

# Guidelines for Input Data<sup>1</sup>

Merrill Lynch International in its role as a benchmark administrator of a number of quantitative investment strategy indices (the “**Benchmark Administrator**”, and each such index an “**Index**”) will ensure that the input data is sufficient to represent accurately and reliably the market or economic reality that an Index is intended to measure.

In order to achieve this, the Benchmark Administrator will ensure the availability of all information necessary to check, where applicable, that:

- a) input data is selected from a source specified by the Benchmark Administrator at the time or within the time-period prescribed by the Benchmark Administrator;
- b) input data is contributed from the input data sources as defined in point 24 of Article 3(1) of the EU Benchmark Regulation (EU) 2016/1011 (the “**EU BMR**”) where such input data is categorised by the Benchmark Administrator as Regulated Exchange Data (as defined in “Types of Input Data” section paragraph a) below);
- c) the input data meets the requirements set out in the benchmark methodology, in particular:
  - i. the requirements of the currency or the unit of measurement, the tenor, and the types of sources;
  - ii. relevant thresholds for the quantity of input data and standards for the quality of input data;
  - iii. the priority of use of different types of input data.

For the purposes of a) to c) above, the Benchmark Administrator should rely on information retained in accordance with the record-keeping policy of the Benchmark Administrator.

<sup>1</sup> In accordance with Articles 11.1(c) and 12(3)

## Types of Input Data

The types of input data used in the determination of Indices are as follows:

- a) **Regulated Exchange Data:** Input data contributed entirely and directly from any of the entities listed in the definition of 'regulated-data benchmark' in Article 3(1)(24)(a) of the EU BMR; **Source:** Data of this type is sourced from recognized market data providers (such as Bloomberg and Reuters) as specified in the relevant Index rules.
- b) **Readily Available Data:** Input data not contributed entirely and directly from any of the entities listed in the definition of 'regulated-data benchmark' in Article 3(1)(24)(a) of the EU BMR including:
  - i. **Non-Regulated Exchange Data:** Input data contributed entirely and directly from exchanges which are not listed in the definition of 'regulated-data benchmarks' in Article 3(1)(24)(a) of the EU BMR. **Source:** Data of this type is sourced from recognized market data providers (such as Bloomberg and Reuters) as specified in the relevant Index rules.
  - ii. **EU Benchmarks:** indices that are "Benchmarks" under the EU BMR and which have been (i) authorized or registered; or (ii) deemed equivalent, recognized or endorsed, in each case, under the EU BMR. **Source:** Data of this type is sourced directly from the third party administrator or from recognized market data providers (such as Bloomberg and Reuters) as specified in the relevant Index rules.
  - iii. **Other Benchmarks:** other indices that are not EU Benchmarks under the EU BMR including other Bank of America Merrill Lynch ("BofAML") investable indices. **Source:** Data of this type is sourced directly from the third party administrator or from recognised market data providers (such as Bloomberg and Reuters) as specified in the relevant Index rules.
  - iv. **Third Party Market Data:** These include, without limitation, benchmark interest rates (such as LIBOR) and foreign exchange rates (such as WM/Reuters). **Source:** Data of this type is sourced from recognized market data providers (such as Bloomberg and Reuters) or other third party providers as specified in the relevant Index rules.
  - v. **Other Readily Available Data:** These include, without limitation, research reports, signals and indicators, forecasts, projections dividend prices, corporate action data, fundamental data and industry, category, style or similar classifications for listed shares, commodities or other financial products (as applicable). **Source:** Data of this type is sourced directly from the third party providers or from recognized financial information providers (such as Bloomberg and Reuters) as specified in the relevant Index rules.

- c) **Contributions:** Currently, the Benchmark Administrator does not consider any of its Indices to be subject to “Contributions” within the meaning of EU BMR.

### **Priority of Use**

Input data are defined in the applicable Index rules by reference to both the source of the data and the time at which the data is observed. Such input data are used for the daily calculation of Index levels.

The majority of Indices reference a single source of data for the input data in the Index rules rather than referencing multiple sources with a defined hierarchy.

Where an Index references multiple sources of input data, a defined hierarchy may in certain instances be specified in the index rules.

In case of discrepancies between the input data in the multiple sources, the Benchmark Administrator may seek to verify the data with the additional sources and/or exercise Expert Judgement as further described below.

