance may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by visiting www.iShares.com or www.blackrock.com. For standardized fund performance, please see page 7. The indexes shown are the parent indexes of the indexes that the funds seek to track. There may be material differences between the fund's index and the indexes shown including without limitation holdings, methodology and performance. **1.** Source: for fund data, BlackRock as of 9/30/18; for index data, MSCI as of 9/30/18. Volatility is measured by Standard Deviation, which is a measure of the dispersion of a set of data from its mean. It is calculated as the square root of variance by determining the variation between each data point relative to the mean 9/30/18. The Sharpe ratio is a measure of returns adjusted for risk; the higher the number, the better the risk-adjusted returns. Price-to-earnings based on a 12-month trailing period. The price-to-earnings ratio is a fundamental measure used to determine if an investment is valued appropriately. Each holding's P/E is the latest closing price divided by the latest fiscal year's earnings per share. **2.** Source: MSCI ESG Fund Metrics as of 8/31/2018, using holdings as of 07/31/2018, for fund data. MSCI ESG Research as of 07/31/2018 for the index data. The ESG Quality Score measures the ability of underlying holdings to manage key medium to long-term risks and opportunities arising from environmental, social, and governance factors. The ESG Quality Score is calculated as the weighted average of the underlying holding's ESG Scores. The ESG Quality Score is provided on a 0-10 score, with 0 and 10 being the respective lowest and highest possible fund scores. MSCI rates underlying holdings according to their exposure to 37 industry specific ESG risks and their ability to manage those risks relative to peers. The MSCI ESG Quality Score Percentile measures how a fund's ESG Quality Score ranks relative to other funds in the same peer group. The peer group is based on the Lipper Global Classification and reflects the funds that are in the MSCI ESG Fund Metrics coverage universe. To be included in MSCI ESG Fund Metrics, 65% of the fund's gross weight must come from securities covered by MSCI ESG Research, the fund's holdings date must be less than one year old, and the fund must have at least ten securities. Past ESG metrics are not indicative of future results.

Chart 2: US and European ESG fund assets, 2013-2017



Source: Blackrock, data includes assets under management in European and U.S. mutual funds and exchange traded funds combined

Chart 3: Flow into ESG themed ETFs



Source: Markit,, BlackRock as of 9/30/18

ESG ratings: How are companies measured on ESG?

Recent improvements in the quality, breadth, and depth of ESG data has led to the growing dependence of sustainable investors on ESG ratings. Independent ratings providers – like MSCI, Sustainalytics, and others – assess issuers on a number of E, S, and G issues. Government regulations around ESG disclosures and advancements in ESG measurement techniques and technologies have steadily led to a rise in the quality and quantity of ESG data, thereby, improving the quality of ESG ratings. While investors increasingly use ESG ratings to integrate sustainability into their investment processes, challenges related to standardization of ESG ratings methodologies and reliability of self-reported ESG data remain.

