

IOSCO, EU BENCHMARKS REGULATION AND UK
BENCHMARKS REGULATION SUPPLEMENTAL DISCLOSURE

J.P. MORGAN SECURITIES PLC

J.P. MORGAN SECURITIES LLC

IOSCO, EU Benchmarks Regulation and UK Benchmarks Regulation

Supplemental Disclosure

Current Effective Date: 19 January, 2023

1.	Purpose of this Disclosure	2
2.	Main Features of the Control Framework.....	2
2.1.	Oversight	2
2.2.	JPMS Administered Index Design.....	3
2.3.	Periodic Reviews	4
2.4.	Calculation	4
2.5.	Error Handling	4
2.6.	Use of Expert Judgement.....	4
2.7.	Changes in Methodology	4
2.8.	Termination of a JPMS Administered Index	5
2.9.	Notification of and Consultation with Stakeholders	5
2.10.	Complaints	5
2.11.	Prohibited Activities	5
2.12.	Recordkeeping	5
2.13.	Conflicts of Interest	5
3.	Main Features of the Oversight Procedures	6
4.	Guidelines on the Hierarchy of Data Inputs	7
5.	Allocators	7
5.1.	Allocator Benchmark Guidelines	7
5.2.	On-boarding Allocators	8
6.	Guidelines on the Exercise of Expert Judgement	8
7.	Procedures for Changing Methodologies.....	9
8.	Procedures for termination of a JPMS Administered Index.....	10
9.	ESG Disclosures for ESG Benchmarks and non-ESG Benchmarks	11
10.	Changes to Interbank Offered Rates (IBORS) and other Benchmark Rates	11
11.	Definitions	11
	Appendix A: Allocator Benchmark Guidelines	13
	Appendix B: non-ESG Benchmark Disclosures	15

1. PURPOSE OF THIS DISCLOSURE

This supplemental disclosure (this **Disclosure**) is provided by J.P. Morgan and is designed to:

- (a) supplement the IOSCO compliance statement published by the Administrator in respect of certain JPMS Administered Indices; and
- (b) provide general information as required by EU BMR and UK BMR about the process by which JPMS Administered Indices are provided by the Administrator.

This Disclosure relates solely to JPMS Administered Indices (as defined in Section 9 below) and does not apply to any other J.P. Morgan Group activities, including in relation to widely-used benchmarks which are subject to existing policies (for example, LIBOR) or indices published by J.P. Morgan's global index research group.

This Disclosure relates to J.P. Morgan Securities LLC only in its capacity as Administrator in respect of IOSCO but not in respect of either EU BMR or UK BMR.

2. MAIN FEATURES OF THE CONTROL FRAMEWORK

The Administrator has developed a control framework for each JPMS Administered Index (the **Control Framework**). The Control Framework provides a governance framework for the Administrator. The Control Framework sits alongside additional internal standards, policies, procedures and guidelines that are applicable to the Administrator.

2.1. Oversight

The Administrator has established governance forums to oversee the creation and operation of each JPMS Administered Index (the **Forums**). The role of the Forums is disclosed to stakeholders in Section 3 (Main Features of the Oversight Procedures) below.

Additionally, JPMS Administered Indices where the Administrator is J.P. Morgan Securities plc, the Oversight Forum has been established as the oversight function of the JPMS Administered Indices. The Oversight Forum oversees all aspects of the provision of such JPMS Administered Indices, together with the control framework and the management and operation of the JPMS Administered Indices.

The ultimate responsibility for the creation and operation of a JPMS Administered Index lies with the relevant business heads within the Administrator.

The Administrator has implemented processes so that, for each JPMS Administered Index, a senior structurer is identified who is responsible for the creation, operation and day-to-day management of the JPMS Administered Index. These processes require that the relevant individual provides for this Control Framework to be followed to protect the integrity of the operation of each JPMS Administered Index.

To the extent that the operation of a proposed JPMS Administered Index will be outsourced to one or more service providers (for example, calculation agents and data providers but for this purpose excluding any regulated market or exchange), the Administrator has

implemented processes so that it has the ability to exercise appropriate oversight of each of such service providers.

