

## J.P. Morgan ESG Index Suite (JESG)

### Rules and Methodology

The J.P. Morgan ESG (JESG) suite of indices is a global fixed income index family that integrates environmental, social and governance factors in a composite benchmark. Built on the established methodology of the conventional J.P. Morgan indices, JESG offers a familiar baseline for fixed income investors to incorporate ESG integration and negative screening of certain controversial issuer types in their investment process.

### Overview

The J.P. Morgan ESG (JESG) index suite was launched in April 2018 to provide fixed income investors with a framework to navigate and incorporate ESG discipline in the investment process. The JESG indices pursue ESG objectives by harmonizing the most common investment strategies into one unified framework.

The JESG methodology integrates proprietary JESG scores that are calculated daily, using data from RepRisk, Sustainalytics, Verisk Maplecroft and the Climate Bonds Initiative (CBI), for over 170 sovereign and 6,800 corporate and quasi-sovereign issuers. The JESG score measures an issuer's ESG performance and subsequently determines its weight in the JESG benchmarks.

Negative screening is also applied for certain issuers involved in thermal coal, oil sands, weapons and tobacco, as well as issuers that are in violation of the United Nations Global Compact (UNGC). The methodology assigns an overweight to green bonds to incentivize sustainable financing aligned with climate change solutions.

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See page 13 for analyst certification and important disclosures.

Figure 1: JESG at a Glance

JESG Overlay	Corporate/Quasi-Sovereign	Sovereign
ESG Data Vendors	RepRisk Sustainalytics Climate Bonds Initiative (Green Bonds)	Verisk Maplecroft Sustainalytics Climate Bonds Initiative (Green Bonds)
Scoring Methodology	The JESG index scores are an amalgamation of RepRisk and Sustainalytics on an equal weight basis. The scores range from 0 - 100, with 100 classified as the best possible score.	The JESG index scores are an amalgamation of Verisk Maplecroft and Sustainalytics on an equal weight basis. The scores range from 0 - 100, with 100 classified as the best possible score.
Integration Methodology	Issuers with higher overall ESG scores are assigned larger weights in the JESG index compared to the baseline index.	
Green Bond Treatment	Green bonds will receive a one-band upgrade compared to conventional bonds from the same issuer (unless the issuer is already in Band 1). Certified Climate green bonds will receive a one-band upgrade in the JESG GENIE and JESG GESSIE (unless the issuer is already in Band 1).	
Negative Screening	Corporate and quasi-sovereign issuers with revenue derived from thermal coal, oil sands, weapons and/or tobacco are excluded. In addition, issuers in violation of the United Nations Global Compact (UNGC) principles are excluded. Further, issuers with JESG scores below 20 are excluded.	Sovereigns with JESG scores below 30 are excluded. Further, sovereigns that have sanctions on their central government debt from the EU, UN, or U.S. are also excluded.

Source: J.P. Morgan.

Launched in April 2018 with a focus on emerging market fixed income, the JESG index suite has since expanded to include the global credit and sustainable debt asset classes:

Figure 2: Evolution of the JESG Index Suite

Launch Date	Benchmark Abbreviation	Benchmark Name
Apr-18	JESG EMBI	J.P. Morgan ESG Emerging Markets Bond Index
Apr-18	JESG GBI-EM	J.P. Morgan ESG Emerging Markets Government Bond Index
Apr-18	JESG CEMBI	J.P. Morgan ESG Corporate Emerging Markets Bond Index
Feb-19	JESG GHYCI	J.P. Morgan ESG Global High Yield Corporate Index
Nov-19	JESG JACI	J.P. Morgan ESG Asia Credit Index
Nov-20	JESG GENIE	J.P. Morgan ESG Green Bond Index
Nov-21	JESG GCI	J.P. Morgan ESG Global Corporate Index
Nov-21	JESG GCI IG	J.P. Morgan ESG Global Investment Grade Corporate Index
Sep-22	JESG GENIE EM DIV	J.P. Morgan ESG Emerging Markets Green Bond Diversified Index
Sep-22	JESG GENIE EM CREDIT DIV	J.P. Morgan ESG Emerging Markets Credit Green Bond Diversified Index
Nov-22	JESG GESSIE	J.P. Morgan ESG Green, Social and Sustainability Bond Index
Nov-22	JESG GESSIE EM CREDIT DIV	J.P. Morgan ESG Emerging Markets Credit Green, Social and Sustainability Bond Diversified Index

Source: J.P. Morgan.