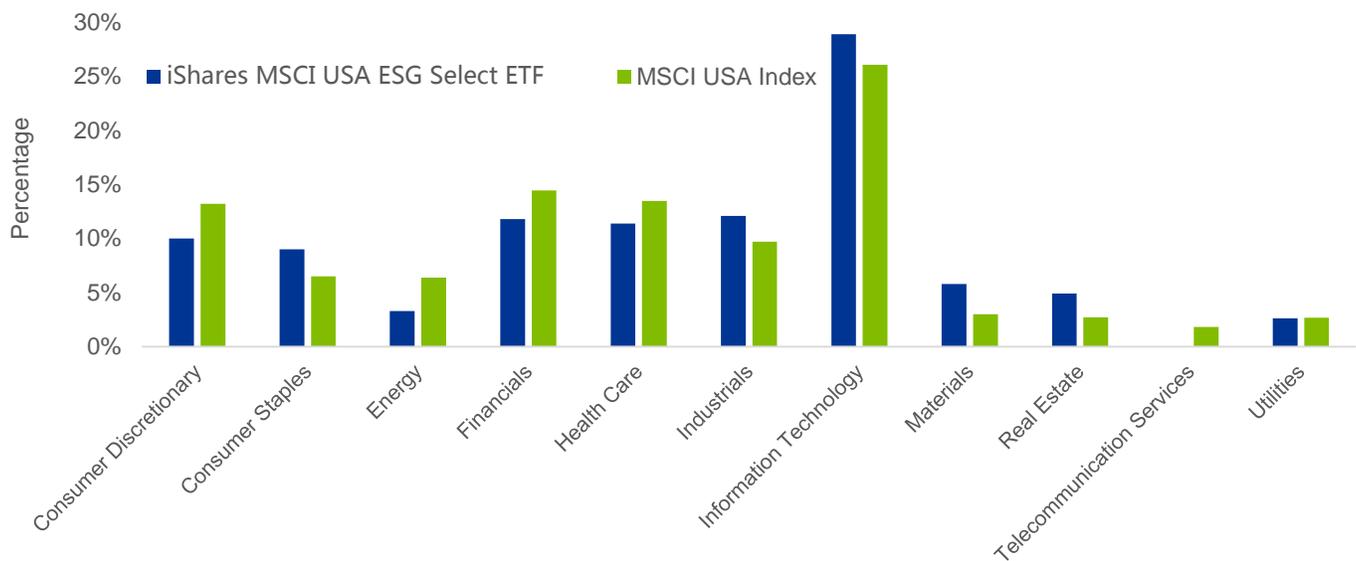
ESG ratings can be used in the construction of ESG-based indexes. The index methodologies can weight the index based on ESG scores or filter out companies with low ESG scores, seeking to minimize overall vulnerability to idiosyncratic risk. A recent MSCI publication⁴ suggests that companies with better management of sustainability risks and opportunities tended to have stronger cash flows, lower borrowing costs and higher valuations.

What do investors hold in an ESG portfolio?

Equities

From a sector perspective, ESG indexes are generally designed to hew closely to their parent, or market cap weighted indexes. Chart 4 provides the sector decomposition, which shows that the iShares MSCI USA ESG Select ETF (SUSA) includes fewer energy and telecommunication companies than the broad market due to their negative environmental impact and higher sustainability risk. Meanwhile, the ESG fund did not necessarily compromise return potential as the fund still successfully captured a similar percentage of technology stocks, which as a sector has led the S&P 500 in returns for five years due to historically low leverage and high profitability.⁵

Chart 4: Equity decomposition by GICS sector



Source: BlackRock, Bloomberg, as of 5/17/18. Weights subject to change. The MSCI USA Index is the parent index of the index that iShares MSCI USA ESG Select ETF (SUSA) seeks to track. Allocations subject to change.

Chart 5: Comparable equity risk adjusted return

	SUSA	MSCI USA INDEX
1-Year Return (NAV)	14.23%	13.26%
Standard Deviation (3y)	10.63%	10.31%
Price-to-earnings	23.25	23.06

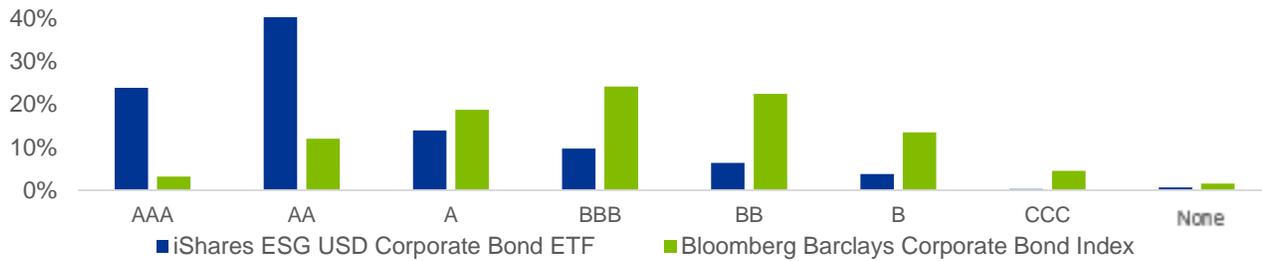
Source: BlackRock, Bloomberg, as of 4/30/18. The index shown is the parent index of the index that the fund seek to track. There may be material differences between the fund's index and the index shown including without limitation holdings, methodology and performance. Index performance is for illustrative purposes only. **Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. The performance quoted represents past performance and does not guarantee future results. Investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than the original cost. Current performance may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by visiting www.iShares.com or www.blackrock.com. For standardized fund performance, please see page 7.**

