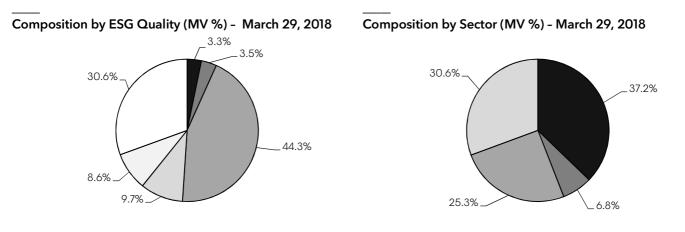
Bloomberg Barclays MSCI US Aggregate ESG Choice Bond Index

The Bloomberg Barclays MSCI US Aggregate ESG Choice Bond Index measures investment grade, fixed-rate, taxable US dollar-denominated bonds eligible for the Bloomberg Barclays US Aggregate Bond Index with strong positive environmental, social and governance (MSCI ESG) ratings. In addition, the index utilizes MSCI Business Involvement Screening Research (BISR) and MSCI ESG Controversies to identify and remove issuers from the Bloomberg Barclays US Aggregate Bond Index that may be involved in business lines or activities that are in conflict with investment policies, values, or social norms. Lastly, Treasury, Government-Related, Corporate, and Securitized sectors are weighted to match the individual sector exposures of the Bloomberg Barclays US Aggregate Bond Index. The index was launched in January 2018, with history available back to January 2008.



■AAA ■AA ■A ■BBB ■BB ■NR

■Treasury ■Government-Related ■Corporate ■Securitized

Rules for Inclusion

Sector	Treasury, Government-Related, Corporate, and Securitized bonds are included. Only issuers with MSCI ESG Ratings greater than or equal to BB are included. Excludes all issuers involved in one or more very severe ESG Controversies (MSCI ESG Controversy Score < 1).					
ESG Rating						
ESG Controversies						
Business Involvement Screening	Adult Entertainment	Excludes all issuers classified as adult entertainment producers that earn more than 5% in revenue, or more than \$500 million in revenue, from adult entertainment materials.				
	Alcohol	Excludes all issuers classified as alcohol producers that earn more than 5% in revenue, or more than \$500 million in revenue, from alcohol-related products.				
	Gambling	Excludes all issuers classified as involved in gambling operations or support that earn more than 5% in revenue, or more than \$500 million in revenue, from gambling-related activities.				
	Tobacco	Excludes all issuers classified as tobacco producers or distributors, retailers, or suppliers that derive 15% or more of their revenue from tobacco-related products.				







Rules for Inclusion

Business Involvement Screening	Military • Excludes all issuers classified as involved in manu						
Screening	Weapons weapons components, chemical and biological wea weapons.	pons components, or depleted uranium					
	 Excludes all issuers that earn more than 5% in revenue, or more than \$50 manufacturing conventional weapons, conventional weapons components, weapons support systems and services. 						
	Civilian Excludes all issuers classified as civilian firearms p Firearms more of their revenue, or more than \$20 million in products.						
	Nuclear • Excludes all issuers classified as nuclear utilities.						
	 Excludes all issuers involved in uranium mining, de of fuel for nuclear reactors. 	signing nuclear reactors, or enrichmen					
	 Excludes all issuers that earn 15% or more revenuindustry. 	ues as a supplier to the nuclear power					
	Genetically Modified Organisms Excludes all issuers that derive any revenue from ac such as seeds and crops, and other organisms in consumption.						
	 Issuers involved only in GMO research and develop 	ment activities are not excluded.					
Eligible Currencies	Principal and interest must be denominated in USD.						
Quality	Securities must be rated investment grade (Baa3/BBB-/BBB- or higher) using the middle rating of Moody's, S&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:						
	• 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.						
	• Expected ratings at issuance may be used to ensure timely index inclusion or to properly classify split-rated issuers.						
	• 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.						
Amount Outstanding	• For Treasury, government-related and corporate securities, USD300mn minimum par amount outstanding.						
	• For MBS pass-throughs, pool aggregates must have USD1bn par amount outstanding.						
	 For ABS, USD500mn minimum deal size and USD25mn minimum tranche size. 						
	• For CMBS, USD500mn minimum deal size with at least USD300mn amount outstanding remaining in the deal and USD25mn minimum tranche size.						
	 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. 						
	The minimum amount outstanding for US Aggregate Indices was raise Treasury, Government-Related and Corporate securities as of April 1, 2017 1, 2017.						
Coupon	Fixed-rate coupon.						
	Callable fixed-to-floating rate bonds are eligible during their fixed-rate term only.						
	• Bonds with a step-up coupon that changes according to a predetermined schedule are eligible.						
	 Hybrid ARMs are index-eligible during their fixed term, but exit adjustable rate. 	one year prior to their conversion to					
	Hybrid ARMs were removed as of June 1, 2017.						

