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. The JESG methodology uses a multidimensional approach, incorporating ESG integration, best-in-class, negative and positive screening into a single benchmark. JESG Scores are available for 170+ countries and 6,000+ corporates. Our Index Specialists incorporate independent and reputable third party ESG vendor data into a proprietary methodology that allows us to rank more than 10,000 bonds daily.

J.P. Morgan ESG indices implement a balanced ESG overlay, using scores based on a combination of qualitative and quantitative approaches that select companies without deviating from the profile of the asset class.

### Qualitative

**Positive Screening**
- Green Bonds
- Strict criteria as adopted by Climate Bonds Initiative

**Negative Screening**
- Weapons, Oil Sands, Thermal Coal, and Tobacco
- UN Global Compact Violators

### Quantitative

**Fundamental Research**
- Scores by Sustainalytics
- Track record of 25+ years
- Coverage of nearly 13,000 companies across 138 sub-industries

**Big Data Algorithms**
- Scores by RepRisk
- Search and interpret negative ESG news
- Extensive coverage of Fixed Income universe

### Translating Concepts into Products

**Establish Index Scores and Issuer Bands**
- Score Normalisation
- 3-month rolling average
- Bucketing into bands (1 - 5, with 1 being the best)

**Score Integration**
- JESG Score bands assign higher weights to issuers with better ESG scores

**Green Bond Incentives**
- CBI classified green bonds receive an increased weight allocation

**Ethical & Negative Screening**
- Issuers involved in Weapons, Oil Sands, Thermal Coal, and Tobacco
- UNGC violators

**Best in Class**
- Issuers in Band 5 (worst ESG performers) are not eligible for the JESG suite of indices
J.P. Morgan’s Index Research team recently published its JESG Year in Review 2021 which shows the performance of the JESG indices relative to their respective baseline benchmarks in 2021. It highlights that despite the turbulence in the markets, asset under management for ESG indices continues to rise and is now close to US$38 billion. In addition to our current JESG product suite, there are several others in the pipeline.

**JESG Index Product Suite**

**JESG EMBI**

The JESG EMBI builds on the popular J.P. Morgan EMBI Global Diversified Index (EMBI GD) to provide investors with an ESG benchmark that provides full coverage of the EM sovereign and quasi-sov asset class. In 2021, the JESG EMBI trailed the baseline for the first time since 2016, as Band 1 issuers underperformed.

"Responsible investing is now central to many of our clients’ investment strategies. J.P. Morgan is committed to strengthening the partnership with our clients to help integrate and facilitate ESG solutions into their investment process.”

_Gloria Kim_,
Global Head of Index Research

**JESG GBI-EM**

JESG GBI-EM offers an ESG tilt on the well-established local government GBI-EM Global Diversified index. In 2021, the JESG GBI-EM underperformed its baseline benchmark as longer maturity bonds weighed on index return.

**JESG GCI**

JESG GCI is the latest expansion to the JESG index suite. This index is among the first ESG benchmarks to cover the global corporate debt markets. In 2021, JESG GCI closely trailed the baseline benchmark amidst a difficult year for Band 1 issuers.

**JESG CEMBI**

The JESG CEMBI offers an ESG overlay to the widely followed J.P. Morgan CEMBI Broad Diversified Index. The baseline is the first comprehensive USD corporate emerging markets bond index. In 2021, the JESG CEMBI saw positive returns across all ESG bands, with the strongest performance coming from Band 4 issuers.

**JESG JACI**

JESG JACI is a first of its kind ESG benchmark aligned to Asia credit. In 2021, quasi-sovereign returns in the JESG JACI surpassed both sovereign and corporate returns.