2.2. JPMS Administered Index Design

The Administrator has implemented processes for the design, creation and oversight of JPMS Administered Indices.

The processes require that each JPMS Administered Index is transparent with respect to its operation. The design of each JPMS Administered Index is intended to support an accurate and reliable representation of the underlying strategy related to the objective of such JPMS Administered Index and to mitigate factors that might result in a distortion of a price, rate, index or value of the JPMS Administered Index or one of its constituents. In light of the underlying strategy related to the objective of a JPMS Administered Index, the JPMS Administered Index design should be intended to reflect the economic reality of the markets for the underlying constituents of such JPMS Administered Index.

In accordance with the Administrator's internal processes, the data used for each JPMS Administered Index is reasonably expected to be sufficient to accurately and reliably represent each constituent included in such JPMS Administered Index. Typically, data is based on prices, rates, indices or values that reflect an active market and are based on observable transactions entered into on an arm's-length basis. Preference is given to data that is "anchored" in an actual, observable, functioning market. However, not every individual JPMS Administered Index must be constructed solely of transaction data and alternative methods for assessing prices may be used.

Where a JPMS Administered Index may reference certain marks or levels generated by a J.P. Morgan Group entity, the Administrator has also implemented additional processes governing the use of marks and models generated by J.P. Morgan (these marks and models are known as **Internal Marks**).

The Administrator's processes provide that each JPMS Administered Index has a written methodology which includes procedures and criteria for its operation. The Administrator has implemented processes for the approval of new JPMS Administered Indices. Each new JPMS Administered Index is approved in accordance with internal approval processes, including historical back testing (where possible), a primary versus secondary reconciliation, and review by the Administrator's legal department. The methodologies of a JPMS Administered Index will be published or made available to users of such JPMS Administered Index. If the operation of a JPMS Administered Index contemplates the collection of data from an external source, the Administrator's processes contemplate that appropriate internal controls over the data collection and transmission processes are instituted and maintained.

Further information is given in Section 4 (Guidelines on the Hierarchy of Data Inputs) below.

For the purposes of the Allocator Indices, each Allocator Index relies on submissions from an allocator (each an **Allocator**). These Allocators are considered to be Submitters under IOSCO but not considered to be "submitters" or "contributors" under either EU BMR or UK BMR. All Allocators are subject to an on-boarding process or review and as part of that, written arrangements between the Administrator and the Allocators are put in place. Each Allocator Index is reviewed on a periodic basis to assess the functioning of the methodology and such review provides scrutiny and monitoring of submissions.

Further information is given in Section 5 (Allocators) below.

2.3. Periodic Reviews

JPMS Administered Indices are subject to a periodic review requirement, and must be reviewed at least once every two years or more frequently as required by applicable laws or regulations. JPMS Administered Indices that are either EU Benchmarks or UK Benchmarks (within the meaning of EU BMR or UK BMR, as applicable) must be reviewed at least annually.

The Administrator has implemented processes so that it periodically reviews each JPMS Administered Index to consider the functioning of the methodology and whether any changes to the methodology are appropriate.

In addition to the periodic review, the Administrator may undertake an *ad hoc* review of a JPMS Administered Index at any time and for any reason.

Following a review of a JPMS Administered Index, the Administrator may, among other actions, choose to amend the methodology or terminate the JPMS Administered Index. The Administrator will make available on request to stakeholders details of any material revisions which have been made to a JPMS Administered Index as a result of a review.

2.4. Calculation

The Administrator has implemented measures designed to promote the accuracy of published JPMS Administered Index levels. These include the level being calculated by two separate areas, one of which may be a third party service provider, with the two levels then being reconciled. Any differences in the calculated levels are investigated and resolved.

2.5. Error Handling

The Administrator has implemented processes so that errors in the calculation of the levels of JPMS Administered Indices are identified and addressed. Management information on errors will be collected and presented to the relevant Forum.

