# J.P.Morgan

## Introducing the J.P. Morgan Paris-Aligned CEMBI Broad Diversified Index

Index Methodology and Profile

## **Highlights**

This J.P. Morgan Paris Aligned CEMBI Broad Diversified Index (JPM PAB CEMBI) Factsheet should be read in conjunction with the J.P. Morgan Paris Aligned and Climate Transition Benchmarks Rules and Methodology which can be found on our public website (<u>link</u>).

The JPM PAB CEMBI Index applies the J.P. Morgan Paris-Aligned and Climate Transition Benchmarks Rules and Methodology overlay to the flagship J.P. Morgan CEMBI Broad Diversified (CEMBI) Index (<u>link</u>), the Parent Index.

The JPM PAB CEMBI tracks the performance of US dollar-denominated bonds issued by Emerging Market corporate entities, and is designed to reflect the minimum technical requirements as set out by the European Commission's Delegated Act (Delegated Act).<sup>1</sup>

JPM PAB Indices seek at least a 50% absolute GHG emissions reduction compared to the corresponding Parent Index and apply at least a 7% reduction on average per annum. JPM PAB Indices use the 1.5°C temperature scenario, with no or limited overshoot referred to in the Special Report on Global Warming of 1.5 °C from the Intergovernmental Panel on Climate Change (IPCC), as the reference scenario to construct the index methodology.

The JPM PAB CEMBI Index selects, weights and excludes constituents with the aim that the resulting emissions of the remaining underlying constituents as a whole will be aligned with the objectives of the Paris Agreement adopted under the United Nations Framework Convention on Climate Change, ratified by the European Union on 5 October 2016 (the Paris Agreement). The Paris Agreement seeks to limit global warming to well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 degrees Celsius.

The returns and statistics for the JPM PAB CEMBI Index are available since December 2021.

At launch, the JPM PAB CEMBI Index covers over US\$825 billion in emerging market corporate debt stock. The benchmark tracks 1,324 bonds from 548 issuers across 55 countries.

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1. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R1818&secureweb=prime

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### **Index Criteria**

Instrument Type	Includes both fixed and floating rate securities along with capitalizing/amortizing bonds or loans. Excludes convertibles, inflation-linked instruments, and defaulted bonds.*
Issuer Type	Corporate issuers and Quasi-Sovereigns that are less than 100% government owned
Issuer Country of Risk	Issuers must be: • Country of risk of the guarantor (must be 100%), or • Country where majority of issuer's assets are located, or • Country where issuer's operating headquarters is located, and centralized decision- making occurs. EM country/economy is defined as a distinct list of countries in the following regions: Asia ex Japan/Australia/New-Zealand, Latam, Eastern Europe, Middle East/Africa
Remaining Maturity	Only those instruments with at least 2.5 years until maturity are considered for inclusion. Once added, an instrument may remain in the index until 6 months before it matures.
Amount Outstanding	Only issues with a current face amount outstanding of US\$300 million or more are considered for inclusion
Currency	Only USD denominated bonds are included. Instruments where the amount of coupon or redemption payment is linked to an exchange rate are not eligible for inclusion.
xcluded instruments are no	ot excluded based on E, S and / or G considerations.

## **Key Performance Metrics**

Metric	PAB CEMBI	CEMBI BD*
TR 2022	-11.31%	-12.26%
TR 2023	8.17%	9.08%
TR 2024 YTD	8.41%	8.22%
Cumulative Return	4.00%	3.57%
Annualized Return	1.35%	1.21%
Annualized Volatility	6.91%	7.29%
Sharpe Ratio	-0.37	-0.37
Yield	6.30	6.30
Duration	3.63	4.22
Coupon	5.07	5.20

Data as of November 29, 2024.

\*Stats presented assuming inception date of December 2021.

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## **JPM PAB Overlay Criteria**

The JPM PAB CEMBI Index applies J.P. Morgan Paris-Aligned and Climate Transition Benchmarks Rules and Methodology overlay (<u>link</u>) as an overlay to the flagship J.P. Morgan CEMBI Broad Diversified (CEMBI) Index (<u>link</u>).

For details on the ESG data providers, decarbonisation mechanisms and exclusions used in the determination of the JPM PAB CEMBI, please refer to the J.P. Morgan Paris-Aligned and Climate-Transition Benchmarks Rules and Methodology.

