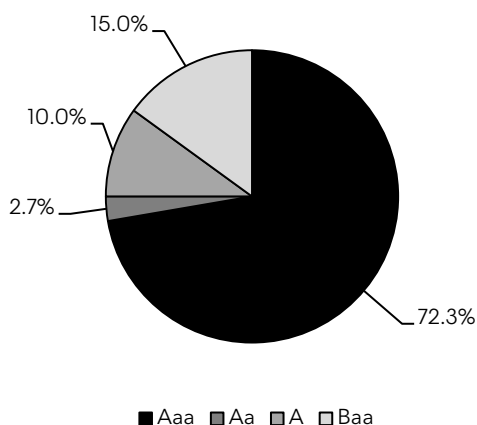


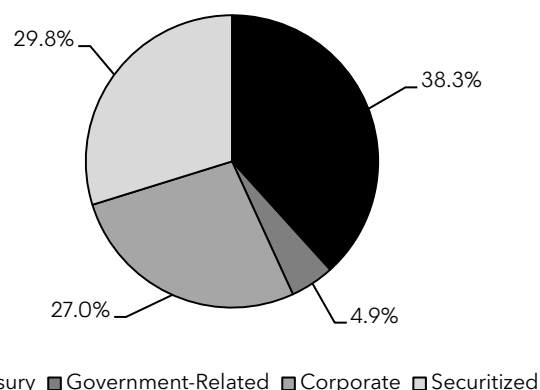
# Bloomberg Barclays MSCI US Aggregate ESG Focus Index

The Bloomberg Barclays MSCI US Aggregate ESG Focus Index measures investment grade, fixed-rate, taxable US dollar-denominated bonds eligible for the Bloomberg Barclays US Aggregate Bond Index, and is optimized to maximize exposure to positive environmental, social and governance (ESG) factors. The index aims to preserve the overall risk characteristics of the Bloomberg Barclays US Aggregate Index by minimizing per annum TEV, while targeting issuers with the highest MSCI ESG Ratings in each sector. The index was launched in August 2018.

Composition by Quality (MV %) - April 30, 2020



Composition by Sector (MV %) - April 30, 2020



## Rules for Inclusion

Sector	Treasury, Government-Related, Corporate, and Securitized bonds are included.
ESG Rating	Only corporate, government-related, and covered issuers with MSCI ESG Ratings are eligible.
ESG Controversies	Excludes all issuers involved in one or more very severe ESG Controversies (MSCI ESG Controversy Score < 1).
Business Involvement Screening	<ul style="list-style-type: none"> <li>Excludes all companies that manufacture tobacco products, such as cigars, blunts, cigarettes, e-cigarettes, inhalers, beedis, kreteks, smokeless tobacco, snuff, snus, dissolvable and chewing tobacco. It includes companies that grow or process raw tobacco leaves.</li> <li>Excludes all companies deriving 15% or more aggregate revenue from the manufacture, distribution, retailing, licensing, and supply of tobacco products.</li> <li>Excludes all companies that manufacture cluster munitions whole weapons systems, components, or delivery platforms.</li> <li>Excludes all companies that manufacture landmines whole systems or components.</li> <li>Excludes all companies involved in the production of depleted uranium (DU) weapons, ammunition, and armor.</li> <li>Excludes all companies that manufacture biological and chemical weapons or components.</li> <li>Excludes all companies that manufacture firearms and small arms ammunitions for civilian markets. It does not include companies that cater to the military, government, and law enforcement markets.</li> <li>Excludes all companies deriving 5% or more aggregate revenue from the production and distribution (wholesale or retail) of firearms or small arms ammunition intended for civilian use.</li> <li>Excludes all companies deriving USD 20 million or more revenue from the production and distribution (wholesale or retail) of firearms or small arms ammunition intended for civilian use.</li> <li>Excludes all companies deriving 5% or more revenue (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. It excludes: revenue from metallurgical coal; coal mined for internal power generation (e.g. in the case of</li> </ul>