2.6. Use of Expert Judgement

The Administrator has implemented processes which require any expert judgement in relation to the calculation of the level of a JPMS Administered Index to be exercised by individuals with the appropriate expertise and experience and with the involvement of individuals from the business, Legal and Compliance functions.

Further information is given in Section 6 (Guidelines on the Exercise of Expert Judgement) below. Expert judgement may be exercised by a service provider if permissible under the methodology and, in this case, the above procedures do not apply. The Administrator has established appropriate controls on the use of expert judgement when it appoints a service provider to exercise expert judgement.

Details of the exercise of expert judgement, including by a service provider, are reported to the Forum.

2.7. Changes in Methodology

The Administrator has implemented processes governing its ability to make changes to the methodology of a JPMS Administered Index. These are set out in Section 7 (Procedures for Changing Methodologies) below.

2.8. Termination of a JPMS Administered Index

The Administrator has implemented processes governing its ability to terminate a JPMS Administered Index. These are set out in Section 8 (Procedures for termination of a JPMS Administered Index) below.

2.9. Notification of and Consultation with Stakeholders

Notification of and consultation with stakeholders may be undertaken by the Administrator as appropriate. In particular, the Administrator has implemented processes governing the possible notification of and possible consultation with stakeholders in relation to proposed changes or termination of a JPMS Administered Index. The method and timing of consultation or notification may vary depending on the particular JPMS Administered Index and the particular stakeholders (including whether the Administrator is able to obtain information regarding the identity of the stakeholders).

2.10. Complaints

All complaints are to be handled in a manner consistent with the Administrator's complaints handling policy and reported to the relevant Forum as part of its oversight. The Administrator has established and made available on its website details for complaint handling:

- Investable Index Business: <https://www.jpmorganindices.com/>
- Nexus Platform Business: <https://www.jpmorgan.com/country/GB/en/cib/markets-investor-services/nexus>
- Credit Nexus Business: <https://www.jpmorgan.com/global/disclosures>

A copy is also available from the Administrator on request.

2.11. Prohibited Activities

The operation of a JPMS Administered Index should be conducted in a manner that mitigates the risk that a person could manipulate or seek to manipulate or influence any data used to calculate such JPMS Administered Index.

The Administrator has a number of internal policies which set out procedures and processes requiring any employee who witnesses or is involved in any actual or potential wrongdoing or suspects potential wrongdoing related to a JPMS Administered Index (including, but not limited to, the manipulation of price assessment, insider trading, or front-running) to report such actual or potential wrongdoing.

2.12. Recordkeeping

J.P. Morgan's general record-keeping requirements apply to the Administrator. Records in relation to JPMS Administered Indices will be maintained to document satisfaction of the procedural steps contemplated in the Control Framework and any supporting procedures and processes in accordance with such record-keeping requirements. In relation to the Allocator Indices, the Administrator will also require Allocators to maintain accurate records relating to submissions.

2.13. Conflicts of Interest

A conflict of interest may exist when the interests of the Administrator, an Allocator (in relation to Allocator Indices only), an employee or a client may conflict. Conflicts of interest pose risks that professional decisions or actions will be unduly influenced by personal or other motivations. In addition, even where no actual conflict is present, the appearance of a conflict

of interest may pose the risk of damage to the Administrator's client relationships or its reputation.

The Administrator has established and maintains a number of procedures, processes and controls for identifying and managing the conflicts of interest that arise in the course of its business. Employees should escalate newly identified potential or actual conflicts of interest to enable appropriate consideration and management of the conflict in accordance with these internal procedures, processes and controls.

Further information on conflicts of interest, in respect of JPMS Administered Indices where the Administrator is J.P. Morgan Securities plc, is also available at the following websites (as applicable):

- <https://www.jpmorganindices.com>
- <https://www.jpmorgan.com/country/GB/en/cib/markets-investor-services/nexus>; and
- <https://www.jpmorgan.com/global/disclosures>.

