



JPMorgan Chase & Co.

***Return Enhanced Notes Linked to a Single Index or a Weighted Basket Consisting of up to One Hundred-Five JPMorgan Commodity Curve Commodity Indices, Twenty-One JPMorgan Commodity Curve Sector Indices, Three JPMorgan Commodity Curve Energy Light Indices and/or Three JPMorgan Commodity Curve Aggregate Indices***

**General**

- JPMorgan Chase & Co. may offer and sell return enhanced notes linked to one or more of the JPMorgan Commodity Curve Indices described below from time to time. This product supplement no. 154-I describes terms that will apply generally to the return notes, and supplements the terms described in the accompanying prospectus supplement and prospectus. A separate term sheet or pricing supplement, as the case may be, will describe terms that apply specifically to the notes, including any changes to the terms specified below. We refer to such term sheets and pricing supplements generally as terms supplements. If the terms described in the relevant terms supplement are inconsistent with those described herein or in the accompanying prospectus supplement or prospectus, the terms described in the relevant terms supplement will control.
- The notes are senior unsecured obligations of JPMorgan Chase & Co.
- Payment is linked to a single index or a weighted Basket consisting of one or more the following indices: JPMCCI Crude Oil Index ("Crude Oil"), JPMCCI Gasoline Index ("Gasoline"), JPMCCI Heating Oil Index ("Heating Oil"), JPMCCI Natural Gas Index ("Natural Gas"), JPMCCI Brent Crude Index ("Brent Crude"), JPMCCI Gas Oil Index ("Gas Oil"), JPMCCI Gold Index ("Gold"), JPMCCI Silver Index ("Silver"), JPMCCI Palladium Index ("Palladium"), JPMCCI Platinum Index ("Platinum"), JPMCCI Aluminum Index ("Aluminum"), JPMCCI Copper Index ("Copper"), JPMCCI Lead Index ("Lead"), JPMCCI Nickel Index ("Nickel"), JPMCCI Zinc Index ("Zinc"), JPMCCI Tin Index ("Tin"), JPMCCI Corn Index ("Corn"), JPMCCI Soybeans Index ("Soybeans"), JPMCCI Soybean Meal Index ("Soybean Meal"), JPMCCI Wheat Index ("Wheat"), JPMCCI Rough Rice Index ("Rough Rice"), JPMCCI Winter Wheat Index ("Winter Wheat"), JPMCCI Spring Wheat Index ("Spring Wheat"), JPMCCI Cocoa Index ("Cocoa"), JPMCCI Coffee Index ("Coffee"), JPMCCI Cotton Index ("Cotton"), JPMCCI Orange Juice Index ("Orange Juice"), JPMCCI Sugar Index ("Sugar"), JPMCCI Robusta Coffee Index ("Robusta Coffee"), JPMCCI White Sugar Index ("White Sugar"), JPMCCI Feeder Cattle Index ("Feeder Cattle"), JPMCCI Lean Hogs Index ("Lean Hogs") and JPMCCI Live Cattle Index ("Live Cattle"), the Aggregate JPMCCI Index (being the aggregate of all of the single commodity indices), the JPMCCI Energy Light Index (being the aggregate of all of the single commodity indices, with a target dollar market weight of the commodities included in the energy JPMCCI Sector Index set to a maximum weight of 33% of such JPMCCI Energy Light Index), the JPMCCI Energy Index, the JPMCCI Non-Energy Index, the JPMCCI Precious Metals Index, the JPMCCI Base Metals Index, the JPMCCI All Metals Index, the JPMCCI Livestock Index and the JPMCCI Agriculture Index (collectively, the "JPMCCI Sector Indices" and each a "JPMCCI Sector Index"), including each of the foregoing indices' respective Price, Excess Return and Total Return Indices, as described below (each a "Basket Index," and collectively, the "Basket Indices").
- In certain cases, only one Basket Index may compose the entire Basket, as described below. See "Description of Notes – Notes Linked to a Single Basket Index."
- The respective constituents of the various sector indices are set forth under "The JPMorgan Commodity Curve Index" below.
- For important information about tax consequences, see "Certain U.S. Federal Income Tax Consequences" beginning on page PS-84.
- Minimum denominations of \$1,000 and integral multiples thereof, unless otherwise specified in the relevant terms supplement.
- Investing in the notes is not equivalent to investing in the Basket Indices, any of the futures contracts underlying the Basket Indices or any futures contracts or exchange-traded or over-the-counter instruments based on, or other instruments linked to, any of the Basket Indices.
- The notes will not be listed on any securities exchange unless otherwise specified in the relevant terms supplement.

**Key Terms**

Basket: Unless otherwise specified in the relevant terms supplement, the Basket will be composed of up to one hundred-five JPMorgan Commodity Curve Commodity Indices, twenty-one JPMorgan Commodity Curve Sector Indices, three JPMorgan Commodity Curve Energy Light Indices and/or three JPMorgan Commodity Curve Aggregate Indices, including each of the below constituent's Price Index, Excess Return Index and Total Return Index. The Basket Indices and the weight of each Basket Indices in the Basket are as follows:  
*(continued on next page)*

**Investing in the Return Notes involves a number of risks. See "Risk Factors" beginning on page PS-54.**

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the notes or passed upon the accuracy or the adequacy of this product supplement no. 154-I, the accompanying prospectus supplement and prospectus, or any related terms supplement. Any representation to the contrary is a criminal offense.

***The notes are not bank deposits and are not insured by the Federal Deposit Insurance Corporation or any other governmental agency, nor are they obligations of, or guaranteed by, a bank.***

**JPMorgan**

November 3, 2008

**Key Terms (continued)**

Constituent	Price Index	Excess Return Index	Total Return Index	Weight
Aggregate	JMCXPI	JMCXER	JMCXTR	†
Energy Light	JMCXELPI	JMCXELER	JMCXELTR	†
Energy	JMCXENPI	JMCXENER	JMCXENTR	†
Non-Energy	JMCXNEPI	JMCXNEER	JMCXNETR	†
Industrial Metals	JMCXIMPI	JMCXIMER	JMCXIMTR	†
Precious Metals	JMCXPMPI	JMCXPMER	JMCXPMTR	†
All Metals	JMCXMEPI	JMCXMEER	JMCXMETR	†
Agriculture	JMCXAGPI	JMCXAGER	JMCXAGTR	†
Livestock	JMCXLIPI	JMCXLIER	JMCXLITR	†
Crude Oil	JMCXCLPI	JMCXCLER	JMCXCLTR	†
Gasoline	JMCXXBPI	JMCXXBER	JMCXXBTR	†
Heating Oil	JMCXHOPi	JMCXHOER	JMCXHOTR	†
Natural Gas	JMCXNGPI	JMCXNGER	JMCXNGTR	†
Brent Crude	JMCXCOPI	JMCXCOER	JMCXCOTR	†
Gas Oil	JMCXQSPI	JMCXQSER	JMCXQSTR	†
Gold	JMCXGCPi	JMCXGCER	JMCXGCTR	†
Silver	JMCXSIPI	JMCXSIER	JMCXSITR	†
Palladium	JMCXPAPI	JMCXPAER	JMCXPATR	†
Platinum	JMCXPLPI	JMCXPLER	JMCXPLTR	†
Aluminum	JMCXLAPI	JMCXLAER	JMCXLATR	†
Copper	JMCXLPIPI	JMCXLPER	JMCXLPTR	†
Lead	JMCXLLPI	JMCXLLER	JMCXLLTR	†
Nickel	JMCXLNPI	JMCXLNER	JMCXLNTR	†
Zinc	JMCXLXPI	JMCXLXER	JMCXLXTR	†
Tin	JMCXLTPi	JMCXLTER	JMCXLTTR	†
Copper	JMCXHGPi	JMCXHGER	JMCXHGTR	†
Corn	JMCXCPI	JMCXCER	JMCXCTR	†
Soybeans	JMCXSPI	JMCXSER	JMCXSTR	†
Soybean Meal	JMCXSBPI	JMCXSMER	JMCXSMTR	†
Soybean Oil	JMCXBOPI	JMCXBOER	JMCXBOTR	†
Wheat	JMCXWPI	JMCXWER	JMCXWTR	†
Rough Rice	JMCXRRPI	JMCXRRER	JMCXRRTR	†
Winter Wheat	JMCXKWPI	JMCXKWER	JMCXKWTR	†
Spring Wheat	JMCXMWPI	JMCXMWER	JMCXMWTR	†
Cocoa	JMCXCCPI	JMCXCCER	JMCXCCTR	†
Coffee	JMCXKCPi	JMCXKCER	JMCXKCTR	†
Cotton	JMCXCTPI	JMCXCTER	JMCXCTTR	†
Orange Juice	JMCXJOPI	JMCXJOER	JMCXJOTR	†
Sugar	JMCXSBPI	JMCXSBER	JMCXSBTR	†
Robusta Coffee	JMCXCFPI	JMCXCFER	JMCXCFTR	†
White Sugar	JMCXQWPI	JMCXQWER	JMCXQWTR	†
Feeder Cattle	JMCXFCPI	JMCXFCTR	JMCXFCTR	†
Lean Hogs	JMCXLHPI	JMCXLHTR	JMCXLHTR	†
Live Cattle	JMCXLCPI	JMCXLCTR	JMCXLCTR	†

\* If any Bloomberg symbol for a particular Basket Index differs from, or is more precise than, any Bloomberg symbol specified in this product supplement, we will include the different, or more precise, Bloomberg symbol in the relevant terms supplement.