## Rules for Inclusion

	<p>vertically integrated power producers); intra-company sales of mined thermal coal; and revenue from coal trading.</p> <ul style="list-style-type: none"> <li>Excludes all companies deriving 5% or more revenue (either reported or estimated) from the thermal coal based power generation.</li> <li>Excludes all companies deriving 5% or more revenue from oil sands extraction for a set of companies that own oil sands reserves and disclose evidence of deriving revenue from oil sands extraction. This factor does not include revenue from non-extraction activities (e.g. exploration, surveying, processing, refining); ownership of oil sands reserves with no associated extraction revenues; revenue from intra-company sales.</li> </ul>
<b>Eligible Currencies</b>	Principal and interest must be denominated in USD.
<b>Quality</b>	<p>Securities must be rated investment grade (Baa3/BBB-/BBB- or higher) using the middle rating of Moody's, S&amp;P and Fitch; when a rating from only two agencies is available, the lower is used; when only one agency rates a bond, that rating is used. In cases where explicit bond level ratings may not be available, other sources may be used to classify securities by credit quality:</p> <ul style="list-style-type: none"> <li>Local currency treasury and hard currency sovereign issues are classified using the middle issuer level rating from each agency for all outstanding bonds, even if bond level ratings are available.</li> <li>Expected ratings at issuance may be used to ensure timely index inclusion or to properly classify split-rated issuers.</li> <li>Unrated securities may use an issuer rating for index classification purposes if available. Unrated subordinated securities are included if a subordinated issuer rating is available.</li> </ul>
<b>Amount Outstanding</b>	<ul style="list-style-type: none"> <li>For Treasury, government-related and corporate securities, USD300mn minimum par amount outstanding.</li> <li>For MBS pass-throughs, pool aggregates must have USD1bn par amount outstanding.</li> <li>For ABS, USD500mn minimum deal size and USD25mn minimum tranche size.</li> <li>For CMBS, USD500mn minimum deal size with at least USD300mn amount outstanding remaining in the deal and USD25mn minimum tranche size.</li> <li>US Treasuries held in the Federal Reserve SOMA account (both purchases at issuance and net secondary market transactions) are deducted from the total amount outstanding. New issuance bought at auction by the Federal Reserve does not enter the index. Net secondary market purchases/sales are adjusted at each month-end with a one-month lag.</li> </ul>
<b>Coupon</b>	<ul style="list-style-type: none"> <li>Fixed-rate coupon.</li> <li>Callable fixed-to-floating rate bonds are eligible during their fixed-rate term only.</li> <li>Bonds with a step-up coupon that changes according to a predetermined schedule are eligible.</li> </ul>
<b>Maturity</b>	<ul style="list-style-type: none"> <li>At least one year until final maturity, regardless of optionality.</li> <li>Bonds that convert from fixed to floating rate, including fixed-to-float perpetual, will exit the index one year prior to conversion to floating-rate. Fixed-rate perpetual bonds are not included.</li> <li>Sub-indices based on maturity are inclusive of lower bounds. Intermediate maturity bands include bonds with maturities of 1 to 9.999 years. Long maturity bands include maturities of 10 years or greater.</li> </ul>
<b>Taxability</b>	<ul style="list-style-type: none"> <li>Only fully taxable issues are eligible.</li> <li>Build America Bonds (BAB) with the tax credit to the issuer are eligible; those with tax credits issued to investors are considered tax exempt.</li> <li>Dividend Received Deduction (DRD) and Qualified Dividend Income (QDI) eligible securities are excluded.</li> </ul>
<b>Market of Issue</b>	<ul style="list-style-type: none"> <li>SEC-registered securities, bonds exempt from registration at the time of issuance and SEC Rule 144A securities with registration rights are eligible. A security with both SEC Regulation-S (Reg-S) and SEC Rule 144A tranches is treated as one security for index purposes. The 144A tranche is used to prevent double-counting and represents the combined amount outstanding of the 144A and Reg-S tranches.</li> <li>Global bonds are included.</li> <li>Bonds that were previously SEC-registered or 144A with registration rights but later deregistered by the issuer remain index eligible.</li> </ul>