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**$38 billion AUM**

Benchmarked against JESG indices so far

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**Coming Soon**

- New JESG products
- New ESG research publications
- Partnerships with leading ESG institutions
- New ESG capabilities and analytics
- Launch of new public website
Historical performance of JESG indices are aligned to the baseline indices

<table>
<thead>
<tr>
<th>Year</th>
<th>GBI-EM GD</th>
<th>JESG GBI-EM GD</th>
<th>CEMBI BD</th>
<th>JESG CEMBI BD</th>
<th>EMBIG Div.</th>
<th>JESG EMBI</th>
<th>JACI</th>
<th>JESG JACI</th>
<th>GCI IG</th>
<th>JESG GCI IG</th>
<th>GCI HY</th>
<th>JESG GCI HY</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>-9.0%</td>
<td>-8.0%</td>
<td>-0.6%</td>
<td>-0.2%</td>
<td>-5.3%</td>
<td>-5.0%</td>
<td>-1.4%</td>
<td>-1.0%</td>
<td>1.2%</td>
<td>1.5%</td>
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<td>7.5%</td>
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<tr>
<td>2014</td>
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<td>-6.1%</td>
<td>5.0%</td>
<td>4.1%</td>
<td>7.4%</td>
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<td>8.3%</td>
<td>3.7%</td>
<td>3.3%</td>
<td>0.8%</td>
<td>0.8%</td>
</tr>
<tr>
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<td>-15.4%</td>
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<td>1.5%</td>
<td>1.2%</td>
<td>1.1%</td>
<td>2.8%</td>
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<td>-4.5%</td>
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<tr>
<td>2017</td>
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<td>15.6%</td>
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<td>10.3%</td>
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<td>5.8%</td>
<td>9.1%</td>
<td>9.3%</td>
<td>10.3%</td>
<td>10.3%</td>
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<tr>
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<td>-1.4%</td>
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<td>-0.9%</td>
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<td>-3.7%</td>
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<td>15.9%</td>
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<td>11.2%</td>
<td>11.1%</td>
<td>11.0%</td>
<td>13.6%</td>
<td>13.3%</td>
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<td>7.1%</td>
<td>7.1%</td>
<td>5.3%</td>
<td>5.8%</td>
<td>6.3%</td>
<td>6.2%</td>
<td>10.3%</td>
<td>10.2%</td>
<td>7.6%</td>
<td>7.8%</td>
</tr>
<tr>
<td>2021</td>
<td>-8.7%</td>
<td>-9.5%</td>
<td>0.9%</td>
<td>0.8%</td>
<td>-1.8%</td>
<td>-2.3%</td>
<td>-2.4%</td>
<td>-2.8%</td>
<td>-3.0%</td>
<td>-3.2%</td>
<td>1.3%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

Annualized Return
-0.9% | -1.0% | 4.6% | 4.5% | 4.0% | 4.2% | 3.9% | 3.8% | 3.2% | 3.1% | 5.1% | 5.2%
Annualized Volatility
11.2% | 11.0% | 5.8% | 5.7% | 7.9% | 7.5% | 4.1% | 4.1% | 5.1% | 5.1% | 7.1% | 7.1%
Sharpe Ratio
-0.08 | -0.09 | 0.8 | 0.79 | 0.5 | 0.56 | 0.95 | 0.94 | 0.46 | 0.44 | 0.61 | 0.61

Data as of December 31, 2021.
Source: J.P. Morgan.

Fixed Income ESG Research Publications

**JESG Year in Review 2021**
JESG indices trail their baselines in a challenging year for fixed income assets

**Introducing J.P. Morgan Sovereign Index Carbon Analytics**
This report showcases the key drivers of index carbon footprints from a regional and sovereign issuer perspective

**Introducing the J.P. Morgan ESG Global Corporate Index**
We introduce the JESG GCI, an integrated ESG benchmark covering investment grade and high yield markets across USD, EUR, and GBP currencies

Where to find the JESG Product Suite?

**DataQuery**
jpmm.com (Research > Analytics > DataQuery > Indices > JESG > JPM ESG Index (JESG))

**Morgan Markets**
jpmm.com (Menu > Research & Commentary > Index > J.P. Morgan ESG Index (JESG)) Contains downloadable files of daily and historical country and instrument returns, statistics and compositions

For more information, please contact
J.P. Morgan Global Index Research at index.research@jpmorgan.com;
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