Rules for Inclusion

Maturity	• At least one year until final maturity, regardless of optionality.										
	 CMBS and ABS must have a remaining average life of at least one year. 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. 										
	 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. 										
Taxability	Only fully taxable issues are eligible.										
	• Build America Bonds (BAB) with the tax credit to the issuer are eligible; those with tax credits issued to investors are considered tax exempt.										
	• Dividend Received Deduction (DRD) and Qualified Dividend Income (QDI) eligible securities are excluded.										
Market of Issue	• 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.										
	Global bonds are included.										
	 Bonds that were previously SEC-registered or 144A with registration rights but later deregistered by the issuer remain index eligible. 										
Security Types	Included Excluded										
	Bullet, putable, sinkable/amortizing and callable Issuers with ESG Ratings below BB										
	bonds • Bonds with very severe ESG Controversies										
	 Taxable municipal securities, including Build America Bonds (BAB) Issuers that do not meet SRI (Socially Responsible Index) business involvement screening thresholds 										
	Senior and subordinated issues Contingent capital securities, including traditional										
	Original issue zero coupon and underwritten MTN CoCos and contingent write-down securities										
	 Enhanced equipment trust certificates (EETC) Bonds with equity type features (e.g., warrants, and the second second										
	Certificates of deposit convertibles, preferreds, DRD/QDI-eligible issues)										
	 Fixed-rate and fixed-to-float (including fixed-to- variable) constal converting 										
	 variable) capital securities Covered bonds (as of January 1, 2011) Private placements, retail bonds 										
	 Covered bonds (as of January 1, 2011) US agency CMBS (as of July 1, 2014) USD25/USD50 par bonds 										
	Structured notes, pass-through certificates										
	Non-ERISA eligible CMBS issues										
	 Hybrid ARMs (as of June 1, 2017) 										
	 Hybrid ARivis (as of June 1, 2017) CMBS A1A tranches (as of January 1, 2011) 										
	Childs ATA tranches (as of January 1, 2011) Structured notes, pass-through certificates										
	Structured notes, pass-inrough certificates Formosa Bonds										

• Illiquid securities with no available internal or thirdparty pricing source

Rebalancing Rules

Frequency

For each index, Bloomberg maintains two universes of securities: the Returns (Backward) and the Projected (Forward) Universes. The composition of the Returns Universe is rebalanced at each month-end and represents the fixed set of bonds on which index returns are calculated for the next month. The Projected Universe is a forward-looking projection that changes daily to reflect issues dropping out of and entering the index but is not used for return calculations. On the last business day of the month (the rebalancing date), the composition of the latest Projected Universe becomes the Returns Universe for the following month

Rebalancing Rules

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 in the Projected and Returns Universe of the index. These changes may cause bonds to enter or fall out of the Projected Universe of the index on a daily basis, but will affect the composition of the Returns Universe at 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.
Sector Neutrality	The application of screens based on ESG Rating, ESG Controversy, and Business Involvement Screening Research will alter the sector composition of the index versus the standard US Aggregate Bond Index. Sector weights are therefore adjusted to match the Class 1 (Treasury, Government–Related, Corporate, and Securitized) weights of the broad US Aggregate Bond Index. These sector weights are fixed as of month end, and may drift intra–month as prices change and bonds are called or tendered.