In addition to comparable risk adjusted returns, the ESG fund has declined less than the broad market during the market's recent increase in volatility. Since February 2018, the financial market started to see a shift from a low volatility regime, as global trade war concerns escalated and inflation expectations surged. During a period of stock price fluctuations, iShares MSCI USA ESG Select ETF (SUSA) outperformed the broader U.S. market index by 52 bps.⁶ This is not surprising because ESG indexes tend to hold more stocks defined by the quality factor.⁷

Fixed income

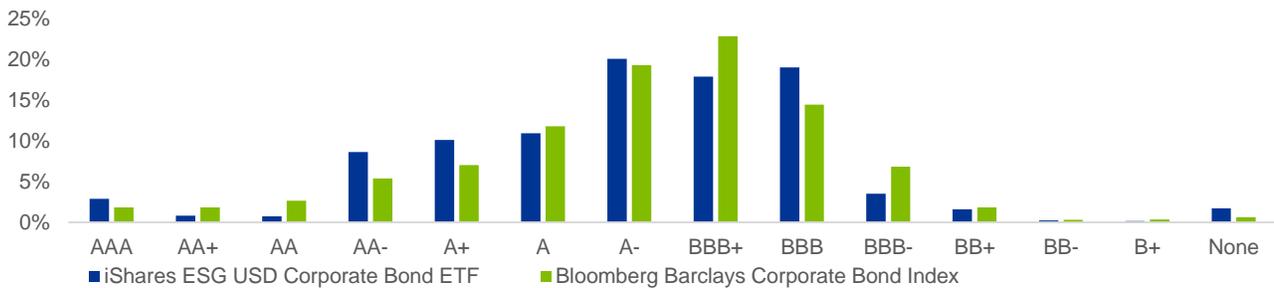
In fixed income, a sustainable investing approach can screen out the issuers with the lowest ESG scores. Compared to the benchmark corporate bond index, iShares ESG USD Corporate Bond ETF (SUSC) includes twice as many bonds that are rated 'A' or above by MSCI. In this example, higher ESG ratings also correspond to higher quality shown by S&P credit ratings. As a result, ESG portfolios may help address the needs of investors who want to promote sustainability as well as seek income.

Chart 6: Fixed income decomposition by ESG ratings



Source: MSCI, as of 5/9/18, ESG ratings are provided by MSCI. Ratings are on a scale of AAA (best) to CCC (worst) and are based on 37 ESG key issues as determined by MSCI. Assessments for each company's ESG performance is relative to the standards and performance of its industry peers. The Bloomberg Barclays Corporate Bond Index is the parent index of the index that iShares ESG USD Corporate Bond ETF (SUSC) seeks to track. There may be material differences between the fund's index and the index shown including without limitation holdings, methodology and performance. Allocations are subject to change.

Chart 7: Fixed income decomposition by S&P credit ratings



Source: BlackRock, as of 5/9/18, credit quality ratings of the underlying securities are received from S&P Global Ratings. Unrated securities do not necessarily indicate low quality. Below investment-grade is represented by a rating of BB and below. Ratings and portfolio credit quality may change over time. Allocations are subject to change.

Chart 8: An ESG focused fixed income index shows comparable return

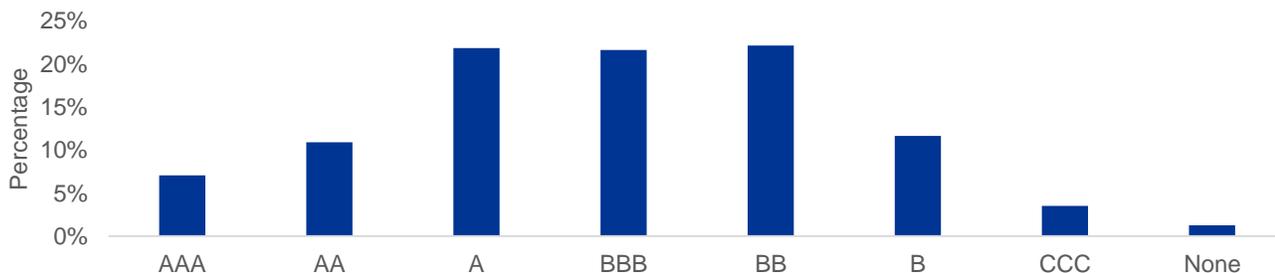
	SUSC	Bloomberg Barclays Corporate Bond Index
90D Volatility (%)	3.47	3.31
30 Day SEC Yield (%)	3.71	3.36