ESG data providers	Sustainalytics Moody's			
Baseline Exclusions	<ul> <li>Issuers with revenue from the following activities:</li> <li>Controversial weapons</li> <li>Tobacco</li> <li>Issuers not in compliance with the UN Global Compact principles</li> <li>Issuers found to significantly harm one or more of the environmental objectives referred to in Article 9 of Regulation (EU) 2020/852 of the European Parliament and of the Council (EU Taxonomy)</li> </ul>			
Activity Exclusions	<ul> <li>Issuers with revenue from the following activities:</li> <li>≥ 1 % from exploration, mining, extraction, distribution or refining of hard coal and lignite</li> <li>≥ 10% from the exploration, extraction, distribution or refining of oil fuels</li> <li>≥ 50 % from the exploration, extraction, manufacturing or distribution of gaseous fuels;</li> <li>≥ 50% from electricity generation with a GHG intensity of more than 100g CO<sub>2</sub>e/kWh.</li> </ul>			
Baseline Reduction of GHG emissions	50%			
Decarbonization Trajectory	At least 7% year on year red	uction from the Base Yea	ar.	
High Emission and Low Emission Bucket Methodology	and thresholds are defined Emissions Bucket Very High Emissions High Emissions Low Emissions	as: Contribution % to CTB CEMBI emissions ≥ 12 ≥ 3 < 12 < 3	Scalar applied to Parent Index MV 0 1 1	he Emission Bucket scalars Threshold to move into lower bucket % 11 2.5 - ets will be gradually reduced
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	2027 2028 2029 2030	13.31 12.37 11.51 10.70		

Gloria Kim <sup>AC</sup> (1-212) 834 gloria.m.kim@jpmorgan J.P. Morgan Securities I Sanjay Rao (44-20) 7742 sanjay.rao@jpmorgan.c	1.com LLC 2-9930	Maria A Aklilu (1-212) 834-4077 maria.aklilu@jpmorgan.com Lydia Harvey (44-20) 3493-1626 Iydia.harvey@ipmorgan.com	Global Index Research Introducing the J.P. Morga Aligned CEMBI Broad Div Index 9 December 2024	
Rebalancing Rules	Monthly If an issuer Exclusions, eligibility oc If an issuer changes in i moved into Composition market active continuing enter Semi-Annual The JPM P/	is eligible for exclusion due to changes in th the action will take place at the next monthl curs. is eligible for a different Emission Bucket the issuance or the issuer's contribution to the J the new Emission Bucket at the next month n and reference data changes in the underly vity will be taken into account on a monthly b	the Baseline Exclusions or Activity by rebalance date after the change in an the one it is currently in, due to JPM PAB CEMBI Emissions, it will be ly rebalance. ying Parent Index as a result of capital basis when considering the issuers anuary month-end and July month-end	

Source: J.P. Morgan

## Index Characteristics and Methodology

The following sections set out information on the characteristics and methodology of the underlying Parent Index, the J.P. Morgan CEMBI Broad Diversified (CEMBI) Index (<u>link</u>).

Pricing:	Bid and Ask prices are taken from a third-party pricing source PricingDirect.
Aggregate Return:	Index/Country level total return is calculated as a market-weighted average of bond returns using bid side prices.
Rebalancing:	Rebalances on the last US business day of the month.
Coupon Treatment:	All coupons received are immediately reinvested into the index.
FX Rates:	All FX rates used for hedged/unhedged returns are as of 4pm London time provided by WM/Reuters.
Hedging Strategy:	Assume a 1-month currency forward position that begins on rebalance day and ends on next rebalance day.
Weighting:	Market capitalization-based weighting.
Holiday Calendar:	Follows US bond market calendar set by Emerging Markets Trader Association (EMTA).
Ratio between the market value of the securities in this Index and those in the CEMBI BD Index	68.10% (as of November 2024)
Bloomberg Ticker	JBCDPAB

Source: J.P. Morgan

#### Defining the universe of eligible countries

The index suite includes a specific set of Emerging Market countries, which is currently a distinct set of countries falling in Asia ex Japan/Australia/New Zealand, Latin America, Eastern Europe, Middle East/Africa.