† The relevant terms supplement will specify either (i) the weight of each Basket Index in the Basket, which will be fixed for the term of the notes, or (ii) the manner in which the weight of each Basket Index will be determined. For example, the relevant terms supplement may specify that each Basket Index has an equal

## Key Terms (continued)

weight in the Basket, in which case each Basket Index makes up 1/132 of the value of the Basket, or the relevant terms supplement may specify a different weighting for each of the one hundred thirty-two Basket Indices. Alternatively, the relevant terms supplement may specify that, for example, for a Basket consisting of the Aluminum Total Return Index and the Precious Metals Excess Return index, the Basket Index with the greater Index Return will make up 70% of the value of the Basket, and the Basket Index with the lesser Index Return will make up 30% of the value of the Basket. The Basket may consist of fewer than all one hundred thirty-two Basket Indices, in which case the weight of each Basket Index not included in the Basket will be deemed to be 0%. In certain cases, only one Basket Index may compose the entire Basket. If there is only one Basket Index, that Basket Index will be weighted as 100% of the Basket and the remaining Basket Indices will each be weighted as 0% of the Basket.

The JPMCCI:

The JPMorgan Commodity Curve Index ("JPMCCI").

JPMCCI is a family of one hundred-five single commodity indices, twenty-one sector indices, three energy light indices and three aggregate commodity indices that seeks to offer a diversified and representative approach to passive commodity investing. Unlike other commodity indices, which generally focus exposure at a single maturity (traditionally, the front month contract or a single deferred contract), JPMCCI seeks to track exposure along the entire futures curve (*i.e.*, exposure to futures contracts with different maturities) in proportion to their open interest.

JPMCCI uses open interest to determine the inclusion and relative weights of the individual commodities to arrive at a total market benchmark, which is based on the entire commodity curve. Each commodity's monthly contract compositions are determined by reference to the historical distribution of the open interest of contracts across the futures curve for the relevant calendar month by reference to the preceding three years.

Although positions will be adjusted monthly, many contracts are deemed to be held in JPMCCI for multiple months because JPMCCI will synthetically own contracts at deferred points of the futures curve. Therefore, only a portion of JPMCCI's nominal positions will roll each month. This is different from traditional commodities indices, which are generally deemed to have liquidated their current nominal holdings entirely after the end of the rolling period from one contract to another.

The description of the JPMCCI strategy and methodology included in this product supplement no. 154-I is based on rules formulated by J.P. Morgan Securities Ltd. (the "Rules"). The Rules are attached as Annex A to this product supplement.

Payment at Maturity  
(Notes with a Buffer):

Subject to the impact of a market disruption event (including the early acceleration of the amounts due and payable under the terms of the notes), for notes with a buffer, the amount you will receive at maturity is based on the value of the Ending Basket Level relative to the Starting Basket Level (or the Strike Level, if applicable) and the buffer amount.

If the Ending Basket Level is greater than the Starting Basket Level (or the Strike Level, if applicable), you will receive a cash payment per \$1,000 principal amount note that provides you with a return on your investment equal to the Basket Return multiplied by the upside leverage factor, subject, if applicable, to the Maximum Total Return on the note. If applicable, the "Maximum Total Return" on the note is a percentage that we will determine on the pricing date and that will be set forth in the relevant terms supplement. Accordingly, if the relevant terms supplement specifies a Maximum Total Return for the notes, the appreciation potential of the notes will be limited to the Maximum Total Return even if the Basket Return multiplied by the upside leverage factor is greater than the Maximum Total Return. Subject to any applicable Maximum Total Return on the note, your final payment per \$1,000 principal note will be calculated as follows:

$$\$1,000 + (\$1,000 \times \text{Basket Return} \times \text{upside leverage factor})$$

Your principal is protected against a decline in the Basket up to the buffer amount. If the Ending Basket Level declines from the Starting Basket Level (or the Strike Level, if applicable) and such decline is equal to or less than the buffer amount, you will receive the principal amount of your notes at maturity.

If the Ending Basket Level declines from the Starting Basket Level (or the Strike Level, if applicable) by more than the buffer amount, for every 1% decline of the Basket beyond the buffer amount, you will lose an amount equal to 1% of the principal amount of your notes multiplied by the downside leverage factor, and your final payment per \$1,000 principal amount note will be calculated, unless otherwise specified in the relevant terms supplement, as follows:

$$\$1,000 + [\$1,000 \times (\text{Basket Return} + \text{buffer amount \%}) \times \text{downside leverage factor}]$$

*For notes with a buffer, you will lose some or all of your investment at maturity if the Ending Basket Level declines from the Starting Basket Level (or the Strike Level, if applicable) by more than the buffer amount.*

For more information about the impact of market disruption events (including the early acceleration of the amounts due and payable under the terms of the notes) please see "Description of Notes – Payment at Maturity" and "General Terms of Notes – Consequences of a Commodity Hedging Disruption Event."

## Key Terms (continued)

### Payment at Maturity (Notes without a Buffer):

Subject to the impact of a market disruption event (including the early acceleration of the amounts due and payable under the terms of the notes), for notes without a buffer, the amount you will receive at maturity is based on the value of the Ending Basket Level relative to the Starting Basket Level (or the Strike Level, if applicable).

If the Ending Basket Level is greater than the Starting Basket Level (or the Strike Level, if applicable), you will receive a cash payment per \$1,000 principal amount note that provides you with a return on your investment equal to the Basket Return multiplied by the upside leverage factor, subject, if applicable, to the Maximum Total Return on the note. If applicable, the "Maximum Total Return" on the note is a percentage that we will determine on the pricing date and that will be set forth in the relevant terms supplement. Accordingly, if the relevant terms supplement specifies a Maximum Total Return for the notes, the appreciation potential of the notes will be limited to the Maximum Total Return even if the Basket Return multiplied by the upside leverage factor is greater than the Maximum Total Return. Subject to any applicable Maximum Total Return on the note, your final payment per note will be calculated as follows:

$$\$1,000 + (\$1,000 \times \text{Basket Return} \times \text{upside leverage factor})$$

If the Ending Basket Level is equal to the Starting Basket Level (or the Strike Level, if applicable), you will receive a cash payment of \$1,000 per \$1,000 principal amount note.

If the Ending Basket Level declines from the Starting Basket Level (or the Strike Level, if applicable), you will lose 1% of the principal amount of your notes for every 1% that the Basket declines beyond the Starting Basket Level (or the Strike Level, if applicable), unless otherwise specified in the relevant terms supplement. Under these circumstances, your final payment per \$1,000 principal amount note will be calculated as follows:

$$\$1,000 + (\$1,000 \times \text{Basket Return})$$

*For notes without a buffer, you will lose some or all of your investment at maturity if the Ending Basket Level declines from the Starting Basket Level (or the Strike Level, if applicable).*

For more information about the impact of market disruption events (including the early acceleration of the amounts due and payable under the terms of the notes) please see "Description of Notes – Payment at Maturity" and "General Terms of Notes – Consequences of a Commodity Hedging Disruption Event."

### Other Terms:

In each case if applicable, the Maximum Total Return, the buffer amount, upside leverage factor and downside leverage factor will be specified in the relevant terms supplement.

### Basket Return:

Unless otherwise specified in the relevant terms supplement:

$$\frac{\text{Ending Basket Level} - \text{Starting Basket Level (or the Strike Level, if applicable)}}{\text{Starting Basket Level (or the Strike Level, if applicable)}}$$

### Starting Basket Level:

Unless otherwise specified in the relevant terms supplement, set equal to 100 on the pricing date, the final Initial Averaging Date, if applicable, or such other date as specified in the relevant terms supplement, or, if the Basket consists of a single Basket Index, the closing level, as applicable, of the Basket Index on the pricing date or such other date or dates as specified in the relevant terms supplement, or the arithmetic average of the settlement prices, fixing levels or closing levels, as applicable, of the Basket Indices on each of the Initial Averaging Dates.

### Ending Basket Level:

The Basket Closing Level on the Observation Date, or such other date as specified in the relevant terms supplement, or the arithmetic average of the Basket Closing Levels on each of the Ending Averaging Dates.

### Strike Level:

The relevant terms supplement may specify a starting value other than the Starting Basket Level to be used for calculating the Basket Return and the amount payable at maturity, if any. For example, the relevant terms supplement may specify that a Strike Level, equal to 95% of the Starting Basket Level, will be used to calculate the Basket Return.