Source: Bloomberg, BlackRock, as of 5/9/18. Volatility is measured by standard deviation. **Index performance is for illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. The performance quoted represents past performance and does not guarantee future results. Investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than the original cost. Current performance may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by visiting www.iShares.com or www.blackrock.com. For standardized fund performance, please see page 7.**

Portfolio construction insights:

A traditional, hypothetical portfolio with 60% in the S&P 500 Index and 40% in the Bloomberg Barclays U.S. Aggregate Bond Index holds more than half in securities that are MSCI ESG rated BBB or below.

Chart 9: 60/40 Portfolio by MSCI ESG ratings

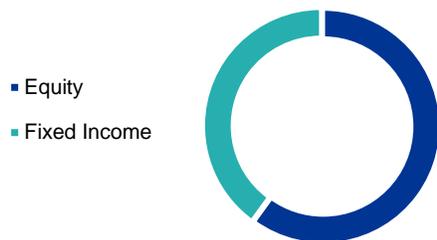


Source: MSCI, as of 5/9/18

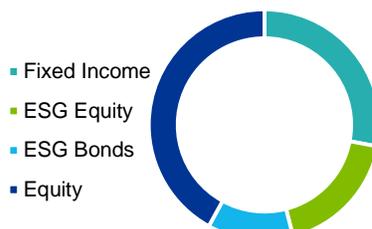
To improve the ESG rating of a traditional 60/40 portfolio, the following exercise illustrates a sample solution: We add an ESG arm to the traditional portfolio by replacing 30% of the current portfolio market weight with an 18% allocation into ESG equities and a 12% allocation into ESG bonds. Therefore, we keep the 60/40 equity and fixed income exposure unchanged.

Chart 10: ESG Complement Portfolio⁸

Traditional 60/40



ESG Complement



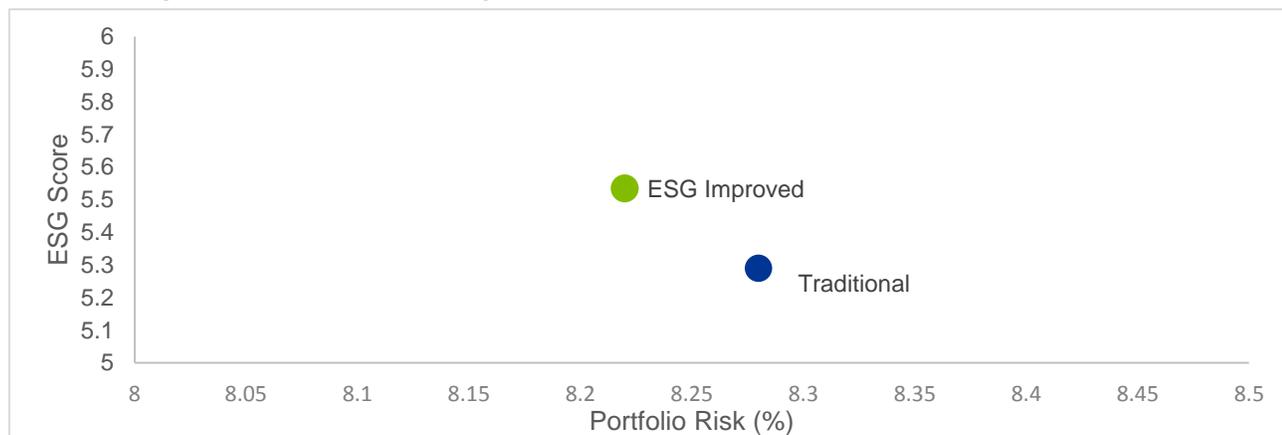
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How can ESG exposure help?

By complementing the traditional portfolio with ESG focused indexes, we can see that the improved ESG portfolio achieves a higher ESG score while holding a similar level of portfolio risk.