3. MAIN FEATURES OF THE OVERSIGHT PROCEDURES

The Administrator has created the Forums as governance forums for each of the relevant business lines in respect of the JPMS Administered Indices. The primary purpose of each Forum is to review and provide challenge on all aspects of a JPMS Administered Index determination process. The purpose of each Forum includes, but is not limited to:

- reviewing and agreeing the governance framework;
- reviewing, assessing and providing oversight of the control framework of the Administrator in conjunction with relevant control functions;
- providing cross-asset oversight over JPMS Administered Indices design;
- ratifying applicable standards and procedures;
- guiding the appropriate process improvement plans to effectively manage inherent and emerging risk and control issues;
- reviewing and monitoring conduct, incidents and control deficiencies that may involve risk to the Administrator, whether reputational, legal, regulatory or operational risk;
- escalating, where appropriate, issues to other appropriate committees, forums or regulatory authorities; and
- oversight of Allocators, as applicable.

Each Forum is made up of representatives from the relevant business lines and control functions involved in the JPMS Administered Indices, as well as Compliance, Legal and the quantitative risk teams.

Each Forum meets regularly and at least on a quarterly basis. In order for there to be a quorum, a minimum number of representatives from the business teams and the control functions (for example, Compliance) must be present.

The Forums may escalate any matter in the provision of any JPMS Administered Index where the Administrator is J.P. Morgan Securities plc, to the Oversight Forum. The Oversight Forum has oversight of all aspects of the provision of a JPMS Administered Index, together with the control framework and the management and operation of such JPMS Administered Indices. The Oversight Forum is made up of representatives from the relevant business lines and control functions involved in the JPMS Administered Indices, including senior management function managers from equities, foreign exchange, commodities, credit and interest rates business lines.

4. GUIDELINES ON THE HIERARCHY OF DATA INPUTS

The Administrator has implemented processes so that the data used for each JPMS Administered Index should be reasonably expected to be sufficient to accurately and reliably represent each constituent included in such JPMS Administered Index. In circumstances where the data used for determining the level of a JPMS Administered Index includes data other than transaction data, the possible alternative methods for assessing prices may include, but are not limited to, the following:

- dealer quotes;
- executable bids and offers in an observable market composed of bona fide, arm's-length transactions;
- mathematical models that generate prices, levels or values based on observed prices, levels or values of financial instruments; and
- where a JPMS Administered Index may reference certain marks or levels generated by a J.P. Morgan Group entity, Internal Marks.

Where a JPMS Administered Index references Internal Marks, it may not do so unless:

- specific additional approval is obtained from all relevant business and control functions;
- it is difficult, on a reasonable efforts basis, to identify a suitable third party source for such information;
- any data from employees in a front office function is corroborated by an independent source on a regular basis; and
- all conditions to be satisfied to allow the use of such marks or models are, in fact, satisfied.

Certain circumstances may arise where input data is unavailable (due to market disruption, extraordinary events or otherwise). In such circumstances, the methodology for such JPMS Administered Index may specify the steps that should be taken by the calculation agent, Administrator or another person.

5. ALLOCATORS

Each Allocator Index relies on submissions from an Allocator. Each new Allocator must:

- be on-boarded as an Allocator via the Know Your Allocator approval procedure or review process;
- execute a specific agreement with the Administrator in respect of Allocator Indices (the **Allocation Agreement**) which details the Allocator's obligations; and
- confirm adherence to the Allocator Benchmark Guidelines annually and whenever there is a change to the Allocator Benchmark Guidelines (except in the case of Non-Distributed Strategies).

5.1. Allocator Benchmark Guidelines

In respect of each Allocator Index based on submissions from Allocators (excluding Non-Distributed Strategies), the Administrator will require each Allocator for each new Allocator Index created after the date of this Disclosure document to adhere to the Allocator Benchmark Guidelines as may be amended or supplemented from time to time, the current version of which is set out in Appendix A to this Disclosure document. The Administrator will

only use submissions from an Allocator which has confirmed they will adhere to the Allocator Benchmark Guidelines.