#### **Instrument Type**

The PAB CEMBI Index includes both fixed and floating rate instruments, as well as capitalizing/amortizing bonds. Bonds with embedded options and warrants are eligible for inclusion if a) the options/warrants are attached to instruments that would otherwise be included in the index and b) the quotation convention—as recommended by the Emerging Markets Traders Association (EMTA)—is for instrument prices to be quoted cumulative options or warrants. Convertible bonds are not eligible for inclusion into the index.

A default event will force the removal of the affected instrument from the PAB CEMBI Index. The issuer will be removed at the month-end during the rebalancing period.

A default event is deemed to occur if any one of the following conditions is met:

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- Issuer failed to pay a scheduled interest or principal payment on an instrument within the grace period,
- Instruments that fall under the cross-default provision,
- Issuer has completed a distressed exchange,
- Issuer has filed for Bankruptcy and the issuance is in scope for legal actions,
- One or more of the credit rating agencies (S&P, Moody, or Fitch) has downgraded the instrument level rating to credit default (or equivalent).

#### Issuer Type and Country of Risk

Bonds are eligible for inclusion in the PAB CEMBI Index if:

- The issuance is 100% guaranteed by an entity within an Emerging Markets economy, or
- Majority of issuer's assets are located in Emerging Markets economy, or
- Issuer's operating headquarter is located, and centralized decision making occurs in Emerging Markets economy.

Emerging Market (EM) / Developed Market (DM) Index eligibility of multi-national companies with geographically diverse exposures will be assessed based on the guarantor, assets, or location of headquarters (decision-making center). Please note that this framework is intended solely to handle those cases where the 'Country of Risk' assignment (and consequently EM vs DM classification) for a given company cannot be unequivocally inferred from reference data sources.

#### Index rebalancing rules

Index rebalancing occurs monthly on the last US business day of each month. A new bond issue that meets the index inclusion criteria will be assessed for inclusion at the month-end rebalance provided its settlement date falls on or before the month-end rebalance date of the same month ("settlement date rule"). Bonds that fail to comply with the index criteria will be removed. Full or partial calls, taps or buybacks, and any rating changes are also reflected at this time.

An exception concerns Reg S securities. An instrument that is issued purely in reliance on Regulation S of the US Securities Act of 1933 and not pursuant to Rule 144A will be ineligible for inclusion in the index until it is seasoned (that is, until the expiration of the relevant Regulation S restricted period). The date at which the seasoning restriction is lifted will effectively be the new "issue" date, at which point the settlement date rule will apply.

Fully called bonds are removed from the index in the current month if the call date falls before the following month-end rebalance.

A specific case is a new issue that is released as part of a debt exchange program. At the month-end rebalancing date immediately following this event, the amount of debt retired in this exchange would be removed from the index, and the new issue would be added to the index (provided official exchange results are made available in a timely manner).

#### Weighting Methodology

The PAB CEMBI Index applies a decarbonization and screening methodology to comply with the minimum technical requirements as set out by the Delegated Act. The PAB CEMBI Index applies the J.P. Morgan Paris-Aligned Benchmarks (JPM PAB) Methodology (<u>link</u>) overlay to the flagship J.P. Morgan CEMBI Broad Diversified (CEMBI) Index (<u>link</u>).

The flagship CEMBI Index diversification methodology anchors on the average size of the countries in the index and the debt stock size of the largest country in the index by only including a specified portion of these countries' eligible current face amounts of debt outstanding. Once

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sanjay.rao@jpmorgan.com lydia.harvey@jpmorgan.com 9 December 2024 these country level allocations are derived for each country, the current settlement price for each instrument within each country is applied to its index allocation to calculate the market capitalization of each instrument in the index. The weight of each instrument in the index is then determined by dividing its market capitalization by the total market capitalization for all of the index's instrument allocations. The result represents the weight of each issue expressed as a percentage of the index.

The CEMBI Index employs a diversification methodology that focuses on the average size of countries within the index and the debt stock of the largest country. It includes only a specified portion of each country's eligible debt, essentially reallocating excess weight from larger countries in the index to smaller countries in order to achieve a more even distribution. Once these allocations are determined, the current settlement price of each instrument is applied to calculate its market capitalization. The weight of each instrument in the index is then calculated by dividing its market capitalization by the total market capitalization of all instruments.