### Basket Closing Level:

Unless otherwise specified in the relevant terms supplement, the Basket Closing Level on any trading day will be calculated as follows:

$$100 \times [1 + (\text{Crude Oil Price Index Return} \times \text{Crude Oil Price Index Return Weighting}) + (\text{Crude Oil Excess Return Index Return} \times \text{Crude Oil Excess Return Index Return Weighting}) + (\text{Crude Oil Total Return Index Return} \times \text{Crude Oil Total Return Index Return Weighting}) + (\text{Gasoline Price Index Return} \times \text{Gasoline Price Index Return Weighting}) + (\text{Gasoline Excess Return Index Return} \times \text{Gasoline Excess Return Index Return Weighting}) + (\text{Gasoline Total Return Index Return} \times \text{Gasoline Total Return Index Return Weighting}) + (\text{Heating Oil Price Index Return} \times \text{Heating Oil Price Index Return Weighting}) + (\text{Heating Oil Excess Return Index Return} \times \text{Heating Oil Excess Return Index Return Weighting}) + (\text{Heating Oil Total Return Index Return} \times \text{Heating Oil Total Return Index Return Weighting}) + (\text{Natural Gas Price Index Return} \times \text{Natural Gas Price Index Return Weighting}) + (\text{Natural Gas Excess Return Index Return} \times \text{Natural Gas Excess Return Index Return Weighting}) + (\text{Natural Gas Total Return Index Return} \times \text{Natural Gas Total Return Index Return Weighting}) + (\text{Brent Crude Price Index Return} \times \text{Brent Crude Price Index Return Weighting}) + (\text{Brent Crude Excess Return Index Return} \times \text{Brent Crude Excess Return Index Return Weighting}) + (\text{Brent Crude Total Return Index Return} \times \text{Brent Crude Total Return Index Return Weighting}) + (\text{Gas Oil Price Index Return} \times \text{Gas Oil Price Index Return Weighting}) + (\text{Gas Oil Excess Return Index Return} \times \text{Gas Oil Excess Return Index Return Weighting}) + (\text{Gas Oil Total Return Index Return} \times \text{Gas Oil Total Return Index Return Weighting}) + (\text{Gold Price Index Return} \times \text{Gold Price Index Return Weighting}) + (\text{Gold Excess Return Index Return} \times \text{Gold Excess Return Index Return Weighting}) + (\text{Gold Total Return Index Return} \times \text{Gold Total Return Index Return Weighting}) + (\text{Silver Price Index Return} \times \text{Silver Price Index Return Weighting}) + (\text{Silver Excess Return Index Return} \times \text{Silver Excess Return Index Return Weighting}) + (\text{Silver Total Return Index Return} \times \text{Silver Total Return Index Return Weighting}) + (\text{Palladium Price Index Return} \times \text{Palladium Price Index Return Weighting}) + (\text{Palladium Excess Return Index Return} \times \text{Palladium Excess Return Index Return Weighting}) + (\text{Palladium Total Return Index Return} \times \text{Palladium Total Return Index Return Weighting}) + (\text{Platinum Price Index Return} \times \text{Platinum Price Index Return Weighting}) + (\text{Platinum Excess Return Index Return} \times \text{Platinum Excess Return Index Return Weighting}) + (\text{Platinum Total Return Index Return} \times \text{Platinum Total Return Index Return Weighting}) + (\text{Aluminum Price Index Return} \times \text{Aluminum Price Index Return Weighting}) + (\text{Aluminum Excess Return Index Return} \times \text{Aluminum Excess Return Index Return Weighting})]$$

## Key Terms (continued)

Weighting) + (Aluminum Total Return Index Return \* Aluminum Total Return Index Return Weighting) + (Copper Price Index Return \* Copper Price Index Return Weighting) + (Copper Excess Return Index Return \* Copper Excess Return Index Return Weighting) + (Copper Total Return Index Return \* Copper Total Return Index Return Weighting) + (Lead Price Index Return \* Lead Price Index Return Weighting) + (Lead Excess Return Index Return \* Lead Excess Return Index Return Weighting) + (Lead Total Return Index Return \* Lead Total Return Index Return Weighting) + (Nickel Price Index Return \* Nickel Price Index Return Weighting) + (Nickel Excess Return Index Return \* Nickel Excess Return Index Return Weighting) + (Nickel Total Return Index Return \* Nickel Total Return Index Return Weighting) + (Zinc Price Index Return \* Zinc Price Index Return Weighting) + (Zinc Excess Return Index Return \* Zinc Excess Return Index Return Weighting) + (Zinc Total Return Index Return \* Zinc Total Return 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Weighting) + (Sugar Price Index Return \* Sugar Price Index Return Weighting) + (Sugar Excess Return Index Return \* Sugar Excess Return Index Return Weighting) + (Sugar Total Return Index Return \* Sugar Total Return Index Return Weighting) + (Robusta Coffee Price Index Return \* Robusta Coffee Price Index Return Weighting) + (Robusta Coffee Excess Return Index Return \* Robusta Coffee Excess Return Index Return Weighting) + (Robusta Coffee Total Return Index Return \* Robusta Coffee Total Return Index Return Weighting) + (White Sugar Price Index Return \* White Sugar Price Index Return Weighting) + (White Sugar Excess Return Index Return \* White Sugar Excess Return Index Return Weighting) + (White Sugar Total Return Index Return \* White Sugar Total Return Index Return Weighting) + (Feeder Cattle Price Index Return \* Feeder Cattle Price Index Return Weighting) + (Feeder Cattle Excess Return Index Return \* Feeder Cattle Excess Return Index Return Weighting) + (Feeder Cattle Total 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## Key Terms (continued)

Return Index Return Weighting) + (the JPMCCI All Metals Total Return Index Return \* the JPMCCI All Metals Total Return Index Return Weighting) + (the JPMCCI Livestock Price Index Return \* the JPMCCI Livestock Price Index Return Weighting) + (the JPMCCI Livestock Excess Return Index Return \* the JPMCCI Livestock Excess Return Index Return Weighting) + (the JPMCCI Livestock Total Return Index Return \* the JPMCCI Livestock Total Return Index Return Weighting) + (the JPMCCI Agriculture Price Index Return \* the JPMCCI Agriculture Price Index Return Weighting) + (the JPMCCI Agriculture Excess Return Index Return \* the JPMCCI Agriculture Excess Return Index Return Weighting) + (the JPMCCI Agriculture Total Return Index Return \* the JPMCCI Agriculture Total Return Index Return Weighting)]

We refer to each of the Crude Oil Price Index Return, the Crude Oil Excess Return Index Return, the Crude Oil Total Return Index Return, the Gasoline Price Index Return, the Gasoline Excess Return Index Return, the Gasoline Total Return Index Return, the Heating Oil Price Index Return, the Heating Oil Excess Return Index Return, the Heating Oil Total Return Index Return, the Natural Gas Price Index Return, the Natural Gas Excess Return Index Return, the Natural Gas Total Return Index Return, the Brent Crude Price Index Return, the Brent Crude Excess Return Index Return, the Brent Crude Total Return Index Return, the Gas Oil Price Index Return, the Gas Oil Excess Return Index Return, the Gas Oil Total Return Index Return, the Gold Price Index Return, the Gold Excess Return Index Return, the Gold Total Return Index Return, the Silver Price Index Return, the Silver Excess Return Index Return, the Silver Total Return Index Return, the Palladium Price Index Return, the Palladium Excess Return Index Return, the Palladium Total Return Index Return, the Platinum Price Index Return, the Platinum Excess Return Index Return, the Platinum Total Return Index Return, the Aluminum Price Index Return, the Aluminum Excess Return Index Return, the Aluminum Total Return Index Return, the Copper Price Index Return, the Copper Excess Return Index Return, the Copper Total Return Index Return, the Lead Price Index Return, the Lead Excess Return Index Return, the Lead Total Return Index Return, the Nickel Price Index Return, the Nickel Excess Return Index Return, the Nickel Total Return Index Return, the Zinc Price Index Return, the Zinc Excess Return Index Return, the Zinc Total Return Index Return, the Tin Price Index Return, the Tin Excess Return Index Return, the Tin Total Return Index Return, the Corn Price Index Return, the Corn Excess Return Index Return, the Corn Total Return Index Return, the Soybeans Price Index Return, the Soybeans Excess Return Index Return, the Soybeans Total Return Index Return, the Soybean Meal Price Index Return, the Soybean Meal Excess Return Index Return, the Soybean Meal Total Return Index Return, the Wheat Price Index Return, the Wheat Excess Return Index Return, the Wheat Total Return Index Return, the Rough Rice Price Index Return, the Rough Rice Excess Return Index Return, the Rough Rice Total Return Index Return, the Winter Wheat Price Index Return, the Winter Wheat Excess Return Index Return, the Winter Wheat Total Return Index Return, the Spring Wheat Price Index Return, the Spring Wheat Excess Return Index Return, the Spring Wheat Total Return Index Return, the Cocoa Price Index Return, the Cocoa Excess Return Index Return, the Cocoa Total Return Index Return, the Coffee Price Index Return, the Coffee Excess Return Index Return, the Coffee Total Return Index Return, the Cotton Price Index Return, the Cotton Excess Return Index Return, the Cotton Total Return Index Return, the Orange Juice Price Index Return, the Orange 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Agriculture Excess Return Index Return, the JPMCCI Agriculture Total Return Index Return, as an "Index Return."