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.						
Pricing Quotes	Bonds can be quoted in a variety of ways, including nominal spreads over benchmark securities/treasuries, spreads over swap curves, or direct price quotes as a percentage of par. For securities quoted on a spread basis, daily security price changes will result from movements in the underlying curve (swap c treasury) and/or changes in the quoted spread.						
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 except MBS, which use same-day settlement. 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 also challenge price levels, which are then reviewed and updated as needed using input from various sources.						
Currency Hedging	Returns hedged to various non-USD currencies are published for the US Aggregate ESG Choice Bond Index. The indices' FX hedging methodology takes rolling one-month forward contracts that are reset at the end of each month and hedges each non-reporting currency-denominated bond in the index into the reporting currency terms. No adjustment is made to the hedge during the month to account for price movements of constituent securities in the Returns Universe of the index.						
Calendar	The US Aggregate ESG Choice Bond Index follows the US bond market holiday schedule.						

Monthly Returns in USD, 2013-2018(%)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2013	-0.72	0.46	0.09	1.05	-1.79	-1.59	0.14	-0.54	1.00	0.83	-0.40	-0.54	-2.06
2014	1.44	0.55	-0.16	0.85	1.13	0.04	-0.25	1.08	-0.66	0.97	0.71	0.07	5.90
2015	2.05	-0.92	0.48	-0.34	-0.22	-1.07	0.69	-0.12	0.70	0.01	-0.23	-0.29	0.69
2016	1.37	0.64	0.91	0.37	0.01	1.76	0.59	-0.11	-0.03	-0.76	-2.33	0.13	2.52
2017	0.18	0.64	-0.04	0.77	0.75	-0.12	0.42	0.87	-0.46	0.06	-0.13	0.43	3.41
2018	-1.15	-0.91	0.64	-	-	-	-	-	-	-	-	-	-1.42

Accessing Index Data

Bloomberg Professional® service Bloomberg benchmarks are the global standard for capital markets investors.

Bloomberg Professional [®] service	 INDEX/CO2. The Disambers Indices landing range is a desheard for index related information on the
	 INDEX<go> - 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.</go> IN<go> - 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</go>
	on a set of favorite indices.
	 PORT<go> - Bloomberg's Portfolio & 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</go>
	performance attribution, tracking error analysis, value-at-risk, scenario analysis, and optimization.
	 DES<go> - The index description page provides transparency into an individual index including membership information, aggregated characteristics and returns, and historical performance.</go>
Bloomberg Indices Website	The index website makes available limited index information including:
(www.bloombergindices.com)	Index methodology and factsheets
	Current performance numbers for select indices
Data Distribution	Index subscribers may choose to receive index data in files. Files may include:Index level and/or constituent level returns and characteristics for any indices
	• Automatic delivery of files via email or SFTP following the completion of the index production process after market close
	Clients may receive standard files or may customize file contents
	Index data is also available via authorized redistributors

Index Licensing

Bloomberg requires index data licenses for services and products linked to the Indices							
Index or Constituent-Level Redistribution Further are Traded Nature (FTNL)	 Bond Pricing Service Index-Linked Insurance Products 	 Exchange Traded Funds (ETFs) Mutual Funds 	-				
 Exchange Traded Notes (ETNs) OTC Derivative Products 	Custom Index Solutions						

Bloomberg Barclays Indices

New York +1-212-318-1000

London +44-20-7330-7500

Singapore +65-6212-1000

Hong Kong +852-2277-6000

Tokvo +81-3-3201-8900

Svdnev +61-2-9777-8600

indexhelp@bloomberg.net

MSCI ESG Client Service

Asia Pacific +612 9033 9339

Americas +1 212 804 5299

Europe, Middle East and Africa +44 207 618 2510

For further information on MSCI ESG Research: esqclientservice@msci.com www.msci.com/esq

Disclaimer

This document and the information contained in it, including without limitation all text, data, graphs and charts (collectively, the "Information") is the property of MSCI Inc. and/or its subsidiaries (collectively, "MSCI"), Bloomberg Finance L.P. and/or its affiliates (collectively, "Bloomberg"), Barclays Bank PLC. and/or its affiliates (collectively, "Barclays"), or their licensors, direct or indirect suppliers or any third party involved in making or compiling any Information (MSCI, Bloomberg and Barclays, collectively, the "Information Providers") and is provided for informational purposes only. The Information may not be reproduced or disseminated in whole or in part without prior written permission from the authorized Information Provider(s). All rights in the Bloomberg Barclays MSCI Environmental, Social & Governance (ESG) fixed income indices (the "ESG Indices") vest in MSCI, Bloomberg and Barclays.