## JESG Methodology

The JESG methodology starts with the benchmark criteria of the respective baseline index. Once the baseline index is selected, the following five-step approach is applied to determine the constituent weights in the JESG benchmark:

1. Define the data inputs
2. Establish JESG index scores
3. Apply integration mechanics
4. Apply product involvement screens and exclusions
5. Calculate new JESG benchmark weights

### ESG Score Providers and Inputs

ESG scores for each issuer are sourced from four industry-leading ESG data providers. These inputs include event-driven signals that leverage big data techniques as well as long-term scores based on rigorous fundamental research:

- **Sustainalytics:** A leading independent ESG and corporate governance research, ratings and analytics firm that supports investors around the world with the development and implementation of responsible investment strategies.
- **RepRisk:** An alternative ESG research provider specializing in quantifying reputational risk exposures by leveraging big data techniques. RepRisk has over a decade of expertise in providing ESG event risk signals on a real-time basis. In addition to ESG input scores, RepRisk also provides a letter rating (AAA to D) which is a peer group and sector average ranking enhanced by the integration of ESG and business conduct risks into business processes.
- **Verisk Maplecroft:** A global risk intelligence company that has been quantifying ESG, climate and political risks for over 15 years. Its Sovereign ESG Ratings provide best-in-class analytics on all relevant aspects of sovereign ESG. They are built on a uniquely broad, deep and timely set of proprietary global risk analytics. They use an aggregation methodology based on cluster analysis, which is sensitive to changes in individual factors within the framework, and preserves more information on countries' key sovereign ESG characteristics.
- **Climate Bonds Initiative (CBI):** An international not-for-profit organization working to mobilize global capital for climate action through the development of the Climate Bonds Standard and Certification Scheme, Taxonomy, Policy Engagement and Market Intelligence. CBI tracks and screens the use of proceeds of the labelled sustainable debt market.

For more information about third-party ESG methodologies, please see the Appendix.

ESG scores at the issuer level are sourced from each provider as follows:

Figure 3: JESG Data Inputs

Vendor	Corporate/Quasi-Sovereign	Sovereign
Sustainalytics	Corporate ESG Rating	Country Risk Monitor
RepRisk	Average of the Current RepRisk Index and the RepRisk Rating $= [(100 - \text{Current RRI}) + \text{RepRisk Rating}] / 2$	N/A
Verisk Maplecroft	N/A	Sovereign ESG Rating
Climate Bonds Initiative (CBI)	Labelled Green bonds	

Source: J.P. Morgan. For more information, please refer to the Appendix.

## JESG Index Scores

### Normalizing the inputs

For corporate and quasi-sovereign issuers, the ESG scores from RepRisk and Sustainalytics are transformed to a range of 0-100 using a normal distribution function, with 100 being the best possible score. For sovereign issuers, no transformation is applied to the ESG scores from Maplecroft and Sustainalytics.

### Finalizing the JESG index score

- Corporate and quasi-sovereign issuers: a simple average of each issuer’s normalized RepRisk and Sustainalytics score is taken to produce the daily JESG index rank. The final JESG index score incorporates a 3-month rolling average of the daily rank in order to smooth any noise in the input data.
- Sovereign issuers: a simple average of each country’s Verisk Maplecroft and Sustainalytics score is taken to produce the final JESG index score.

### Waterfall scoring logic

Alternative issuer-level scores will be used for the JESG score calculation if coverage from the ESG score providers is missing:

- If a quasi-sovereign issuer is not covered by one or both of the input ESG score providers, the respective sovereign’s ESG score is utilized. Where a quasi-sovereign is not covered by RepRisk, the respective Maplecroft sovereign score will be used.
- If a corporate issuer is not covered by one or both of the input ESG score providers, the region-sector average ESG rank is utilized. This is calculated at the provider level as needed and will only be used when the region-sector grouping has at least three issuers. If there are fewer than three issuers, the sector average ESG rank is instead utilized.

## Integration Mechanics

### Implementation of bands

The JESG score of each issuer defines which quintile band it falls within. The band functions as a scalar/multiplier that determines the weight an issuer receives in the JESG index relative to the baseline benchmark, as outlined in Figure 4.