## Rules for Inclusion

Security Types	Included	Excluded
	<ul style="list-style-type: none"> <li>Bullet, putable, sinkable/amortizing and callable bonds</li> <li>Taxable municipal securities, including Build America Bonds (BAB)</li> <li>Senior and subordinated issues</li> <li>Original issue zero coupon and underwritten MTN</li> <li>Enhanced equipment trust certificates (EETC)</li> <li>Certificates of deposit</li> <li>Fixed-rate and fixed-to-float (including fixed-to-variable) capital securities</li> <li>Covered bonds</li> <li>US agency CMBS</li> </ul>	<ul style="list-style-type: none"> <li>Bonds with no MSCI ESG Rating</li> <li>Bonds with very severe ESG Controversies</li> <li>Tobacco producers or companies with 15% or more of their revenue derived from tobacco products</li> <li>Civilian firearms producers or retailers that derive 5% or more of their revenue, or more than \$20 million in revenue, from civilian firearms-related products</li> <li>Cluster bomb, landmine, depleted uranium, or chemical/biological weapon systems or components manufactures</li> <li>Companies deriving 5% or more revenue from Thermal Coal or Oil Sands.</li> <li>Contingent capital securities, including traditional CoCos and contingent write-down securities</li> <li>Bonds with equity type features (e.g., warrants, convertibles, preferreds, DRD/QDI-eligible issues)</li> <li>Tax-exempt municipal securities</li> <li>Inflation-linked bonds, floating-rate issues</li> <li>Private placements, retail bonds</li> <li>USD25/USD50 par bonds</li> <li>Structured notes, pass-through certificates</li> <li>Non-ERISA eligible CMBS issues</li> <li>Hybrid ARMs</li> <li>CMBS A1A tranches</li> <li>Structured notes, pass-through certificates</li> <li>Formosa Bonds</li> <li>Illiquid securities with no available internal or third-party pricing source</li> </ul>

## Optimization Constraints and Calculations

Overview	<ul style="list-style-type: none"> <li>The Bloomberg PORT Optimizer is used to select and weight each security in the index. <ul style="list-style-type: none"> <li>All bonds are selected from the Bloomberg Barclays US Aggregate Index, also known as the parent index.</li> <li>The optimizer runs once per month, selecting securities and calculating notional positions.</li> <li>This process will not impact bond prices and other security-level analytics.</li> </ul> </li> <li>The optimizer has three main objectives: <ul style="list-style-type: none"> <li>Maximize the overall MSCI ESG Score.</li> <li>Minimize Active Total Risk versus the Bloomberg Barclays US Aggregate Index. This is the ex-ante (or predicted) tracking error based on the Bloomberg Fixed Income multi-factor risk model.</li> <li>Minimize month-to-month index turnover.</li> </ul> </li> <li>Each of these objectives is assigned a weight (trade-off) in order to make these goals directly comparable. Active Total Risk is assigned the highest weight, followed by ESG Score, and finally by Turnover.</li> <li>By default, only securities eligible for the Bloomberg Barclays US Aggregate Index are included.</li> </ul>
Optimization Constraints	<p>Each of these constraints, with the exception of turnover, is a hard constraint. This means that the optimizer will only consider solutions within these bounds. Parent Index refers to the Bloomberg Barclays US Aggregate Index.</p> <ul style="list-style-type: none"> <li>OAD (option-adjusted duration) must be within 0.1 years of the parent index.</li> <li>DTS (duration times spread) must be within 0.2 years of the parent index. DTS is calculated by multiplying spread duration by Libor option-adjusted spread. DTS measures sensitivity to relative spread change as opposed to absolute spread change like modified duration.</li> </ul>



## Optimization Constraints and Calculations

- Active total risk, as calculated by the Bloomberg multi-factor fixed income risk model, must be within 0.1 or 10bps of the parent index. This is an annualized measure. If market conditions do not allow for the active total risk target to be met, this constraint will be relaxed until a solution is achieved.
- Yield to worst must be greater than or equal to the parent index.
- Bloomberg Barclays Class 3 sector weights must be within 2% of the parent index.
- Individual security weights must be within 1% of their weight in the parent index.
- Small issues, those with less than or equal to \$500MM par amount outstanding, are capped at 25 times their weight in the parent index.
- Issuer weights are limited to 1.5 plus their weight in the parent index.
- Treasury, ABS, CMBS, and MBS bonds are kept at the parent index weight.
- Only long positions are allowed.

### Turnover

Unlike standard rules-based indices, past index holdings will directly impact which securities are chosen for index inclusion in the present and future. This is because one of the constraints and objectives of the optimization process is to limit monthly index turnover. The optimizer sets a 5% turnover soft constraint each month. This means that if a solution cannot be found satisfying the hard constraints defined above, the 5% upper bound will be breached.

## Rebalancing Rules

### Frequency

The composition of the index is rebalanced at each month-end and represents the fixed set of bonds on which index returns are calculated for the next month.

### Index Changes

During the month, indicative changes to securities (credit rating change, sector reclassification, amount outstanding changes, corporate actions, and ticker changes) are reflected daily. These changes will affect the composition of the index on month-end only, when the index is next rebalanced.