The Allocator Benchmark Guidelines are required to be reviewed on an annual basis by the relevant Forum. The guidelines on the selection of inputs are addressed in each Allocation Agreement. Controls have also been implemented to effectively monitor and scrutinize submissions.

5.2. On-boarding Allocators

All Allocators are subject to an on-boarding process. The on-boarding process is known as the Know Your Allocator procedure which includes criteria for including and excluding Allocators. Such criteria include:

- the country of incorporation of the Allocator;
- the jurisdictions in which the Allocator acts;
- the number of years of experience the Allocator has acting as an allocator;

as well as the following, which may be deemed not applicable in the case of Non-Distributed Strategies:

- the Allocator's target client base;
- the number of employees of the Allocator;
- the number of clients of the Allocator;
- the activities the Allocator is authorized to undertake; and
- the Allocator's regulator(s).

If any Allocator Index is referenced by any product distributed to retail investors then additional approvals may also be required.

6. GUIDELINES ON THE EXERCISE OF EXPERT JUDGEMENT

The Administrator has implemented processes governing the use of expert judgement, which it has defined as the exercise of discretion by the Administrator or a service provider with respect to determining the level of a JPMS Administered Index, but excluding any determination of a corporate action or other relevant Index constituent. The Administrator does not consider determinations of an Allocator for the selection and recomposition of an Allocator Index's constituents and their weightings to be expert judgement by the relevant Allocator.

In accordance with the Administrator's processes, the methodology for each JPMS Administered Index will specify the circumstances in which the calculation agent, Administrator or service provider may exercise expert judgement in respect of the determination of a JPMS Administered Index.

Subject to any exceptions permissible under the internal processes, the following requirements apply to the exercise of expert judgement:

- Any exercise of expert judgement will be done in a reasonable manner based on transparent criteria and in line with the methodology of the JPMS Administered Index.
- When it is identified that expert judgement needs to be exercised, the proposed approach to the exercise of expert judgement will be discussed by a group of representatives from the Administrator's business, Compliance and Legal and, where

appropriate, other business areas or control functions. Consideration will be given to previous determinations where applicable, although each case is considered on its own facts.

- Expert judgement is exercised by individuals who have the appropriate expertise and experience.
- If, in the process of an exercise of expert judgement, it is concluded that a change to the methodology of a JPMS Administered Index or the termination of a JPMS Administered Index should be considered, the applicable procedures would be followed with regards to the consideration of a possible change or termination.
- The exercise of expert judgement in relation to a JPMS Administered Index determined by reference to Internal Marks should comply with additional requirements which the Administrator has implemented relating to the use of such Internal Marks.
- The Administrator will consider whether to notify the stakeholders regarding the outcome of the exercise of expert judgement.

7. PROCEDURES FOR CHANGING METHODOLOGIES

From time to time, changes to the methodology of an existing JPMS Administered Index may be considered by the Administrator. The Administrator has implemented processes for considering possible material changes to existing methodologies.

Any proposed changes to the methodology of an existing JPMS Administered Index are considered by the Administrators business, Compliance and Legal, and, where appropriate, other business areas or control functions.

Unless otherwise agreed, any change proposed to the methodology must be consistent with the relevant JPMS Administered Index continuing to accurately and reliably represent its objective.

When assessing proposed changes in accordance with the internal processes, the Administrator considers, in particular, whether the proposed changes to the methodology would be considered material or non-material changes and whether the changes warrant or require consultation with or notification of the stakeholders.

Whether or not a proposed change is “material”, the Administrator may consider the following:

- any impact on historical or future index performance of the JPMS Administered Index (to the extent that the lead structurer of such JPMS Administered Index has actual knowledge of such information);
- if the proposed change is to the objective of the JPMS Administered Index;
- if there are any current or prior products (including third party products) referencing the JPMS Administered Index;
- the extent to which the change is consistent with the objective of the JPMS Administered Index;
- any other relevant information.