Figure 4: JESG Scalers

Issuer Band	Corporate & Quasi-Sovereign		Sovereign	
	JESG score	Scalar applied to baseline index MV	JESG score	Scalar applied to baseline index MV
1	≥ 80	100%	≥ 80	100%
2	≥ 60, < 80	80%	≥ 60, < 80	80%
3	≥ 40, < 60	60%	≥ 40, < 60	60%
4	≥ 20, < 40	40%	≥ 30, < 40	40%
5	< 20	excluded	< 30	excluded

Source: J.P. Morgan.

### Treatment of labelled bonds

The JESG methodology increases the weight of green bonds to incentivize sustainable financing aligned with climate change solutions. If an instrument is categorized as green by the CBI, the bond will receive a one-band upgrade. For example, any green bond issued by a Band 3 issuer will be promoted to Band 2, whereas conventional bonds from the same issuer will remain in Band 3. Green bonds by issuers in Band 1 will not receive any further upgrade. This approach effectively provides positive screening benefits to green bond issuance by increasing their weight relative to conventional bonds issued by the same entity.

## Product Involvement Screening and Exclusions

- Issuers that fall into Band 5 will be excluded from the JESG benchmarks. Green bonds from these issuers will still be eligible for index inclusion due to the one-band upgrade.
- Corporate and quasi-sovereign issuers with revenue derived from thermal coal, oil sands, weapons, and/or tobacco are excluded. Figure 5 provides additional disclosure as to how these exclusions are applied. Data for these exclusions is sourced from Sustainalytics. Green bonds from issuers involved in thermal coal or oil sands remain eligible for JESG inclusion to incentivize transition to less pollutive revenue streams. For more information on Sustainalytics' definition of controversial weapons, please see the Appendix.
- Corporate and quasi-sovereign issuers that are deemed non-compliant with the UN Global Compact (UNGC) principles are excluded. An issuer must be flagged by both Sustainalytics and RepRisk as being in violation/non-compliant of the UNGC principles before they are excluded. For more information on how Sustainalytics and RepRisk determine violation/non-compliance with the UNGC, please see the Appendix.
- If the central government debt of a country is subject to economic sanctions (primary or secondary markets) by either the U.S, EU or UN, all sovereign and quasi-sovereign issuance from the sanctioned country will be removed from the JESG indices.

An issuer that is excluded from the JESG indices will not be eligible to re-enter the benchmark for at least 12 months after the time of its initial exclusion.

Figure 5: Categories of Involvement and Exclusion Thresholds

Category	Category of Involvement	Sustainalytics Involvement ID	Description	Revenue Threshold
Oil Sands	Extraction	173012171899	The company extracts oil sands.	0%
Thermal Coal	Extraction	172811112999	The company extracts thermal coal.	0%
	Power Generation	172813112999	The company generates electricity from thermal coal.	0%
Tobacco	Production	172911112999	The company manufactures tobacco products.	0%
Military Contracting	Weapons	172111112999	The company manufactures military weapon systems and/or integral, tailor-made components or these weapons.	10%
Small Arms	Civilian customers (Assault weapons)	171711112999	The company manufactures and sells assault weapons to civilian customers.	0%
	Military/law enforcement customers	171713112999	The company manufactures and sells small arms to military/law enforcement.	10%
	Key components	171715112999	The company manufactures and sells key components of small arms.	0%
Controversial Weapons	Civilian customers (Non-assault weapons)	171721112999	The company manufactures and sells small arms (Non-assault weapons) to civilian customers.	0%
	Tailor-made and essential	171611102999	The company is involved in the core weapon system, or components/services of the core weapon system that are considered tailor-made and essential for the lethal use of the weapon.	0%

Source: J.P. Morgan and Sustainalytics.

## Calculate New Benchmark Weights

Once the final constituent list has been determined, the bond-level weights are assigned pro rata to market capitalization. For example, an issuer in Band 3 will inherit 60% of their baseline index market value. This calculated market value determines the weight of each constituent in the JESG index.

Countries in the JESG GBI-EM will be capped at 10%.

## Rebalancing Rules

### Timing of additions/removals of instruments

The JESG bands rebalance quarterly at the following dates:

- January month-end
- April month-end
- July month-end
- October month-end

ESG data for corporates and quasi-sovereigns is consumed with a one-month lag, while sovereign JESG bands are rebalanced using the most recent scores from each vendor.

Note that this quarterly rebalance only applies to JESG score/band changes; composition and reference data changes in the underlying conventional index as a result of capital market activity (e.g. new bonds, taps, tenders etc.) will be reflected on a monthly basis (end-of-month rebalance).