## Appendix

## Glossary

**Emerging Markets:** A country is classified as Emerging Markets within the J.P. Morgan CEMBI Broad Diversified (CEMBI) Index (link), if it falls within the regions of Asia (ex Japan/Australia/New Zealand), Latin America, Eastern Europe, Middle East and Africa.

**Developed Markets:** A country is classified as Developed Markets within the Markets within the J.P. Morgan CEMBI Broad Diversified (CEMBI) Index (link), if it does not fall into the definition of Emerging Markets above.

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## **ESG Disclosures**

#### EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY

tem 1. Name of the benchmark administrator.	J.P. Morgan Securities LLC
tem 2. Type of benchmark or family of benchmarks. Choose the relevant underlying asset from the list provided in	Paris-Aligned and Climate-Transition Fixed Income Indices
Annex II" of the applicable legislation under EU BMR or UK BMR.	For the purposes of Annex II, the relevant underlying assets are Fixed Income.
tem 3. Name of the benchmark or family of benchmarks.	Paris-Aligned and Climate-Transition Fixed Income Indices Family.
tem 4. Are there in the portfolio of the benchmark administrator any EU Climate Transition Benchmarks, UK Climate Transition Benchmarks, EU Paris-aligned Benchmarks, UK Paris-aligned Benchmarks, benchmarks hat pursue ESG objectives or benchmarks that take into account ESG factors?	Yes
tem 5. Does the benchmark or amily of benchmarks pursue ESG objectives?	Yes, each benchmark within the family of Paris-Aligned and Climate-Transition Fixed Income Benchmarks pursues ESG objectives.
tem 6. Where the response to Item 5 is positive, provide below benchmarks at aggregated level. The ESG factors shall be disclosed at an aggregated weighted a	the details (score) in relation to the ESG factors listed in Annex II for each family of average value at the level of the family of benchmarks
a) List of combined ESG factors1:	Mandatory disclosures of ESG factors as listed in Annex II, for each Benchmark in the Paris- Aligned and Climate- Transition Fixed Income Benchmark family, is available here.
) List of environmental factors <sup>2</sup> :	Mandatory disclosures of environmental factors as listed in Annex II, for each Benchmark in the Paris- Aligned and Climate- Transition Fixed Income Benchmark family, is available <u>here</u> .
:) List of social factors <sup>3</sup> :	Mandatory disclosures of social factors as listed in Annex II, for each Benchmark in the Paris- Aligned and Climate- Transition Fixed Income
,	Benchmark family, is available here.

Alternatively, all of this information may be provided in the form of a hyperlink to a website of the benchmark administrator included in the benchmark statement. The information on the website shall be easily available and accessible. Benchmark administrators shall ensure that the information published on their website remains available for five years.

The score of the ESG factors shall not be disclosed for each constituent of the benchmark but shall be disclosed at an aggregated weighted average value of the benchmark.

a) List of combined ESG factors <sup>5</sup> :	Mandatory disclosures of ESG factors as listed in Annex II, for each Benchmark
	in the Paris- Aligned and Climate- Transition Fixed Income Benchmark family,
	is available here.
b) List of environmental factors6:	Mandatory disclosures of environmental factors as listed in Annex II, for each
	Benchmark in the Paris- Aligned and Climate- Transition Fixed Income
	Benchmark family, is available here.

<sup>&</sup>lt;sup>1</sup> The mandatory factors listed in the UK BMR and EU BMR Benchmark Statement Delegated Act as set out in *Annex II* are not taken into account in the methodology for the benchmarks and information on these mandatory factors is provided for reference purposes only.

<sup>&</sup>lt;sup>2</sup> The mandatory factors listed in the UK BMR and EU BMR Benchmark Statement Delegated Act as set out in Annex II are not taken into account in the methodology for the benchmarks and information on these mandatory factors is provided for reference purposes only.

<sup>&</sup>lt;sup>3</sup> The mandatory factors listed in the UK BMR and EU BMR Benchmark Statement Delegated Act as set out in Annex II are not taken into account in the methodology for the benchmarks and information on these mandatory factors is provided for reference purposes only.

<sup>&</sup>lt;sup>4</sup> The mandatory factors listed in the UK BMR and EU BMR Benchmark Statement Delegated Act as set out in *Annex II* are not taken into account in the methodology for the benchmarks and information on these mandatory factors is provided for reference purposes only.