The following amendments to the methodology of a JPMS Administered Index are non-exhaustive examples of non-material changes:

- correction of typos or manifest or proven errors, clarifications and changes of a formal, minor or technical nature;
- adding or removing language not impacting how the methodology of the JPMS Administered Index is normally applied, including disclaimers, regulatory statements, governance procedures and examples;
- amending the structure of the methodology document of the JPMS Administered Index.

Other types of amendments to the methodology of a JPMS Administered Index may also be considered to be non-material changes.

The method and timing of consultation or notification may vary depending on the particular JPMS Administered Index and the particular stakeholders.

The Administrator will facilitate all necessary actions to implement any agreed changes, including informing any service provider involved in the calculation of the level of the JPMS Administered Index, setting implementation dates and confirming that the change has been made.

Changes are reviewed by the relevant Forum.

8. PROCEDURES FOR TERMINATION OF A JPMS ADMINISTERED INDEX

From time to time, the Administrator may consider terminating an existing JPMS Administered Index. The Administrator has implemented processes for considering this possibility.

Where a JPMS Administered Index is linked to any products, is licensed to third parties or the Administrator's affiliates, or is used as a constituent or as a signal in any other JPMS Administered Index, any proposed termination of such JPMS Administered Index is considered in advance by the Administrator's business, Compliance and Legal, and, where appropriate, other business areas or control functions.

When assessing the proposed termination in accordance with these processes, the Administrator considers how a JPMS Administered Index is used, by whom it is being used and the potential impact on economic and financial stability that might result from the termination of the JPMS Administered Index. Additionally, the Administrator considers, in particular, whether the proposed termination should be open to consultation with stakeholders or how the proposed termination would be notified to stakeholders.

The method and timing of consultation or notification may vary depending on the particular JPMS Administered Index and the particular stakeholders.

The Administrator will facilitate all necessary actions to implement the termination of the JPMS Administered Index, including informing any service provider involved in the calculation of the level of the JPMS Administered Index, setting the termination dates and confirming the termination has taken place.

Terminations of a JPMS Administered Index are reviewed by the relevant Forum.

9. ESG DISCLOSURES FOR ESG BENCHMARKS AND NON-ESG BENCHMARKS

JPMS Administered Indices that are either EU Benchmarks or UK Benchmarks (within the meaning of EU BMR or UK BMR, as applicable), and which pursue environmental, social and governance objectives (**ESG Benchmarks**) shall set out disclosures required by EU BMR or UK BMR, as applicable, in their respective methodology (**ESG Disclosures**).

Any EU Benchmarks or UK Benchmarks that do not contain such ESG Disclosures in their respective methodologies are EU Benchmarks or UK Benchmarks (as applicable) that do not pursue environmental, social and governance objectives (**non-ESG Benchmarks**). The disclosures set out in Appendix B are applicable solely to these non-ESG Benchmarks.

10. CHANGES TO INTERBANK OFFERED RATES (IBORS) AND OTHER BENCHMARK RATES

As further described in the following hyperlink, the Administrator wants to draw to the attention of stakeholders and users, the changes in the wider market to interbank offered rates (IBORs) and other benchmarks:

https://www.jpmorgan.com/global/disclosures/interbank_offered_rates

The Administrator is considering these IBOR reforms in the context of our index inventory and will update index methodologies to account for these changes in due course.

If you have any queries on the impact of this updated disclosure for you, please contact your usual J.P. Morgan sales contact.

11. DEFINITIONS

Definitions of terms contained in this Disclosure are as follows:

Administrator means:

- a) in respect of either EU BMR or UK BMR (as applicable), J.P. Morgan Securities plc as Administrator of certain JPMS Administered Indices which are either EU Benchmarks within the meaning of EU BMR or UK Benchmarks within the meaning of UK BMR; and
- b) in respect of IOSCO, the relevant business line within J.P. Morgan in its role as Administrator for certain JPMS Administered Indices which are benchmarks within the meaning of IOSCO,

each, in its respective capacity as Administrator of a JPMS Administered Index.