## Quarterly Rebalance Events

### Promotion/Demotion into/out of JESG bands

If an issuer is eligible for a different band than the one it is currently in, it will be moved into the new band at the next quarterly rebalance date. As per index rules, any change in the JESG band will also impact the green bonds issued by the respective issuer. Issuers that are excluded from the JESG indices at the quarterly rebalance date are not eligible to re-enter for at least 12 months.

An issuer must enter a new score quintile by at least one (1) point in order to become eligible for a band change. For example, an issuer in Band 1 will only fall into Band 2 if its score drops below 79, and an issuer in Band 2 will only rise into Band 1 if its score rises above 81.

Figure 6: JESG Band Thresholds

Issuer Band	Corporate & Quasi-Sovereign		Sovereign	
	Score Threshold to Receive Upgrade	Score Threshold to Receive Downgrade	Score Threshold to Receive Upgrade	Score Threshold to Receive Downgrade
1	-	79	-	79
2	81	59	81	59
3	61	39	61	39
4	41	19	41	29
5	21	-	31	-

Source: J.P. Morgan.

### Exclusions for product involvement

If an issuer is eligible for exclusion due to changes in its product involvement exposure, the action will take place at the next quarterly rebalance date. The issuer will thereafter not be eligible to re-enter the JESG benchmark for at least 12 months.

## Intra-Quarter Rebalance Events

### Inclusion/Exclusion based on sanctions

If an issuer is eligible for exclusion based on economic sanctions, the exposure of the sanctioned issuer will be removed from the JESG indices starting at the following month's rebalance. For large exposures, a tapered reduction approach will be considered in consultation with investors. The issuer will not be eligible to re-enter the benchmark for at least 12 months after the time of its exclusion.

### Green bond changes

Updates to the CBI Green Bond Database will be reflected in the index at the next monthly rebalance. For example, conventional bonds that are newly marked as green will receive a one-band upgrade at the next rebalance after the change.

## Historical Rule Changes

Figure 7: History of JESG Rule Changes

Effective Date	Rule Change
September 4, 2019	United Nations Global Compact violators will need to be flagged by both vendors (Sustainalytics and RepRisk), versus just one, for an issuer to be excluded.
September 4, 2019	Green bonds from issuers with JESG scores below 20 or with revenues from thermal coal will now be eligible within the JESG index suite. In-line with the JESG green bond rules, these green bonds will receive a one-band upgrade from the issuer's JESG band.
September 4, 2019	The JESG indices will allow issuers that earn revenue from non-weapons-based military contracts or issuers with tobacco-related revenue to be included. Issuers that have direct involvement in weapons development and tobacco manufacturing will remain ineligible for the JESG index suite.
September 18, 2020	JESG band (i.e. ESG rank quintile) changes and corresponding index weight changes will be reflected only on a quarterly basis effective from December 31st, 2020.
September 18, 2020	Issuers with any exposure to oil sand assets will be excluded from JESG indices.
September 18, 2020	Green bonds from issuers with revenues from oil sands now be eligible within the JESG index suite. In-line with the JESG green bond rules, these green bonds will receive a one-band upgrade from the issuer's JESG band.
October 4, 2022	The quarterly rebalance schedule of JESG bands will be shifted forward by one month to January, April, July and October.
October 4, 2022	Issuers deriving less than 10% of revenue from military contracting and small arms sales will become eligible for JESG indices.
October 4, 2022	If the central government debt of a country is subject to economic sanctions (primary or secondary markets) by either the U.S, the EU or the UN, all sovereign and quasi-sovereign issuers from the sanctioned country will be removed from the JESG indices.
January 13, 2023	Existing index issuers will be required to enter a new score quintile by more than one (1) point in order to change JESG bands.
April 18, 2023	Maplecroft Sovereign ESG Ratings will replace the RepRisk Country RRI within the sovereign JESG scores from July 31st 2023. For sovereign issuers, a simple average of each country's Verisk Maplecroft and Sustainalytics score is taken to produce the final JESG index score. No normalization or three-month rolling average is applied. In addition, the score threshold for index inclusion is now 30, increased from 20.

Source: J.P. Morgan.