<sup>&</sup>lt;sup>5</sup> The mandatory factors listed in the UK BNR and EU BMR Benchmark Statement Delegated Act as set out in Annex II are not taken into account in the methodology for the benchmarks and information on these mandatory factors is provided for reference purposes only.

<sup>&</sup>lt;sup>6</sup> The mandatory factors listed in the UK BMR and EU BMR Benchmark Statement Delegated Act as set out in Annex II are not taken into account in the methodology for the benchmarks and information on these mandatory factors is provided for reference purposes only.

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per year since creation;       Benchmark family can be found in the J.P. Morgan Benchmark Statement Annex II PAB/CTB Disclosures, available here.         c) overlap between those benchmarks and their investable universe, as defined in the relevant delegated legislation under EU BMR or UK BMR, using the active share at relevant underlying asset level.       The overlap between these Benchmarks and their investable universe for each Benchmark in the Paris- Aligned and Climate- Transition Fixed Income Benchmark family can be found in the J.P. Morgan Benchmark Statement Annex II PAB/CTB Disclosures, available here.         SECTION 3 - DISCLOSURE OF THE ALIGNMENT WITH THE OBJECTIVES OF THE PARIS AGREEMENT         10. By the date of application of the relevant delegated legislation under EU BMR or UK BMR, for significant equity and bond benchmarks, EU Climate Transition Benchmarks, UK Climate Transition Benchmarks, EU Paris-aligned Benchmarks and UK Paris-aligned Benchmarks, benchmark administrators shall also disclose the following information.         By 31 December 2021, benchmark administrators shall, for each benchmark or, where applicable, each family of benchmarks, disclose the					
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universe, as defined in the relevant delegated legislation under       Benchmark in the Paris- Aligned and Climate- Transition Fixed Income         EU BMR or UK BMR, using the active share at relevant       Benchmark family can be found in the J.P. Morgan Benchmark Statement         underlying asset level.       Annex II PAB/CTB Disclosures, available here.         SECTION 3 - DISCLOSURE OF THE ALIGNMENT WITH THE OBJECTIVES OF THE PARIS AGREEMENT         10. By the date of application of the relevant delegated legislation under EU BMR or UK BMR, for significant equity and bond benchmarks, EU         Climate Transition Benchmarks, UK Climate Transition Benchmarks, EU Paris-aligned Benchmarks and UK Paris-aligned Benchmarks, benchmark administrators shall also disclose the following information.         By 31 December 2021, benchmark administrators shall, for each benchmark or, where applicable, each family of benchmarks, disclose the	c) overlap between those benchmarks and	their investable		ach	
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	By 31 December 2021, benchmark admini	strators shall, for each b	enchmark or, where applicable, each family of benchmarks, disclose the		
	following information:		··· · ·		

<sup>&</sup>lt;sup>7</sup> The mandatory factors listed in the UK BMR and EU BMR Benchmark Statement Delegated Act as set out in Annex II are not taken into account in the methodology for the benchmarks and information on these <sup>8</sup> The mandatory factors listed in the UK BMR and EU BMR Benchmark Statement Delegated Act as set out in Annex II are not taken into account in the methodology for the benchmarks and information on these mandatory factors listed in the UK BMR and EU BMR Benchmark Statement Delegated Act as set out in Annex II are not taken into account in the methodology for the benchmarks and information on these mandatory factors listed in the UK BMR and EU BMR Benchmark Statement Delegated Act as set out in Annex II are not taken into account in the methodology for the benchmarks and information on these mandatory factors is provided for reference purposes only.