The Crude Oil Price Index Weighting, the Crude Oil Excess Return Index Weighting, the Crude Oil Total Return Index Weighting, the Gasoline Price Index Weighting, the Gasoline Excess Return Index Weighting, the Gasoline Total Return Index Weighting, the Heating Oil Price Index Weighting, the Heating Oil Excess Return Index Weighting, the Heating Oil Total Return Index Weighting, the Natural Gas Price Index Weighting, the Natural Gas Excess Return Index Weighting, the Natural Gas Total Return Index Weighting, the Brent Crude Price Index Weighting, the Brent Crude Excess Return Index Weighting, the Brent Crude Total Return Index Weighting, the Gas Oil Price Index Weighting, the Gas Oil Excess Return Index Weighting, the Gas Oil Total Return Index Weighting, the Gold Price Index Weighting, the Gold Excess Return Index Weighting, the Gold Total Return Index Weighting, the Silver Price Index Weighting, the Silver Excess Return Index Weighting, the Silver Total Return Index Weighting, the Palladium Price Index Weighting, the Palladium Excess Return Index Weighting, the Palladium Total Return Index Weighting, the Platinum Price Index Weighting, the Platinum Excess Return Index Weighting, the Platinum Total Return Index Weighting, the Aluminum Price Index Weighting, the Aluminum Excess Return Index Weighting, the Aluminum Total Return Index Weighting, the Copper Price Index Weighting, the Copper Excess Return Index Weighting, the Copper Total Return Index Weighting, the Lead Price Index Weighting, the Lead Excess Return Index

## **Key Terms (continued)**

Weighting, the Lead Total Return Index Weighting, the Nickel Price Index Weighting, the Nickel Excess Return Index Weighting, the Nickel Total Return Index Weighting, the Zinc Price Index Weighting, the Zinc Excess Return Index Weighting, the Zinc Total Return Index Weighting, the Tin Price Index Weighting, the Tin Excess Return Index Weighting, the Tin Total Return Index Weighting, the Corn Price Index Weighting, the Corn Excess Return Index Weighting, the Corn Total Return Index Weighting, the Soybeans Price Index Weighting, the Soybeans Excess Return Index Weighting, the Soybeans Total Return Index Weighting, the Soybean Meal Price Index Weighting, the Soybean Meal Excess Return Index Weighting, the Soybean Meal Total Return Index Weighting, the Wheat Price Index Weighting, the Wheat Excess Return Index Weighting, the Wheat Total Return Index Weighting, the Rough Rice Price Index Weighting, the Rough Rice Excess Return Index Weighting, the Rough Rice Total Return Index Weighting, the Winter Wheat Price Index Weighting, the Winter Wheat Excess Return Index Weighting, the Winter Wheat Total Return Index Weighting, the Spring Wheat Price Index Weighting, the Spring Wheat Excess Return Index Weighting, the Spring Wheat Total Return Index Weighting, the Cocoa Price Index Weighting, the Cocoa Excess Return Index Weighting, the Cocoa Total Return Index Weighting, the Coffee Price Index Weighting, the Coffee Excess Return Index Weighting, the Coffee Total Return Index Weighting, the Cotton Price Index Weighting, the Cotton Excess Return Index Weighting, the Cotton Total Return Index Weighting, the Orange Juice Price Index Weighting, the Orange Juice Excess Return Index Weighting, the Orange Juice Total Return Index Weighting, the Sugar Price Index Weighting, the Sugar Excess Return Index Weighting, the Sugar Total Return Index Weighting, the Robusta Coffee Price Index Weighting, the Robusta Coffee Excess Return Index Weighting, the Robusta Coffee Total Return Index Weighting, the White Sugar Price Index Weighting, the White Sugar Excess Return Index Weighting, the White Sugar Total Return Index Weighting, the Feeder Cattle Price Index Weighting, the Feeder Cattle Excess Return Index Weighting, the Feeder Cattle Total Return Index Weighting, the Lean Hogs Price Index Weighting, the Lean Hogs Excess Return Index Weighting, the Lean Hogs Total Return Index Weighting, the Live Cattle Price Index Weighting, the Live Cattle Excess Return Index Weighting, the Live Cattle Total Return Index Weighting, the JPMCCI Energy Light Price Index Weighting, the JPMCCI Energy Light Excess Return Index Weighting, the JPMCCI Energy Light Total Return Index Weighting, the Aggregate JPMCCI Price Index Weighting, the Aggregate JPMCCI Excess Return Index Weighting, the Aggregate JPMCCI Total Return Index Weighting, the JPMCCI Energy Price Index Weighting, the JPMCCI Energy Excess Return Index Weighting, the JPMCCI Energy Total Return Index Weighting, the JPMCCI Non-Energy Price Index Weighting, the JPMCCI Non-Energy Excess Return Index Weighting, the JPMCCI Non-Energy Total Return Index Weighting, the JPMCCI Precious Metals Price Index Weighting, the JPMCCI Precious Metals Excess Return Index Weighting, the JPMCCI Precious Metals Total Return Index Weighting, the JPMCCI Base Metals Price Index Weighting, the JPMCCI Base Metals Excess Return Index Weighting, the JPMCCI Base Metals Total Return Index Weighting, the JPMCCI All Metals Price Index Weighting, the JPMCCI All Metals Excess Return Index Weighting, the JPMCCI All Metals Total Return Index Weighting, the JPMCCI Livestock Price Index Weighting, the JPMCCI Livestock Excess Return Index Weighting, the JPMCCI Livestock Total Return Index Weighting, the JPMCCI Agriculture Price Index Weighting, the JPMCCI Agriculture Excess Return Index Weighting, the JPMCCI Agriculture Total Return Index Weighting (each an "Index Weighting") are the respective weights of each of the Basket Indices in the Basket. For example, if the relevant terms supplement specifies that Aluminum Excess Return Index is weighted to compose 25% of the value of the Basket, the Aluminum Excess Return Weighting is 25%. In certain cases, only one Basket Index may compose the entire Basket. If there is only one Basket Index, that Basket Index will be weighted as 100% of the Basket and the remaining Basket Indices will be weighted as 0% of the Basket. For additional information relating to the weighting of Basket Indices, see "Key Terms — Basket." For additional information, see "Description of Notes — Payment at Maturity."

**Initial Averaging Dates:**

As specified, if applicable, in the relevant terms supplement. Any Initial Averaging Date is subject to the impact of certain market disruption events and as described under "Description of Notes – Payment at Maturity."

**Basket Valuation Date(s):**

The Ending Basket Level will be calculated on a single date, which we refer to as an Observation Date, or on several dates, each of which we refer to as an Ending Averaging Date, as specified in the relevant terms supplement. We refer to such dates generally as Basket Valuation Dates in this product supplement. Any Basket Valuation Date is subject to postponement in the event of certain market disruption events and as described under "Description of Notes — Payment at Maturity."

**Maturity Date:**

As specified in the relevant terms supplement. The maturity date of the notes is subject to the impact of certain market disruption events (including the early acceleration of the amounts due and payable under the terms of the notes) and as described under "Description of Notes – Payment at Maturity" and "General Terms of Notes – Consequences of a Commodity Hedging Disruption Event."

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In making your investment decision, you should rely only on the information contained or incorporated by reference in the terms supplement relevant to your investment, this product supplement no. 154-I and the accompanying prospectus supplement and prospectus with respect to the notes offered by the relevant terms supplement and this product supplement no. 154-I and with respect to JPMorgan Chase & Co. This product supplement no. 154-I, together with the relevant terms supplement and the accompanying prospectus and prospectus supplement, contain the terms of the notes and supersede all other prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, fact sheets, brochures or other educational materials of ours. The information in the relevant terms supplement, this product supplement no. 154-I and the accompanying prospectus supplement and prospectus may only be accurate as of the dates of each of these documents, respectively.

The notes described in the relevant terms supplement and this product supplement no. 154-I are not appropriate for all investors, and involve important legal and tax consequences and investment risks, which should be discussed with your professional advisers. You should be aware that the regulations of the Financial Industry Regulatory Authority, or, FINRA, and the laws of certain jurisdictions (including regulations and laws that require brokers to ensure that investments are suitable for their customers) may limit the availability of the notes. The relevant terms supplement, this product supplement no. 154-I and the accompanying prospectus supplement and prospectus do not constitute an offer to sell or a solicitation of an offer to buy the notes in any circumstances in which such offer or solicitation is unlawful.

In this product supplement no. 154-I and the accompanying prospectus supplement and prospectus, "we," "us" and "our" refer to JPMorgan Chase & Co., unless the context requires otherwise.



## DESCRIPTION OF NOTES

*The following description of the terms of the notes supplements the description of the general terms of the debt securities set forth under the headings "Description of Notes" in the accompanying prospectus supplement and "Description of Debt Securities" in the accompanying prospectus. A separate terms supplement will describe the terms that apply specifically to the notes, including any changes to the terms specified below. Capitalized terms used but not defined in this product supplement no. 154-I have the meanings assigned in the accompanying prospectus supplement, prospectus and the relevant terms supplement. The term "note" refers to each \$1,000 principal amount of Return Enhanced Notes Linked to a Weighted Basket Consisting of up to One Hundred-Five JPMorgan Commodity Curve Commodity Indices, Twenty-One JPMorgan Commodity Curve Sector Indices and/or Three JPMorgan Commodity Curve Aggregate Indices, or Linked to Any One of the Foregoing.*

### General

The Return Enhanced Notes are senior unsecured obligations of JPMorgan Chase & Co. that are linked to a weighted basket (the "Basket") consisting of up to one hundred-five JPMorgan Commodity Curve Commodity Indices, twenty-one JPMorgan Commodity Curve Sector Indices and/or three JPMorgan Commodity Curve Aggregate Indices (each a "Basket Index" and collectively, the "Basket Indices"), or linked to any one of the Basket Indices. The notes are a series of securities referred to in the accompanying prospectus supplement, prospectus and the relevant terms supplement. The notes will be issued by JPMorgan Chase & Co. under an indenture dated May 25, 2001, as may be amended or supplemented from time to time, between us and Deutsche Bank Trust Company Americas (formerly Bankers Trust Company), as trustee.