## Index Governance

J.P. Morgan’s Global Index Research Group (GIRG) has established the Index Governance Review process to solicit comments and feedback from index users on various index topics that can include potential changes related to index rules, conventions, and overall governance of J.P. Morgan’s benchmark indices in accordance with guidelines recommended in the EU/UK BMR and IOSCO principles for financial benchmarks. During the consultation process, feedback will be gathered by GIRG via solicited and unsolicited client, consultant, and other interested party conversations and written communications. The comments collected from these external parties will be considered by GIRG, which makes decisions on the discussed topics and communicates them to the market through the appropriate communication channels.

The methodology documents will be modified whenever a rule change occurs, compatibly with the rules and principles governing the index team.

## Where to Find the JESG Indices

Figure 8: How to Access the JESG Indices

Platform	Link	Index Content
Morgan Markets	<a href="http://www.morganmarkets.com">www.morganmarkets.com</a>	Downloadable files of daily and historical instrument returns, statistics and compositions
DataQuery	<a href="http://www.jpmm.com/#dataquery">www.jpmm.com/#dataquery</a>	User-specific queries, giving access to historical indices' statistics
Bloomberg	<JPMX> : <ESG>	Directory page for all J.P. Morgan JESG Index stats and closing levels

Source: J.P. Morgan.

## Appendix

### Third-Party ESG Data Methodologies

- RepRisk: For more information on the RepRisk Index, please visit [www.reprisk.com/news-research/resources/methodology](http://www.reprisk.com/news-research/resources/methodology)
- Sustainalytics: For more information on Sustainalytics, please visit [www.sustainalytics.com](http://www.sustainalytics.com)
- Verisk Maplecroft: For more information on Maplecroft's Sovereign ESG Rating methodology, please visit [www.maplecroft.com/siteassets/images/pdfs/VM\\_Sovereign\\_ESG\\_Ratings\\_Methodology.pdf](http://www.maplecroft.com/siteassets/images/pdfs/VM_Sovereign_ESG_Ratings_Methodology.pdf)
- Climate Bonds Initiative (CBI): For more information on the Green Bond Database methodology, please visit [www.climatebonds.net/market/green-bond-database-methodology](http://www.climatebonds.net/market/green-bond-database-methodology)

### Third-Party Screening Definitions

#### United Nations Global Compact Screening

Corporate and quasi-sovereign issuers that have been deemed non-compliant with the UN Global Compact (UNGC) principles are excluded. An issuer must be flagged by both Sustainalytics and RepRisk as being in violation/non-compliant before they are excluded. For more information, please refer to [www.unglobalcompact.org](http://www.unglobalcompact.org).

- Sustainalytics analyses publicly reported allegations of adverse impacts caused by businesses and provides assessments based on principles recognized under the UN Global Compact principles as well as underlying conventions and authoritative guidelines, such as the OECD MNE Guidelines and the UNGPs. The terms Watch list and Non-Compliant should be understood to be Sustainalytics' opinion and a normative assessment of a company with regard to the UN Global Compact principles.
- RepRisk classifies companies as "UNGC Violators" if they have had a significant and credible exposure to ESG risk incidents associated with one or more of the ten UNGC Principles. The underlying risk metric of the RepRisk UNGC Violator Flag is the RepRisk UNGC Violator Index (UNGC VI), which is based on the ESG risk incidents related to a company over the previous two years. Very severe risk incidents are given a higher importance than severe and less severe risk incidents. Further, the UNGC VI underweights risk incidents reported in less influential sources.

#### Controversial Weapons Screening

Controversial weapons are weapons that have a disproportionate and indiscriminate impact on civilian populations, sometimes even years after a conflict has ended. The principles of 'distinction' and 'proportionality' are key concepts in International Humanitarian Law, which regulates the methods as well as the means of warfare. Figure 8 below details the definitions applied by Sustainalytics for controversial weapons.

Sustainalytics captures both Essential (Key) and Tailor-made (Dedicated) use:

- Essential (Key): components or services that are considered essential for the lethal use of the weapon or weapon system
- Tailor-made (Dedicated): components or services that are considered tailormade for the weapon or weapon system