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gloria.m.kim@jpmorgan.com maria.aklilu@jpmor J.P. Morgan Securities LLC	gan.com 9 December 2024	0
Sanjay Rao (44-20) 7742-9930 Lydia Harvey (44-20		
sanjay.rao@jpmorgan.com lydia.harvey@jpmo		1
a) Does the benchmark align with the target of reducing carbon emissions or the attainment of the objectives of the	Yes.	
Paris Agreement;	Climate Transition Benchmarks align with the target of reducing carbon	
	emissions.	
	Paris-aligned Benchmarks align with the attainment of the objectives of the	Paris
	Agreement.	
b) the temperature scenario, in accordance with international	The Benchmarks use the reference 1.5 °C temperature scenario with no or	
standards, used for the alignment with the target of reducing GHG emissions or attaining of the objectives of the Paris	limited overshoot, referred to in the Special Report on Global Warming of 1, from the Intergovernmental Panel on Climate Change ("IPCC") as the refere	
Agreement;	temperature scenario.	
c) the name of the provider of the temperature scenario used	The Special Report on Global Warming of 1.5 °C from the Intergovernment	al
for the alignment with the target of reducing GHG emissions or	Panel on Climate Change (the "IPCC").	
the attainment of the objectives of the Paris Agreement d) the methodology used for the measurement of the	Terms not defined below are defined within the J.P. Morgan Paris-Aligned a	and
alignment with the temperature scenario;	Climate-Transition Benchmark Rules and Methodology, available here.	
	Index Construction	
	Index Construction	
	1. Define Data Inputs	
	GHG emissions data for each issuer (Issuer Emissions) is sourced from	
	Moody's. The GHG emissions include scope 1, 2 and 3 emissions and is calculated as tonnes of carbon dioxide equivalent (tCO2e). Issuers with no	
	reported or estimated emissions (across scope 1, 2 and 3) are estimated us	sing
	a waterfall logic.	
	For more information on the data inputs, please refer to the Data Sources a	nd
	Scope section below.	
	Furthering and stall be side	
	Emissions waterfall logic As GHG emissions are an essential input to the JPM PAB and JPM CTB In-	dex
	methodologies, JPM will apply a waterfall logic to estimate emissions where	
	they are missing from Moody's.	
	If a corporate issuer is not covered by Moody's, a regional-sector average is	5
	utilised to estimate emissions using the data available from Moody's on the	
	other relevant issuers. For this calculation, scope 1 and 2 emissions are	
	grouped together, and scope 3 emissions are considered separately.	
	The regional-sector average is calculated by JPM at the issuer level as nee	ded
	(e.g. if only scope 1 and 2 is missing, then the regional-sector average of sc	
	1 and 2 emissions will be applied) and will only be used when the region-se grouping has at least two issuers. If the region-sector grouping has fewer the	
	two issuers, a regional average will be used.	
	The sector and explored a complete for the increase if he takes from its index.	
	The region and sector designation for the issuer will be taken from its index classification in the Parent Index, as detailed in the relevant JPM PAB or JF	
	CTB Index Factsheet here.	
	2. Calculate Depart Index Emissions	
	2. Calculate Parent Index Emissions For the respective Parent Index, the Parent Index Emissions is calculated u	sina
	the absolute GHG emissions in tCO <sub>2</sub> e of each issuer and their index weight	
	the Parent Index. The Parent Index Emissions is calculated as the weighted	
	average absolute emissions, as follows:	
	Parent Index Emissions	
	$\sum_{n=1}^{n} I_{n} = I_{n} = I_{n} = I_{n}$	
	$= \sum_{i=0}^{n} Issuer \ M \ kv \ \%_i * Issuer \ Emissions_i$	
	L=0	
	3. Apply Exclusions	
	Once the requisite exclusions have been applied, a 3% cap on an issuer's	
	weight is applied and the Index Emissions of the resulting JPM PAB or JPM CTB Index are recalculated using the weighted average formula, as follows	
	a reaction and reconcentrated using the weighted average formula, as follows	