### **Expert Judgement**

If the Benchmark Administrator is required or entitled to make a determination in relation to an Index pursuant to the Index rules and that determination involves the exercise of expert judgement or discretion, then that expert judgement or discretion must be exercised: (i) in good faith and in a commercially reasonable manner and (ii) in such manner as to ensure, as far as commercially reasonable, consistency in the approach it adopts with regard to the exercise of such expert judgement or discretion between Index determinations, including having regard to previous occasions on which expert judgement or discretion has been exercised in relation to the relevant Index or other similar Indices.

Expert judgement is permitted only on the occurrence of any event or circumstance of any nature which (in the determination of the Benchmark Administrator):

- a) disrupts or impairs any procedure normally used in determination of the Index closing level; e.g. any necessary data input is unavailable or considered by the Benchmark Administrator to be unreliable for any reason or a corporate action event not fully covered in the Index methodology has occurred.
- b) impairs the determination of the Index closing level or of any value necessary to determine the Index closing level or results in any such value being unavailable;
- c) affects the ability of the Index to achieve its stated objective;

- d) makes it impossible, impractical or commercially unreasonable for the Index to be administered, maintained, calculated or published in accordance with the terms of the index rules or otherwise requires the Benchmark Administrator and/or calculation agent to depart from the terms of the index rules in the administration, maintenance, calculation or publication of the Index, in each case, in order to maintain the commercial purposes of the Index;
- e) otherwise makes it necessary or desirable (including from the perspective of any party hedging any exposure to the Index) to amend or adjust the Index or the Index rules; or
- f) is a market disruption event as set out in the relevant Index rules or a market disruption event that is not fully anticipated or addressed in the Index rules.

Any exercise of expert judgement or discretion by the Benchmark Administrator in relation to an Index, including determinations required following disruptions, changes to embedded costs and amendments to the Index calculation methodology, will be approved by the Equities Index Forum.

#### **1.1 Monitoring of input data**

Input data as specified in the Index rules and used for the determination of the Index levels is verified by way of a secondary calculation on Index launch and for each calculation thereafter, at such frequency as set out in the relevant Index rules. Daily reconciliations are carried out by primary and secondary calculation agents, where required by the relevant Index rules, and are provided to the Benchmark Administrator's Reconciliation team. This identifies any issues with the Index levels and input data used and discrepancies are dealt with in accordance with the process set out in the Benchmark Administrator's Global Governance Procedures.

Where input data is sourced directly from a third party market data provider and a value, price, rate or level raises a particular concern or where the Benchmark Administrator deems that input data is unreliable or falls below the standards necessary for the Benchmark Administrator to determine the index reliably and accurately, or where the Benchmark Administrator considers that the input data does not represent the market or economic reality that an Index is intended to measure, the Benchmark Administrator will notify the Equities Index Forum with a recommendation as to the best course of action including any of the actions under Section 4.1 of the relevant Index rules or the modification or termination of the Index under the relevant Index rules.

#### **1.2 Errors and market disruption events**

Where a disruption event or an error in the publication or calculation of an Index occurs which has a material impact in respect of an Index, the Benchmark Administrator must follow the terms of the relevant index rules to determine the course of action and escalate the matter to the Equities Index Forum. The

procedures provided for in each Index rules cover the following potential responses by the Benchmark Administrator:

- a) Determination by the Benchmark Administrator of the value of the Index and/or any disrupted Index component as of an Index calculation day in a manner which reflects the nature of the market disruption event.
- b) Suspension, delay or postponement of the calculation and/or publication of the Index closing level by the Benchmark Administrator.
- c) Modification or termination of the Index under the relevant Index rules.
- d) Determination of the value of any Index component affected by such market disruption event by using any measure selected by the Benchmark Administrator. The Benchmark Administrator expects that such measure may be based on, without limitation, prevailing market conditions, the most recently reported trading prices for such Index component or prices indicated by qualified deals or other relevant market participants (which may include the Benchmark Administrator or one or more of its affiliates).

Any changes to the Index methodology or other changes to the Index rules, and any other actions to be taken in respect of an Index in relation to the disruption event and/or manifest error, will be escalated to the Equities Index Forum. Any decisions made by the Equities Index Forum will be recorded in the Equities Index Forum meeting minutes.

### **1.3 Review of Input Data Procedures**

The Equities Index Forum is responsible for the annual review of these procedures in relation to input data in accordance with the review of the Benchmark Administrator's Global Governance Procedures conducted annually.