Figure 9: Controversial Weapons Definitions

Sub-category	Definition Utilized by Sustainalytics
Anti-personnel mines	1997 Ottawa (Mine-Ban) Treaty. <a href="http://www.apminebanconvention.org/">http://www.apminebanconvention.org/</a>
Biological and chemical weapons	Sustainalytics utilizes the definitions outlined in the 1972 Biological and Toxin Weapons Convention (BTWC) and the 1993 Chemical Weapons Convention (CWC). <a href="http://www.un.org/disarmament/WMD/Bio/">http://www.un.org/disarmament/WMD/Bio/</a> <a href="http://www.opcw.org/chemical-weapons-convention/">http://www.opcw.org/chemical-weapons-convention/</a>
Cluster weapons	2008 Convention on Cluster Munitions (CCM), which outlines seven criteria to define a cluster weapon, besides weight and submunition quantity. <a href="http://www.clusterconvention.org/">http://www.clusterconvention.org/</a>
Depleted Uranium	Sustainalytics uses a broad definition of DU, i.e. with U-235 concentrations of 0.7% or lower. The current findings of Sustainalytics would not have been different if the company had used a narrower definition given that there is in practice not much debate about classifying DU ammunition. There is currently no convention or legal framework illegalising or regulating depleted uranium.
Nuclear weapons	As the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT) does not contain a definition, Sustainalytics bases its definition of a nuclear weapon on the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Tlatelolco). <a href="http://disarmament.un.org/treaties/t/tlatelolco">http://disarmament.un.org/treaties/t/tlatelolco</a>
White Phosphorus	A WP munition is any projectile (e.g. flares, grenades, or mortars) that is equipped with WP, in order to act as a smoke-producing agent, or as tracer, illumination, or incendiary munition. There is currently no convention or legal framework comprehensively illegalizing or regulating white phosphorus.

Source: J.P. Morgan and Sustainalytics.

### Third-Party ESG Data Definitions

Figure 10 lists the definitions of key RepRisk data inputs.

Figure 10: RepRisk Data Definitions

Datapoint	Definition
RepRisk Index (RRI)	The RRI is a measure of the reputational risk exposure related to ESG issues of a company or project.
Current RRI	Deontes the current RRI or reputational risk exposure related to ESG issues over the last two years.
RepRisk Rating	The RepRisk Rating is determined by two factors, the Peak RRI and the derived country-sector value.

Source: J.P. Morgan and RepRisk.

The RepRisk Rating is converted into a numerical equivalent based on the following table:

Figure 11: RepRisk Conversion Table

RepRisk Rating	Numerical Equivalent
AAA	95
AA	85
A	75
BBB	65
BB	55
B	45
CCC	35
CC	25
C	15
D	5

Source: J.P. Morgan.

### Climate Bonds Initiative (CBI)

The CBI screens self-labeled debt instruments with 100% use of proceeds dedicated to green activities, assets, projects, and/or expenditures to identify bonds and other debt instruments as eligible for inclusion in the CBI Green Bond Database (GBDB). The screening seeks to determine alignment to the Climate Bonds Taxonomy and requires sufficient public disclosures. For more information, please refer to [www.climatebonds.net/market/green-bond-database-methodology](http://www.climatebonds.net/market/green-bond-database-methodology).

### Data Integrity Disclosure

Where a GIRG Administered Index pursues environmental, social or governance (ESG) objectives, the Administrator is, wholly or in part, reliant on public sources of information and other third party sources. Further, the ability of the Administrator to verify such objectives may be limited by the integrity, quality, and detail of the data available in respect of the underlying constituents at the relevant point in time and the status and evolution of global laws, guidelines, regulations, and market practice in relation to the preparation, tracking and provision of such data. Therefore, such disclosures are made on a commercially reasonable efforts basis and are subject to change. In particular, new laws, guidelines or regulations may be introduced in relation to the methodology used to provide corporate ESG ratings which could impact the Administrator’s [ESG Index Score] and cause it to change. ESG data may be inconsistent across providers. The Administrator’s [ESG Index Score] and related disclosures are also subject to change as a result of periodic reviews conducted by the Administrator in relation to the sources of ESG data.

In calculating the [index] in line with the methodology articulated [herein], JPM relies on the data provided by the [ESG data providers]. JPM does not independently source its own ESG data or exercise any discretion with respect to the substitution of third party ESG data. The integrity of the ESG data sourced from third parties is limited by the ability of those providers to source accurate data on the ESG performance of certain corporate structures, such as parent versus subsidiary, including SPVs, holding company versus operating company and the activities of any affiliated entities and derived structures. Further, ESG data pertaining to sovereign issuers is limited to the sourcing of ESG performance data at the level of the relevant country. The current data integrity landscape means it is not possible to screen all issuers for exclusion (e.g. issuers other than corporate and quasi-sovereign issuers). Issuers in respect of whom ESG data is limited may still be included in the index.

## Disclosures

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