The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the Information many not be used to create indices, databases, risk models, analytics or software, or in connection with issuing, offering, sponsoring, managing or marketing securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information

The user of the Information assumes the entire risk of any use it makes or permits to be made of the Information. NONE OF THE INFORMATION PROVIDERS MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF) AND, TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, EACH INFORMATION PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS OR MERCHANTABILITY).

Without limiting any of the foregoing and to the maximum extent permitted by applicable law, in no event shall any Information Provider have any liability regarding any of the Information including with respect to any direct, indirect, special, punitive, consequential (including lost profits) or other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit liability that may not by applicable law be excluded or limited, including without limitation (as applicable), for death or personal injury to the extent such injury results from the negligence or willful default of itself or its servants, agents or sub-contractors

Information containing historical information, data or analysis should not be taken as an indication or guarantee of future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy

MSCI's wholly-owned subsidiary, MSCI ESG Research Inc., is a Registered Investment Adviser under the Investment Advisers Act of 1940. Except with respect to any applicable products or services from MSCI ESG Research Inc., none of MSCI's products or services recommends, endorses, approves or otherwise expresses any opinion regarding issuers, securities, financial products or instruments or trading strategies and none of MSCI's products or services is intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and no such products or services may be relied on as such.

Barclays regularly trades, generally deals as principal and generally provides liquidity (as market maker or otherwise) in the securities, commodities, currencies, derivatives and other financial instruments that may be included in the ESG Indices, as well as other financial products linked to such indices. Barclays trading desks may have either long and/or short positions in such securities, commodities, currencies, derivatives and index-linked products, which may pose a conflict with the interests of investing customers and/or index users. All levels, prices and spreads are historical and do not represent current market levels, prices or spreads, some or all of which may have changed since the publication of this document. To the extent any historical pricing information was obtained from Barclays trading desks, the firm makes no representation that it is accurate or complete. Barclays has investment banking and other business relationships with many of the issuers of securities included in the ESG Indices, which may result in potential conflicts of interest. Barclays may from time to time perform commercial, investment banking or other advisory services for the issuers of securities included in the ESG Indices, including acting as manager, co-manager or underwriter of such securities

The ESG Indices use ratings and other data, analysis and information from MSCI ESG Research. Issuers mentioned or included in any MSCI ESG Research materials may include MSCI Inc., clients of MSCI, or suppliers to MSCI, and may also purchase research or other products or services from MSCI ESG Research. MSCI ESG Research materials, including materials utilized in ESG Indices or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body. ESG Indices are unmanaged indices that cannot be invested in directly. None of the ESG Indices recommend, endorse, approve or otherwise express any opinion regarding any issuer, securities, financial products or instruments or trading strategies and none of the ESG Indices are intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and they may not be relied on as such. Any funds, products or other securities or investment vehicles using or based on the ESG Indices are not sponsored, endorsed, or promoted by Bloomberg, Barclays or MSCI. Any use of or access to the ESG Indices requires a license from both MSCI and Bloomberg.

Any use of or access to other products, services or information of Bloomberg requires a license from Bloomberg. Any use of or access to other roducts, services or information of Barclays requires a license from Barclays. Any use of or access to other products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, MSCI ESG Research, FEA, and other MSCI brands and product names are the trademarks or service marks of MSCI. BLOOMBERG is a trademark and service mark of Bloomberg Finance L.P. BARCLAYS is a trademark and service mark of Barclays Bank Plc. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and Standard & Poor's. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and Standard & Poor's.

Barclays offers premier investment banking products and services to its clients through Barclays Bank PLC. Barclays Bank PLC is authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority and is a member of the London Stock Exchange. Barclays Bank PLC is registered in England No. 1026167. Registered Office: 1 Churchill Place, London E14 5HP. Barclays undertakes its US securities and investment banking business in the name of its wholly-owned subsidiary Barclays Capital Inc.

©2018 Bloomberg Finance L.P. All rights reserved.