In addition, industrials, energy and utilities sectors represent more than 10% of a 60/40 equity bond portfolio’s overall market value with each sector on average producing more than 500 metric tons of carbon dioxide equivalents per million USD sales generated. The ESG complement helps to reduce a traditional portfolio’s overall greenhouse gas emissions by 16.7%.⁹

Chart 11: Improved MSCI ESG Quality Score



Source: MSCI, BlackRock, as of 6//18, Portfolio Risk is represented by 1-year standard deviation of monthly index returns. Standard deviation measures how dispersed returns are around the average. A higher standard deviation indicates that returns are spread out over a larger range of values and thus, more volatile.

Conclusion

Interest and awareness around sustainable investing strategies has been rising in recent years. We believe it is feasible to create sustainable portfolios that seek similar returns as the broad market. Exchange-traded funds offer operational efficiency and easy accessibility to higher-rated ESG companies across asset classes and regions. We have moved from a “why?” to a “why not” moment in sustainable investing.

1. Source: [The Global guide to responsible investment regulation](#), *Principles for Responsible Investment Academy*, accessed on May 9, 2018
2. Source: [World Economic Outlook](#), IMF, accessed on Oct 15th, 2018
3. Source: BlackRock with data from FactSet. ESG related issues cover topics such as climate change, data security and business ethics.
4. Source: [Foundations of ESG Investing Companies](#), *Guido Giese, Linda-Eling Lee, Dimitris Melas, Zoltan Nagy, Laura Nishikawa*, accessed on May 9, 2018
5. Source: Bloomberg, five year return as of May 16, 2018. **Past performance does not guarantee future results.**
6. Source: Bloomberg, time period from 2/1/18 – 4/30/ 2018, return calculation is based on NAV prices.
7. Source: Barra, BlackRock, MSCI, S&P, as of Dec 2017. ESG indexes are represented by the MSCI ESG indexes.
8. ESG equity is represented by MSCI USA ESG Select Index and ESG bond is represented by Bloomberg Barclays MSCI US Corporate ESG Focus Index. MSCI research covers 99.8% of the S&P 500 Index, 97.3% of the Bloomberg Barclays U.S. Aggregate Bond Index, 100% of the MSCI USA ESG Select Index, and 99.3% of the Bloomberg Barclays MSCI US Corporate ESG Focus Index. MSCI research covers 98.8% of the traditional portfolio and 99.2% of the ESG portfolio.
9. Source: Blackrock, with security level greenhouse emission data from MSCI, as of May 2018

Fees as of Current Prospectus. All Other Data as of 9/30/18

Fund Name	Fund Inception Date	Gross Expense Ratio	1-Year Returns		5-Year Returns		10-Year Returns		Since Inception	
			NAV	Mkt Price	NAV	Mkt Price	NAV	Mkt Price	NAV	Mkt Price
iShares ESG MSCI USA ETF (ESGU)	12/1/2016	0.15%	18.20%	18.20%	-	-	-	-	19.12%	19.14%
iShares ESG MSCI EAFE ETF (ESGD)	6/28/2016	0.20%	3.02%	2.70%	-	-	-	-	14.56%	14.60%
iShares ESG MSCI EM ETF (ESGE)	12/1/2016	0.25%	-0.99%	-2.18%	-	-	-	-	14.86%	14.73%
iShares MSCI USA ESG Select ETF (SUSA)	1/24/2005	0.25%	16.10%	16.20%	12.68%	12.70%	10.70%	10.54%	8.27%	8.27%
iShares ESG USD Corporate Bond ETF (SUSC)	7/11/2017	0.18%	-1.46%	-1.41%	-	-	-	-	-0.08%	0.31%

The performance quoted represents past performance and does not guarantee future results. Investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than the original cost. Current performance may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by visiting www.iShares.com or www.blackrock.com. Shares of ETFs are bought and sold at market price (not NAV) and are not individually redeemed from the Fund. Brokerage commissions will reduce returns. Market returns are based upon the midpoint of the bid/ask spread at 4:00 p.m. eastern time (when NAV is normally determined for most ETFs), and do not represent the returns you would receive if you traded shares at other times.

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