Allocator Indices means JPMS Administered Indices which rely on submissions from an index or strategy allocator within the definition of 'submitter' under IOSCO, and as identified in the relevant IOSCO compliance statement.

Brexit Transitional Period means the period of time between when the United Kingdom ceased to be a member state of the European Union (January 31, 2020) and when European Union law ceased to apply in the United Kingdom (at 23:00 London time on December 31, 2020).

J.P. Morgan means J.P. Morgan Securities plc, and in the context of provisions relating to IOSCO only, also J.P. Morgan Securities LLC.

J.P. Morgan Group means JPMorgan Chase & Co. together with its subsidiaries.

JPMS Administered Index means:

- a) in respect of either EU BMR or UK BMR, benchmarks that J.P. Morgan Securities plc, in its role as Administrator, has identified as either EU Benchmarks or UK Benchmarks within the meaning of EU BMR or UK BMR (as applicable); and
- b) in respect of IOSCO, benchmarks that the relevant business line within J.P. Morgan in its role as Administrator has identified as benchmarks within the meaning of IOSCO, in the relevant IOSCO compliance statement.

EU BMR means EU Benchmarks Regulation (EU) 2016/1011 as may be amended from time to time including, but not limited to, the EU Regulation on Climate Transition Benchmarks, EU Paris-aligned Benchmarks and sustainability-related disclosures for benchmarks (2019/2089).

Forum means the governance forums which the Administrator has established to oversee all aspects of the JPMS Administered Index determination process.

IOSCO means the International Organisation of Securities Commissions (IOSCO) in its Principles for Financial Benchmarks (July 2013).

Non-Distributed Strategies means indices that are both (a) indices that are used solely by one investor and which do not form the basis of any other financial transactions; and (b) indices where the name or other identifying information of the Allocator Index is not disclosed to end investors as part of a fund or product offering.

Oversight Forum means the J.P. Morgan Securities plc Benchmark Administration Oversight Forum established solely in respect of JPMS Administered Indices where the Administrator is J.P. Morgan Securities plc to oversee all aspects of the provision of such JPMS Administered Indices.

UK BMR means the UK Benchmarks Regulation.

Appendix A: Allocator Benchmark Guidelines

These allocator benchmark guidelines, comprising the additional terms (a) and (b) below (the **Allocator Benchmark Guidelines**), apply to an allocator (an **Allocator**) who requests access to the Administrator in relation to Allocator Indices to provide synthetic allocation services to the Administrator under and in accordance with an allocation agreement (the **Allocation Agreement**). These Allocator Benchmark Guidelines relate to the Administrator's obligations under Principles 14 and 18 of the IOSCO Principles for Financial Benchmarks set out in the Final Report dated July 2013 (the **IOSCO Benchmark Principles**) for each Allocator Index.

Under these Allocator Benchmark Guidelines, each Allocator undertakes to the Administrator that:

- (a) employees, officers or directors who are responsible for conducting its activities as Allocator under the Allocation Agreement (**Personnel**) are appropriately:
 - (i) identified to the Administrator in writing;
 - (ii) authorised, qualified and experienced, to take on the responsibilities of the Allocator set out in the Allocation Agreement; and
 - (iii) registered with any relevant regulatory authority (where required), and supervised and trained (including any additional training considered necessary to meet any relevant regulation);
- (b) the Allocator has established and maintains the appropriate internal systems, controls, policies and procedures to:
 - (i) document the roles and responsibilities of Personnel, including ensuring that only appropriately qualified and approved Personnel can make and review allocation requests;
 - (ii) ensure all allocation requests are, and the Allocator is, in compliance with the methodology of the Allocator Index and ensure all allocation requests are accurate (including procedures for pre-allocation request internal validation review and appropriate sign-off);
 - (iii) identify and evaluate any suspicious or erroneous allocation requests and report to relevant regulatory authority (where required);
 - (iv) enable whistle-blowers to anonymously report attempts to manipulate allocation requests and to escalate concerns relating to allocation requests to regulators and the Administrator (as may be appropriate and as permitted under applicable laws and regulations) to facilitate early awareness of any potential misconduct or irregularities that may arise;
 - (v) to enable the identification, management, mitigation and avoidance of conflicts of interest which may arise from the process of making allocation requests, and to prevent the manipulation of the data inputs by those involved in the allocation process, in accordance with both the Allocator's own policies and procedures and the terms of its Allocation Agreement;