9 December 2024 Lvdia Harvev (44-20) 3493-1626 lydia.harvey@jpmorgan.com and JPM CTB Index Base Date Emissions Target and the Annual Emissions Targets. If the JPM PAB or JPM CTB Index Emissions do not meet the required Base Year Emissions Target purely through the application of Baseline Exclusions and Activity Exclusions, then the weight of the High Emission Bucket will be set such that when combined with the Low Emission Bucket, the overall JPM PAB or JPM CTB Index Emissions is lower than or equal to the JPM PAB or JPM CTB Index Base Date Emissions Target. The Multipliers used to determine the weights of the Emission Buckets are calculated using an optimization function that uses the Initial Emission Bucket weights and Bucket Emissions. The optimizer function uses a set of defined constraints to calculate the required Multipliers to meet the Decarbonisation Trajectory. Constraints: 1. *JPM PAB Index Emissions*  $\leq$ min (Parent Index Annual Emissions Target, JPM PAB Annual Index Emissions Target) 2. Emission Bucket  $Weight_{(low)} \geq$ Initial Emission Bucket Weight<sub>(low)</sub> 3.  $\Sigma(Emission Bucket Weights) = 100\%$ Constraints 1 & 2 force the optimizer to only increase the weights of the Low Emissions Bucket when the JPM PAB or JPM CTB Index Emissions are above the Annual Emission Target. If the JPM PAB or JPM CTB Index Emissions are below the Annual Emission Target the results of the optimizer are the Initial emission bucket weights, this prevents the High Emissions Bucket increasing in weight. Constraint 3 requires the index weight to remain at 100% after the optimization. If the optimizer fails, the Low, High and Very High Emissions Buckets will need to re-defined to allow the JPM PAB or JPM CTB Index Emissions to meet the Decarbonisation Trajectory. The required Annual Emission Targets are then met each year by reducing the multiplier applied to the High Emission Bucket, meaning that the relative weight of the High Emission Bucket can be gradually reduced over time to result in a reduction in the JPM PAB or JPM CTB Index Emissions in line with the projections. The following formula illustrates these constraints for a JPM PAB Index:

$$\begin{split} & [Multiplier_{(High \ Emitter \ Bucket)} * \\ & Bucket \ Emissions_{(High \ Emitter \ Bucket)} + \\ & Multiplier_{(Low \ Emitter \ Bucket)} * \\ & Bucket \ Emissions_{(Low \ Emitter \ Bucket)}] \leq \\ & \min (JPM \ PAB \ Index \ Emissions_{t0} * (1 - 7\%)^n, \ 0.5 * \\ & Parent \ Index \ Emissions), \ where \ n \ is \ number \ of \ years. \end{split}$$

Objective Issuer  $Mkv %_{(High Emitter Bucket)}$ + Issuer  $Mkv %_{(High Emitter Bucket)}$ 

+ Issuer  $Mkv \ \%_{(Low \ Emitter \ Bucket)} = 100\%$ 

To reduce turnover between the High Emission and the Low Emission Buckets due to changes in issuance or emissions, the entry threshold will be set higher than the exit threshold for eligibility, i.e. 5% for entry into the High Emission Bucket, 3.5% for any subsequent switch from High Emission Bucket to Low Emission Bucket. For more information, see the Rebalancing Rules below.

7. Calculate New Index Weights

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Sanjay Rao (44-20) 7742-9930 sanjay.rao@jpmorgan.com	Lydia Harvey (44-20) lydia.harvey@jpmor	gan.com Issuer weights are a	Index 9 December 2024 ssigned by renormalizing relative to the total High ssion Bucket weights.	n Emission
		35% and the allowat the Multiplier is appli	otal index weight of issuers in the High Emission le weight of the High Emission Bucket is set at 2 ed, then the final market value for each issuer wi lying its weight by 20/35.	20% after
		This calculated mark final JPM PAB or JP	et value determines the weight of each constitue M CTB Index.	ent in the
			otal Return Using New Index Weights	
		USD, then it needs to	gh Emissions bucket, and has a notional amount o be scaled down by multiplying by 20/35 in the p djusted notional amount:	
		1,000,000,000 * 2	20/35 = 571,428,571	
		Bond Market Value(t above)	) = Bond Dirty Price(t) * Bond Notional Amount (/	Adjusted as
		$\_$ Bond D	ll Return <sub>(t+1)</sub> irty Price <sub>(t+1)</sub> * Bond Notional Amou Dirty Price <sub>t</sub> * Bond Notional Amoun	
			um on day t+1 is calculated as the sumproduct of (t+1), weighted by their Bond Market values on d	
			is the Clean price provided by Pricing Direct as llation plus accrued interest as calculated by the	
		January month-end	ance Events x and JPM CTB Index is rebalanced semi-annua and July month-end to ensure that the JPM PAB TB Index Emissions meet the required Annual Er	Index
			Morgan Paris-Aligned and Climate-Transition Bei ogy for more information, available <u>here</u> .	nchmark
e) the hyperlink to the website of the tempe used;	erature scenario	https://www.ipcc.ch/s		
Date on which information has last beer reason for the update:	updated and	November 2024.		

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