The notes do not pay interest and do not guarantee any return of principal at, or prior to, maturity (other than the Additional Amount). Instead, at maturity you will receive a payment in cash, the amount of which will vary depending on the performance of the Basket calculated in accordance with the formula set forth below and the Additional Amount.

The notes are not bank deposits and are not insured by the Federal Deposit Insurance Corporation or by any other governmental agency, nor are they obligations of, or guaranteed by, a bank.

The notes are our unsecured and unsubordinated obligations and will rank *pari passu* with all of our other unsecured and unsubordinated obligations.

The notes will be issued in denominations of \$1,000 and integral multiples thereof, unless otherwise specified in the relevant terms supplement. The principal amount and issue price of each note is \$1,000, unless otherwise specified in the relevant terms supplement. The notes will be represented by one or more permanent global notes registered in the name of The Depository Trust Company, or DTC, or its nominee, as described under "Description of Notes — Forms of Notes" in the prospectus supplement and "Forms of Securities — Global Securities" in the prospectus.

The specific terms of the notes will be described in the relevant terms supplement accompanying this product supplement no. 154-I. The terms described in that document supplement those described herein and in the accompanying prospectus and prospectus supplement. If the terms described in the relevant terms supplement are inconsistent with those described herein or in the accompanying prospectus or prospectus supplement, the terms described in the relevant terms supplement will control.

## Payment at Maturity

The maturity date for the notes will be set forth in the relevant terms supplement and is subject to adjustment if such day is not a business day or if the final Basket Valuation Date is postponed as described below. We will also specify whether or not the notes have a buffer and the amount of any such buffer in the relevant terms supplement. In addition, the notes are subject to early acceleration under certain circumstances described under "General Terms of Notes — Consequences of a Commodity Hedging Disruption Event."

### *Notes with a Buffer*

For notes with a buffer, the amount you will receive at maturity is based on the value of the Ending Basket Level relative to the Starting Basket Level (or Strike Level, if applicable) and the buffer amount.

- If the Ending Basket Level is greater than the Starting Basket Level (or Strike Level, if applicable), you will receive a cash payment per \$1,000 principal amount note that provides you with a return on your investment equal to the Basket Return multiplied by the upside leverage factor subject, if applicable, to the Maximum Total Return on the note. If applicable, the "Maximum Total Return" on the note is a percentage that we will determine on the pricing date and which will be set forth in the relevant terms supplement. Accordingly, if the relevant terms supplement specifies a Maximum Total Return for the notes, the appreciation potential of the notes will be limited to the Maximum Total Return even if the Basket Return multiplied by the upside leverage factor is greater than the Maximum Total Return. Subject to any applicable Maximum Total Return, your final payment per \$1,000 principal amount note will be calculated as follows:

$$\$1,000 + (\$1,000 \times \text{Basket Return} \times \text{upside leverage factor})$$

- Your principal is protected against a decline in the Basket up to the buffer amount. If the Ending Basket Level declines from the Starting Basket Level (or Strike Level, if applicable) and such decline is equal to or less than the buffer amount, you will receive the principal amount of your notes at maturity.
- Your investment will be fully exposed to any decline in the Basket beyond the buffer amount. If the Ending Basket Level declines by more than the buffer amount, for every 1% decline of the Basket beyond the buffer amount, you will lose an amount equal to 1% of the principal amount of your notes multiplied by the downside leverage factor, and your final payment per \$1,000 principal amount note will be calculated, unless otherwise specified in the relevant terms supplement, as follows:

$$\$1,000 + [\$1,000 \times (\text{Basket Return} + \text{buffer amount} \%) \times \text{downside leverage factor}]$$

*For notes with a buffer, you will lose some or all of your investment at maturity if the Ending Basket Level declines from the Starting Basket Level (or Strike Level, if applicable) by more than the buffer amount.*

*For more information about the impact of market disruption events (including the early acceleration of the amounts due and payable under the terms of the notes) please see "Description of Notes – Payment at Maturity" and "General Terms of Notes – Consequences of a Commodity Hedging Disruption Event."*

### ***Notes without a Buffer***

For notes without a buffer, the amount you will receive at maturity is based on the value of the Ending Basket Level relative to the Starting Basket Level (or Strike Level, if applicable).

- If the Ending Basket Level is greater than the Starting Basket Level (or Strike Level, if applicable), you will receive a cash payment per \$1,000 principal amount note that provides you with a return on your investment equal to the Basket Return multiplied by the upside leverage factor subject, if applicable, to the Maximum Total Return on the note. If applicable, the "Maximum Total Return" on the note is a percentage which we will determine on the pricing date and which will be set forth in the relevant terms supplement. Accordingly, if the relevant terms supplement specifies a Maximum Total Return for the notes, the appreciation potential of the notes will be limited to the Maximum Total Return, even if the Basket Return multiplied by the upside leverage factor is greater than the Maximum Total Return. Subject to any applicable Maximum Total Return, your final payment per \$1,000 principal amount note will be calculated as follows:

$$\$1,000 + (\$1,000 \times \text{Basket Return} \times \text{upside leverage factor})$$

- If the Ending Basket Level is equal to the Starting Basket Level (or Strike Level, if applicable), you will receive a cash payment of \$1,000 per \$1,000 principal amount note.
- If the Ending Basket Level declines from the Starting Basket Level (or Strike Level, if applicable), you will lose 1% of the principal amount of your notes for every 1% that the Ending Basket Level declines beyond the Starting Basket Level (or Strike Level, if applicable), unless otherwise specified in the relevant terms supplement. Under these circumstances, your final payment per \$1,000 principal amount note will be calculated as follows:

$$\$1,000 + (\$1,000 \times \text{Basket Return})$$

*For notes without a buffer, you will lose some or all of your investment at maturity if the Ending Basket Level declines from the Starting Basket Level (or Strike Level, if applicable).*

*For more information about the impact of market disruption events (including the early acceleration of the amounts due and payable under the terms of the notes) please see "Description of Notes – Payment at Maturity" and "General Terms of Notes – Consequences of a Commodity Hedging Disruption Event."*

Unless otherwise specified in the relevant terms supplement, the "Basket Return," as calculated by the calculation agent, is the percentage change in the Basket, calculated by comparing the Basket Closing Level on the Observation Date, or such other date as specified in the relevant terms supplement, or the arithmetic average of the Basket Closing Level on each of the Ending Averaging Dates (the "Ending Basket Level"), to the Basket Closing Level on the pricing date or such other date as specified in the relevant terms supplement, or to the arithmetic average of the Basket Closing Levels on each of the Initial Averaging Dates, if so specified in the relevant terms supplement (the "Starting Basket Level") or to a Basket Level other than the Starting Basket Level as specified in the relevant terms supplement (the "Strike Level"). The relevant terms supplement will specify the manner in which the Starting Basket Level, or the Strike Level, as applicable, and the Ending Basket Level are determined. The Basket Return, unless otherwise specified in the relevant terms supplement, is calculated as follows:

$$\text{Basket Return} = \frac{\text{Ending Basket Level} - \text{Starting Basket Level (or the Strike Level, if applicable)}}{\text{Starting Basket Level (or the Strike Level, if applicable)}}$$

Unless otherwise specified in the relevant terms supplement, the "Starting Basket Level" will be set equal to 100 on the pricing date, the final Initial Averaging Date, if applicable, or on such other date as specified in the relevant terms supplement, or, if the Basket consists of a single Basket Index, the closing level of the Basket Index on the pricing date or such other date as specified in the relevant terms supplement, or the arithmetic average of the settlement prices, fixing levels or closing levels, as applicable, of the Basket Index on each of the Initial Averaging Dates. The "Ending Basket Level" is equal to the Basket Closing Level on the Observation Date, or such other date as specified in the relevant terms supplement or an arithmetic average of the Basket Closing Levels on each of the Ending Averaging Dates.

In each case if applicable, the "Maximum Total Return," the "buffer amount," "upside leverage factor" and "downside leverage factor" will be set forth in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, the "Basket Closing Level" on any trading day will be calculated as follows:

$$100 \times [1 + (\text{Crude Oil Price Index Return} \times \text{Crude Oil Price Index Return Weighting}) + (\text{Crude Oil Excess Return Index Return} \times \text{Crude Oil Excess Return Index Weighting}) + (\text{Crude Oil Total Return Index Return} \times \text{Crude Oil Total Return Index Weighting}) + (\text{Gasoline Price Index Return} \times \text{Gasoline Price Index Return Weighting}) + (\text{Gasoline Excess Return Index Return} \times \text{Gasoline Excess Return Index Return Weighting}) + (\text{Gasoline Total Return Index Return} \times \text{Gasoline Total Return Index Return Weighting}) + (\text{Heating Oil Price Index Return} \times \text{Heating Oil Price Index Return Weighting}) + (\text{Heating Oil Excess Return Index Return} \times \text{Heating Oil Excess Return Index Return Weighting}) + (\text{Heating Oil Total Return Index Return} \times \text{Heating Oil Total Return Index Return Weighting}) + (\text{Natural Gas Price Index Return} \times \text{Natural Gas Price Index Return Weighting}) + (\text{Natural Gas Excess Return Index Return} \times \text{Natural Gas Excess Return Index Return Weighting}) + (\text{Natural Gas Total Return Index Return} \times \text{Natural Gas Total Return Index Return Weighting}) + (\text{Brent Crude Price Index Return} \times \text{Brent Crude Price Index Return Weighting}) + (\text{Brent Crude Excess Return Index Return} \times \text{Brent Crude Excess Return Index Return Weighting}) + (\text{Brent Crude Total Return Index Return} \times \text{Brent Crude Total Return Index Return Weighting}) + (\text{Gas Oil Price Index Return} \times \text{Gas Oil Price Index Return Weighting}) + (\text{Gas Oil Excess Return Index Return} \times \text{Gas Oil Excess Return Index Return Weighting}) + (\text{Gas Oil Total Return Index Return} \times \text{Gas Oil Total Return Index Return Weighting}) + (\text{Gold Price Index Return} \times \text{Gold Price Index Return Weighting}) + (\text{Gold Excess Return Index Return} \times \text{Gold Excess Return Index Return Weighting}) + (\text{Gold Total Return Index Return} \times \text{Gold Total Return Index Return Weighting}) + (\text{Silver Price Index Return} \times \text{Silver Price Index Return Weighting}) + (\text{Silver Excess Return Index Return} \times \text{Silver Excess Return Index Return Weighting}) + (\text{Silver Total Return Index Return} \times \text{Silver Total Return Index Return Weighting}) + (\text{Palladium Price Index Return} \times \text{Palladium Price Index Return Weighting}) + (\text{Palladium Excess Return Index Return} \times \text{Palladium Excess Return Index Return Weighting}) + (\text{Palladium Total Return Index Return} \times \text{Palladium Total Return Index Return Weighting}) + (\text{Platinum Price Index Return} \times \text{Platinum Price Index Return Weighting}) + (\text{Platinum Excess Return Index Return} \times \text{Platinum Excess Return Index Return Weighting}) + (\text{Platinum Total Return Index Return} \times \text{Platinum Total Return Index Return Weighting}) + (\text{Aluminum Price Index Return} \times \text{Aluminum Price Index Return Weighting}) + (\text{Aluminum Excess Return Index Return} \times \text{Aluminum Excess Return Index Return Weighting}) + (\text{Aluminum Total Return Index Return} \times \text{Aluminum Total Return Index Return Weighting}) + (\text{Copper Price Index Return} \times \text{Copper Price Index Return Weighting}) + (\text{Copper Excess Return Index Return} \times \text{Copper Excess Return Index Return Weighting}) + (\text{Copper Total Return Index Return} \times \text{Copper Total Return Index Return Weighting}) + (\text{Lead Price Index Return} \times \text{Lead Price Index Return Weighting}) + (\text{Lead Excess Return Index Return} \times \text{Lead Excess Return Index Return Weighting}) + (\text{Lead Total Return Index Return} \times \text{Lead Total Return Index Return Weighting}) + (\text{Nickel Price Index Return} \times \text{Nickel Price Index Return Weighting}) + (\text{Nickel Excess Return Index Return} \times \text{Nickel Excess Return Index Return Weighting}) + (\text{Nickel Total Return Index Return} \times \text{Nickel Total Return Index Return Weighting}) + (\text{Zinc Price Index Return} \times \text{Zinc Price Index Return Weighting}) + (\text{Zinc Excess Return Index Return} \times \text{Zinc Excess Return Index Return Weighting})]$$

Return Index Return Weighting) + (Zinc Total Return Index Return \* Zinc Total Return Index Return Weighting) + (Tin Price Index Return \* Tin Price Index Return Weighting) + (Tin Excess Return Index Return \* Tin Excess Return Index Return Weighting) + (Tin Total Return Index Return \* Tin Total Return Index Return Weighting) + (Corn Price Index Return \* Corn Price Index Return Weighting) + (Corn Excess Return Index Return \* Corn Excess Return Index Return Weighting) + (Corn Total Return Index Return \* Corn Total Return Index Return Weighting) + (Soybeans Price Index Return \* Soybeans Price Index Return Weighting) + (Soybeans Excess Return Index Return \* Soybeans Excess Return Index Return Weighting) + (Soybeans Total Return Index Return \* Soybeans Total Return Index Return Weighting) + (Soybean Meal Price Index Return \* Soybean Meal Price Index Return Weighting) + (Soybean Meal Excess Return Index Return \* Soybean Meal Excess Return Index Return Weighting) + (Soybean Meal Total Return Index Return \* Soybean Meal Total Return Index Return Weighting) + (Wheat Price Index Return \* Wheat Price Index Return Weighting) + (Wheat Excess Return Index Return \* Wheat Excess Return Index Return Weighting) + (Wheat Total Return Index Return \* Wheat Total Return Index Return Weighting) + (Rough Rice Price Index Return \* Rough Rice Price Index Return Weighting) + (Rough Rice Excess Return Index Return \* Rough Rice Excess Return Index Return Weighting) + (Rough Rice Total Return Index Return \* Rough Rice Total Return Index Return Weighting) + (Winter Wheat Price Index Return \* Winter Wheat Price Index Return Weighting) + (Winter Wheat Excess Return Index Return \* Winter Wheat Excess Return Index Return Weighting) + (Winter Wheat Total Return Index Return \* Winter Wheat Total Return Index Return Weighting) + (Spring Wheat Price Index Return \* Spring Wheat Price Index Return Weighting) + (Spring Wheat Excess Return Index Return \* Spring Wheat Excess Return Index Return Weighting) + (Spring Wheat Total Return Index Return \* Spring Wheat Total Return Index Return Weighting) + (Cocoa Price Index Return \* Cocoa Price Index Return Weighting) + (Cocoa Excess Return Index Return \* Cocoa Excess Return Index Return Weighting) + (Cocoa Total Return Index Return \* Cocoa Total Return Index Return Weighting) + (Coffee Price Index Return \* Coffee Price Index Return Weighting) + (Coffee Excess Return Index Return \* Coffee Excess Return Index Return Weighting) + (Coffee Total Return Index Return \* Coffee Total Return Index Return Weighting) + (Cotton Price Index Return \* Cotton Price Index Return Weighting) + (Cotton Excess Return Index Return \* Cotton Excess Return Index Return Weighting) + (Cotton Total Return Index Return \* Cotton Total Return Index Return Weighting) + (Orange Juice Price Index Return \* Orange Juice Price Index Return Weighting) + (Orange Juice Excess Return Index Return \* Orange Juice Excess Return Index Return Weighting) + (Orange Juice Total Return Index Return \* Orange Juice Total Return Index Return Weighting) + (Sugar Price Index Return \* Sugar Price Index Return Weighting) + (Sugar Excess Return Index Return \* Sugar Excess Return Index Return Weighting) + (Sugar Total Return Index Return \* Sugar Total Return Index Return Weighting) + (Robusta Coffee Price Index Return \* Robusta Coffee Price Index Return Weighting) + (Robusta Coffee Excess Return Index Return \* Robusta Coffee Excess Return Index Return Weighting) + (Robusta Coffee Total Return Index Return \* Robusta Coffee Total Return Index Return Weighting) + (White Sugar Price Index Return \* White Sugar Price Index Return Weighting) + (White Sugar Excess Return Index Return \* White Sugar Excess Return Index Return Weighting) + (White Sugar Total Return Index Return \* White Sugar Total Return Index Return Weighting) + (Feeder Cattle Price Index Return \* Feeder Cattle Price Index Return Weighting) + (Feeder Cattle Excess Return Index Return \* Feeder Cattle Excess Return Index Return Weighting) + (Feeder Cattle Total Return Index Return \* Feeder Cattle Total Return Index Return Weighting) + (Lean Hogs Price Index Return \* Lean Hogs Price Index Return Weighting) + (Lean Hogs Excess Return Index Return \* Lean Hogs Excess Return Index Return Weighting) + (Lean Hogs Total Return Index Return \* Lean Hogs Total Return Index Return Weighting) + (Live Cattle Price Index Return \* Live Cattle Price Index Return Weighting) + (Live Cattle Excess Return Index Return \* Live Cattle Excess Return Index Return Weighting) + (Live Cattle Total Return Index Return \* Live Cattle Total Return Index Return Weighting) + (the JPMCCI Energy Light Price Index Return \* the JPMCCI Energy Light Price Index Weighting) + (the JPMCCI Energy Light Excess Return Index Return \* the JPMCCI Energy Light Excess Return Index Weighting) + (the JPMCCI Energy Light Total Return Index