### Reinvestment of Cash Flows

Intra-month cash flows from interest and principal payments contribute to monthly index returns but are not reinvested at a short-term reinvestment rate between rebalance dates. At each rebalancing, cash is effectively reinvested into the returns universe for the following month so that index results over two or more months reflect monthly compounding.

### New Issues

Qualifying securities issued, but not necessarily settled on or before the month-end rebalancing date, qualify for inclusion in the following month's index if the required security reference information and pricing are readily available.

## Pricing and Related Issues

### Sources & Frequency

- All bonds in the index are priced daily using Bloomberg's evaluated pricing service, BVAL.
- MBS generics are priced daily based on a weighted average price of underlying pools. The pools are priced by BVAL on a same-day settlement basis.

### Timing

- 3pm (New York time) for all securities except taxable municipal bonds which use 4pm (New York time).
- On early market closes, prices are taken as of 1pm (New York time), unless otherwise noted.
- If the last business day of the month is a public holiday, prices from the previous business day are used.

### Bid or Offer Side

Bonds in the index are priced on the bid side. The initial price for new corporate issues entering the index is the offer side; after the first month, the bid price is used.

### Settlement Assumptions

T+1 calendar day settlement basis for all bonds. At month-end, settlement is assumed to be the first calendar day of the following month, even if the last business day is not the last day of the month, to allow for one full month of accrued interest to be calculated.

### Verification

Daily price moves for each security are analyzed by the index pricing team to identify outliers. Index users may



## Pricing and Related Issues

also challenge price levels, which are then reviewed and updated as needed using input from various sources.

### Calendar

The US Aggregate ESG Focus Index follows the US bond market holiday schedule.

## Accessing Index Data

Bloomberg Professional® service	<p>Bloomberg benchmarks are the global standard for capital markets investors.</p> <ul style="list-style-type: none"> <li>• INDEX&lt;Go&gt; - The Bloomberg Indices landing page is a dashboard for index-related information on the terminal. Find daily and monthly index returns for key indices from each index family as well as index publications including methodologies, factsheets, monthly reports, updates and alerts.</li> <li>• IN&lt;Go&gt; - The Bloomberg Index Browser displays the latest performance results and statistics for the indices as well as history. IN presents the indices that make up Bloomberg's global, multi-asset class index families into a hierarchical view, facilitating navigation and comparisons. The "My Indices" tab allows a user to focus on a set of favorite indices.</li> <li>• PORT&lt;Go&gt; - Bloomberg's Portfolio &amp; Risk Analytics solution includes tools to analyze the risk, return, and current structure of indices. Analyze the performance of a portfolio versus a benchmark or use models for performance attribution, tracking error analysis, value-at-risk, scenario analysis, and optimization.</li> <li>• DES&lt;Go&gt; - The index description page provides transparency into an individual index including membership information, aggregated characteristics and returns, and historical performance.</li> </ul>
Bloomberg Indices Website (www.bloomberg.com/professional/product/indices)	<p>The index website makes available limited index information including:</p> <ul style="list-style-type: none"> <li>• Index methodology and factsheets</li> <li>• Current performance numbers for select indices</li> </ul>
Data Distribution	<p>Index subscribers may choose to receive index data in files. Files may include:</p> <ul style="list-style-type: none"> <li>• Index level and/or constituent level returns and characteristics for any indices</li> <li>• Automatic delivery of files via email or SFTP following the completion of the index production process after market close</li> <li>• Clients may receive standard files or may customize file contents</li> <li>• Index data is also available via authorized redistributors</li> </ul>

## Bloomberg Total Return Index Value Tickers: US Aggregate ESG Focus Index and Related Indices

Ticker (USD Unhedged)	Index	Ticker (USD Unhedged)	Index
I34100US	US Aggregate ESG Focus Index	BESFTRUU	US Corporate ESG Focus Index
LBUSTRUU	US Aggregate Index	B15FTRUU	US Corporate 1–5 year ESG Focus Index
UAEWTRUU	US Aggregate ESG–Weighted Index	I35573	US Universal Choice ESG Screened Index

Total Return Index Values are available in other currencies and on a hedged basis. Attributes such as yield and duration, are also available. Please refer to Accessing Bloomberg Barclays Index Data Using Bloomberg Tickers for a full list of tickers and attributes that are available.

## Index Licensing

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May 14, 2020

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