- (vi) retain records of all documents and information that specify the selections provided, or to be provided by the Allocator relating to the Allocator Index such as may be reasonably sufficient to demonstrate the Allocator's compliance with methodology of the Allocator Index, including, without limitation, the accuracy of the Allocation's representations and warranties (the **Records**) and to provide such Records to the Administrator upon reasonable request by the Administrator; and
- (vii) endeavour to continue providing the Administrator with allocation services for the duration of the Allocation Agreement in order to protect the continuation of the Allocator Index and where the Allocator considers withdrawing from the allocation process, it may only do so in accordance with the termination provisions contained in the Allocation Agreement.

Appendix B: non-ESG Benchmark Disclosures

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY	
Item 1. Name of the benchmark administrator.	J.P. Morgan Securities plc
Item 2. Type of benchmark or family of benchmarks. <i>Choose the relevant underlying asset from the list provided in “Annex II” of the applicable delegated legislation under EU BMR or UK BMR.</i>	Non-ESG Benchmark families
Item 3. Name of the benchmark or family of benchmarks.	Non-ESG Benchmark families
Item 4. Does the benchmark methodology for the benchmark or family of benchmarks take into account ESG factors?	No
<p>Item 5. Where the response to Item 4 is positive, please list below, for each family of benchmarks, those ESG factors that are taken into account in the benchmark methodology, taking into account the ESG factors listed in Annex II to the applicable delegated legislation under EU BMR or UK BMR.</p> <p>Please explain how those ESG factors are used for the selection, weighting or exclusion of underlying assets.</p> <p>The ESG factors shall be disclosed at an aggregated weighted average value at the level of the family of benchmarks.</p>	
a) List of environmental factors considered:	Non-ESG Benchmark families do not pursue ESG objectives.
b) List of social factors considered:	Non-ESG Benchmark families do not pursue ESG objectives.
c) List of governance factors considered:	Non-ESG Benchmark families do not pursue ESG objectives.
<p>Item 6. Where the response to Item 4 is positive, please list below, for each benchmark, those ESG factors that are taken into account in the benchmark methodology, taking into account the ESG factors listed in Annex II to the applicable delegated legislation under EU BMR or UK BMR, depending on the relevant underlying asset concerned.</p> <p>Please explain how those ESG factors are used for the selection, weighting or exclusion of underlying assets.</p>	

<p>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.</p> <p>Alternatively, all of this information may be provided in the form of a hyperlink to a website of the benchmark administrator included in this explanation. The information on the website shall be easily available and accessible. Benchmark administrators shall ensure that information published on their website remains available for five years.</p>	
a) List of environmental factors considered:	Non-ESG Benchmark families do not pursue ESG objectives.
b) List of social factors considered:	Non-ESG Benchmark families do not pursue ESG objectives.
c) List of governance factors considered:	Non-ESG Benchmark families do not pursue ESG objectives.
Hyperlink to the information on ESG factors for each benchmark:	Not Applicable.
Item 7. Data and standards used	
<p>a) Data input.</p> <p><i>(i) Describe whether the data are reported, modelled or sourced internally or externally.</i></p> <p><i>(ii) Where the data are reported, modelled or sourced externally, please name the third party data provider.</i></p>	Non-ESG Benchmark families do not pursue ESG objectives.
<p>b) Verification and quality of data.</p> <p><i>Describe how data are verified and how the quality of those data is ensured.</i></p>	Non-ESG Benchmark families do not pursue ESG objectives.
<p>c) Reference standards</p> <p><i>Describe the international standards used in the benchmark methodology.</i></p>	EU BMR or UK BMR.
Date on which information has been last updated and reason for the update:	December 2022 - annual update.