Return \* the JPMCCI Energy Light Total Return Index Weighting) + (the Aggregate JPMCCI Price Index Return \* the Aggregate JPMCCI Price Index Return Weighting) + (the Aggregate JPMCCI Excess Return Index Return \* the Aggregate JPMCCI Excess Return Index Return Weighting) + (the Aggregate JPMCCI Total Return Index Return \* the Aggregate JPMCCI Total Return Index Return Weighting) + (the JPMCCI Energy Price Index Return \* the JPMCCI Energy Price Index Return Weighting) + (the JPMCCI Energy Excess Return Index Return \* the JPMCCI Energy Excess Return Index Return Weighting) + (the JPMCCI Energy Total Return Index Return \* the JPMCCI Energy Total Return Index Return Weighting) + (the JPMCCI Non-Energy Price Index Return \* the JPMCCI Non-Energy Price Index Return Weighting) + (the JPMCCI Non-Energy Excess Return Index Return \* the JPMCCI Non-Energy Excess Return Index Return Weighting) + (the JPMCCI Non-Energy Total Return Index Return \* the JPMCCI Non-Energy Total Return Index Return Weighting) + (the JPMCCI Precious Metals Price Index Return \* the JPMCCI Precious Metals Price Index Return Weighting) + (the JPMCCI Precious Metals Excess Return Index Return \* the JPMCCI Precious Metals Excess Return Index Return Weighting) + (the JPMCCI Precious Metals Total Return Index Return \* the JPMCCI Precious Metals Total Return Index Return Weighting) + (the JPMCCI Base Metals Price Index Return \* the JPMCCI Base Metals Price Index Return Weighting) + (the JPMCCI Base Metals Excess Return Index Return \* the JPMCCI Base Metals Excess Return Index Return Weighting) + (the JPMCCI Base Metals Total Return Index Return \* the JPMCCI Base Metals Total Return Index Return Weighting) + (the JPMCCI All Metals Price Index Return \* the JPMCCI All Metals Price Index Return Weighting) + (the JPMCCI All Metals Excess Return Index Return \* the JPMCCI All Metals Excess Return Index Return Weighting) + (the JPMCCI All Metals Total Return Index Return \* the JPMCCI All Metals Total Return Index Return Weighting) + (the JPMCCI Livestock Price Index Return \* the JPMCCI Livestock Price Index Return Weighting) + (the JPMCCI Livestock Excess Return Index Return \* the JPMCCI Livestock Excess Return Index Return Weighting) + (the JPMCCI Livestock Total Return Index Return \* the JPMCCI Livestock Total Return Index Return Weighting) + (the JPMCCI Agriculture Price Index Return \* the JPMCCI Agriculture Price Index Return Weighting) + (the JPMCCI Agriculture Excess Return Index Return \* the JPMCCI Agriculture Excess Return Index Return Weighting) + (the JPMCCI Agriculture Total Return Index Return \* the JPMCCI Agriculture Total Return Index Return Weighting)]

We refer to each of the Crude Oil Price Index Return, the Crude Oil Excess Return Index Return, the Crude Oil Total Return Index Return, the Gasoline Price Index Return, the Gasoline Excess Return Index Return, the Gasoline Total Return Index Return, the Heating Oil Price Index Return, the Heating Oil Excess Return Index Return, the Heating Oil Total Return Index Return, the Natural Gas Price Index Return, the Natural Gas Excess Return Index Return, the Natural Gas Total Return Index Return, the Brent Crude Price Index Return, the Brent Crude Excess Return Index Return, the Brent Crude Total Return Index Return, the Gas Oil Price Index Return, the Gas Oil Excess Return Index Return, the Gas Oil Total Return Index Return, the Gold Price Index Return, the Gold Excess Return Index Return, the Gold Total Return Index Return, the Silver Price Index Return, the Silver Excess Return Index Return, the Silver Total Return Index Return, the Palladium Price Index Return, the Palladium Excess Return Index Return, the Palladium Total Return Index Return, the Platinum Price Index Return, the Platinum Excess Return Index Return, the Platinum Total Return Index Return, the Aluminum Price Index Return, the Aluminum Excess Return Index Return, the Aluminum Total Return Index Return, the Copper Price Index Return, the Copper Excess Return Index Return, the Copper Total Return Index Return, the Lead Price Index Return, the Lead Excess Return Index Return, the Lead Total Return Index Return, the Nickel Price Index Return, the Nickel Excess Return Index Return, the Nickel Total Return Index Return, the Zinc Price Index Return, the Zinc Excess Return Index Return, the Zinc Total Return Index Return, the Tin Price Index Return, the Tin Excess Return Index Return, the Tin Total Return Index Return, the Corn Price Index Return, the Corn Excess Return Index Return, the Corn Total Return Index Return, the Soybeans Price Index Return, the Soybeans Excess Return Index Return, the Soybeans Total Return Index Return, the Soybean Meal Price Index Return, the Soybean Meal Excess Return Index Return, the Soybean Meal Total Return Index Return, the Wheat Price Index Return, the Wheat Excess Return Index Return, the Wheat Total Return Index Return, the Rough Rice Price Index Return, the Rough Rice Excess Return Index Return, the Rough Rice Total Return Index Return, the Winter Wheat Price Index Return,

the Winter Wheat Excess Return Index Return, the Winter Wheat Total Return Index Return, the Spring Wheat Price Index Return, the Spring Wheat Excess Return Index Return, the Spring Wheat Total Return Index Return, the Cocoa Price Index Return, the Cocoa Excess Return Index Return, the Cocoa Total Return Index Return, the Coffee Price Index Return, the Coffee Excess Return Index Return, the Coffee Total Return Index Return, the Cotton Price Index Return, the Cotton Excess Return Index Return, the Cotton Total Return Index Return, the Orange Juice Price Index Return, the Orange Juice Excess Return Index Return, the Orange Juice Total Return Index Return, the Sugar Price Index Return, the Sugar Excess Return Index Return, the Sugar Total Return Index Return, the Robusta Coffee Price Index Return, the Robusta Coffee Excess Return Index Return, the Robusta Coffee Total Return Index Return, the White Sugar Price Index Return, the White Sugar Excess Return Index Return, the White Sugar Total Return Index Return, the Feeder Cattle Price Index Return, the Feeder Cattle Excess Return Index Return, the Feeder Cattle Total Return Index Return, the Lean Hogs Price Index Return, the Lean Hogs Excess Return Index Return, the Lean Hogs Total Return Index Return, the Live Cattle Price Index Return, the Live Cattle Excess Return Index Return, the Live Cattle Total Return Index Return, the JPMCCI Energy Light Price Index Return, the JPMCCI Energy Light Excess Return Index Return, the JPMCCI Energy Light Total Return Index Return, the Aggregate JPMCCI Price Index Return, the Aggregate JPMCCI Excess Return Index Return, the Aggregate JPMCCI Total Return Index Return, the JPMCCI Energy Price Index Return, the JPMCCI Energy Excess Return Index Return, the JPMCCI Energy Total Return Index Return, the JPMCCI Non-Energy Price Index Return, the JPMCCI Non-Energy Excess Return Index Return, the JPMCCI Non-Energy Total Return Index Return, the JPMCCI Precious Metals Price Index Return, the JPMCCI Precious Metals Excess Return Index Return, the JPMCCI Precious Metals Total Return Index Return, the JPMCCI Base Metals Price Index Return, the JPMCCI Base Metals Excess Return Index Return, the JPMCCI Base Metals Total Return Index Return, the JPMCCI All Metals Price Index Return, the JPMCCI All Metals Excess Return Index Return, the JPMCCI All Metals Total Return Index Return, the JPMCCI Livestock Price Index Return, the JPMCCI Livestock Excess Return Index Return, the JPMCCI Livestock Total Return Index Return, the JPMCCI Agriculture Price Index Return, the JPMCCI Agriculture Excess Return Index Return, the JPMCCI Agriculture Total Return Index Return, as an "Index Return."

The Crude Oil Price Index Weighting, the Crude Oil Excess Return Index Weighting, the Crude Oil Total Return Index Weighting, the Gasoline Price Index Weighting, the Gasoline Excess Return Index Weighting, the Gasoline Total Return Index Weighting, the Heating Oil Price Index Weighting, the Heating Oil Excess Return Index Weighting, the Heating Oil Total Return Index Weighting, the Natural Gas Price Index Weighting, the Natural Gas Excess Return Index Weighting, the Natural Gas Total Return Index Weighting, the Brent Crude Price Index Weighting, the Brent Crude Excess Return Index Weighting, the Brent Crude Total Return Index Weighting, the Gas Oil Price Index Weighting, the Gas Oil Excess Return Index Weighting, the Gas Oil Total Return Index Weighting, the Gold Price Index Weighting, the Gold Excess Return Index Weighting, the Gold Total Return Index Weighting, the Silver Price Index Weighting, the Silver Excess Return Index Weighting, the Silver Total Return Index Weighting, the Palladium Price Index Weighting, the Palladium Excess Return Index Weighting, the Palladium Total Return Index Weighting, the Platinum Price Index Weighting, the Platinum Excess Return Index Weighting, the Platinum Total Return Index Weighting, the Aluminum Price Index Weighting, the Aluminum Excess Return Index Weighting, the Aluminum Total Return Index Weighting, the Copper Price Index Weighting, the Copper Excess Return Index Weighting, the Copper Total Return Index Weighting, the Lead Price Index Weighting, the Lead Excess Return Index Weighting, the Lead Total Return Index Weighting, the Nickel Price Index Weighting, the Nickel Excess Return Index Weighting, the Nickel Total Return Index Weighting, the Zinc Price Index Weighting, the Zinc Excess Return Index Weighting, the Zinc Total Return Index Weighting, the Tin Price Index Weighting, the Tin Excess Return Index Weighting, the Tin Total Return Index Weighting, the Corn Price Index Weighting, the Corn Excess Return Index Weighting, the Corn Total Return Index Weighting, the Soybeans Price Index Weighting, the Soybeans Excess Return Index Weighting, the Soybeans Total Return Index Weighting, the Soybean Meal Price Index Weighting, the Soybean Meal Excess Return Index Weighting, the Soybean Meal Total Return Index Weighting, the Wheat Price Index Weighting, the Wheat Excess Return Index Weighting, the Wheat Total Return Index Weighting, the Rough Rice Price Index Weighting, the Rough Rice Excess Return Index Weighting, the Rough Rice Total Return Index Weighting, the Winter Wheat Price Index Weighting, the Winter Wheat Excess

Return Index Weighting, the Winter Wheat Total Return Index Weighting, the Spring Wheat Price Index Weighting, the Spring Wheat Excess Return Index Weighting, the Spring Wheat Total Return Index Weighting, the Cocoa Price Index Weighting, the Cocoa Excess Return Index Weighting, the Cocoa Total Return Index Weighting, the Coffee Price Index Weighting, the Coffee Excess Return Index Weighting, the Coffee Total Return Index Weighting, the Cotton Price Index Weighting, the Cotton Excess Return Index Weighting, the Cotton Total Return Index Weighting, the Orange Juice Price Index Weighting, the Orange Juice Excess Return Index Weighting, the Orange Juice Total Return Index Weighting, the Sugar Price Index Weighting, the Sugar Excess Return Index Weighting, the Sugar Total Return Index Weighting, the Robusta Coffee Price Index Weighting, the Robusta Coffee Excess Return Index Weighting, the Robusta Coffee Total Return Index Weighting, the White Sugar Price Index Weighting, the White Sugar Excess Return Index Weighting, the White Sugar Total Return Index Weighting, the Feeder Cattle Price Index Weighting, the Feeder Cattle Excess Return Index Weighting, the Feeder Cattle Total Return Index Weighting, the Lean Hogs Price Index Weighting, the Lean Hogs Excess Return Index Weighting, the Lean Hogs Total Return Index Weighting, the Live Cattle Price Index Weighting, the Live Cattle Excess Return Index Weighting, the Live Cattle Total Return Index Weighting, the JPMCCI Energy Light Price Index Weighting, the JPMCCI Energy Light Excess Return Index Weighting, the JPMCCI Energy Light Total Return Index Weighting, the Aggregate JPMCCI Price Index Weighting, the Aggregate JPMCCI Excess Return Index Weighting, the Aggregate JPMCCI Total Return Index Weighting, the JPMCCI Energy Price Index Weighting, the JPMCCI Energy Excess Return Index Weighting, the JPMCCI Energy Total Return Index Weighting, the JPMCCI Non-Energy Price Index Weighting, the JPMCCI Non-Energy Excess Return Index Weighting, the JPMCCI Non-Energy Total Return Index Weighting, the JPMCCI Precious Metals Price Index Weighting, the JPMCCI Precious Metals Excess Return Index Weighting, the JPMCCI Precious Metals Total Return Index Weighting, the JPMCCI Base Metals Price Index Weighting, the JPMCCI Base Metals Excess Return Index Weighting, the JPMCCI Base Metals Total Return Index Weighting, the JPMCCI All Metals Price Index Weighting, the JPMCCI All Metals Excess Return Index Weighting, the JPMCCI All Metals Total Return Index Weighting, the JPMCCI Livestock Price Index Weighting, the JPMCCI Livestock Excess Return Index Weighting, the JPMCCI Livestock Total Return Index Weighting, the JPMCCI Agriculture Price Index Weighting, the JPMCCI Agriculture Excess Return Index Weighting, the JPMCCI Agriculture Total Return Index Weighting (each an "Index Weighting") are the respective weights of each of the Basket Indices in the Basket. For example, if the relevant terms supplement specifies that Aluminum Excess Return Index is weighted to compose 25% of the value of the Basket, the Aluminum Excess Return Weighting is 25%. In certain cases, only one Basket Index may compose the entire Basket. If there is only one Basket Index, that Basket Index will be weighted as 100% of the Basket and the remaining Basket Indices will be weighted as 0% of the Basket. For additional information relating to the weighting of Basket Indices, see "Key Terms — Basket."

The relevant terms supplement will specify either (i) the weight of each Basket Index in the Basket, which will be fixed for the term of the notes, or (ii) the manner in which the weight of each Basket Index will be determined. For example, the relevant terms supplement may specify that each Basket Index has an equal weight in the Basket, in which case each Basket Index makes up 1/132 of the value of the Basket, or the relevant terms supplement may specify a different weighting for each of the one hundred thirty-two Basket Indices. Alternatively, the relevant terms supplement may specify that, for a Basket consisting of the Aluminum Total Return Index and the Precious Metals Excess Return index, the Basket Index with the greater Index Return will make up 70% of the value of the Basket, and the Basket Index with the lesser Index Return will make up 30% of the value of the Basket. The Basket may consist of fewer than all one hundred thirty-two Basket Indices, in which case the weight of each Basket Index not included in the Basket will be deemed to be 0%. In certain cases, only one Basket Index may compose the entire Basket. If there is only one Basket Index, that Basket Index will be weighted as 100% of the Basket and the remaining Basket Indices will each be weighted as 0% of the Basket.



On any trading day, the “Crude Oil Return Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Crude Oil Price Index Return} = \frac{\text{Crude Oil Price Index Closing Level} - \text{Crude Oil Price Index Starting Level}}{\text{Crude Oil Price Index Starting Level}}$$

where the “Crude Oil Price Index Starting Level” is the closing level of the Crude Oil Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Crude Oil Price Index on each of the Initial Averaging Dates, and the “Crude Oil Price Index Closing Level” is the closing level of the Crude Oil Price Index on such trading day. However, if the Basket consists of only the Crude Oil Price Index, the “Crude Oil Price Index Closing Level” is the closing level of the Crude Oil Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Crude Oil Price Index on each of the Ending Averaging Dates.

On any trading day, the “Crude Oil Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Crude Oil Excess Return Index Return} = \frac{\text{Crude Oil Excess Return Index Closing Level} - \text{Crude Oil Excess Return Starting Level}}{\text{Crude Oil Excess Return Starting Level}}$$

where the “Crude Oil Excess Return Index Starting Level” is the closing level of the Crude Oil Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Crude Oil Excess Return Index on each of the Initial Averaging Dates, and the “Crude Oil Excess Return Index Closing Level” is the closing level of the Crude Oil Excess Return Index on such trading day. However, if the Basket consists of only the Crude Oil Excess Return Index, the “Crude Oil Excess Return Index Closing Level” is the closing level of the Crude Oil Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Crude Oil Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Crude Oil Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Crude Oil Total Return Index Return} = \frac{\text{Crude Oil Total Return Index Closing Level} - \text{Crude Oil Total Return Index Starting Level}}{\text{Crude Oil Total Return Index Starting Level}}$$

where the “Crude Oil Total Return Index Starting Level” is the closing level of the Crude Oil Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Crude Oil Total Return Index on each of the Initial Averaging Dates, and the “Crude Oil Total Return Index Closing Level” is the closing level of the Crude Oil Total Return Index on such trading day. However, if the Basket consists of only the Crude Oil Total Return Index, the “Crude Oil Total Return Index Closing Level” is the closing level of the Crude Oil Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Crude Oil Total Return Index on each of the Ending Averaging Dates.

On any trading day, the "Gasoline Return Price Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Gasoline Price Index Return} = \frac{\text{Gasoline Price Index Closing Level} - \text{Gasoline Price Index Starting Level}}{\text{Gasoline Price Index Starting Level}}$$

where the "Gasoline Price Index Starting Level" is the closing level of the Gasoline Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gasoline Price Index on each of the Initial Averaging Dates, and the "Gasoline Price Index Return Closing Level" is the closing level of the Gasoline Price Index on such trading day. However, if the Basket consists of only the Gasoline Price Index, the "Gasoline Return Price Index Closing Level" is the closing level of the Gasoline Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gasoline Price Index on each of the Ending Averaging Dates.

On any trading day, the "Gasoline Excess Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Gasoline Excess Return Index Return} = \frac{\text{Gasoline Excess Return Index Closing Level} - \text{Gasoline Excess Return Starting Level}}{\text{Gasoline Excess Return Starting Level}}$$

where the "Gasoline Excess Return Index Starting Level" is the closing level of the Gasoline Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gasoline Excess Return Index on each of the Initial Averaging Dates, and the "Gasoline Excess Return Index Closing Level" is the closing level of the Gasoline Excess Return Index on such trading day. However, if the Basket consists of only the Gasoline Excess Return Index, the "Gasoline Excess Return Index Closing Level" is the closing level of the Gasoline Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gasoline Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the "Gasoline Total Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Gasoline Total Return Index Return} = \frac{\text{Gasoline Total Return Index Closing Level} - \text{Gasoline Total Return Index Starting Level}}{\text{Gasoline Total Return Index Starting Level}}$$

where the "Gasoline Total Return Index Starting Level" is the closing level of the Gasoline Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gasoline Total Return Index on each of the Initial Averaging Dates, and the "Gasoline Total Return Index Closing Level" is the closing level of the Gasoline Total Return Index on such trading day. However, if the Basket consists of only the Gasoline Total Return Index, the "Gasoline Total Return Index Closing Level" is the closing level of the Gasoline Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gasoline Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Heating Oil Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Heating Oil Price Index Return} = \frac{\text{Heating Oil Price Index Closing Level} - \text{Heating Oil Price Index Starting Level}}{\text{Heating Oil Price Index Starting Level}}$$

where the “Heating Oil Price Index Starting Level” is the closing level of the Heating Oil Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Heating Oil Price Index on each of the Initial Averaging Dates, and the “Heating Oil Price Index Closing Level” is the closing level of the Heating Oil Price Index on such trading day. However, if the Basket consists of only the Heating Oil Price Index, the “Heating Oil Price Index Closing Level” is the closing level of the Heating Oil Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Heating Oil Price Index on each of the Ending Averaging Dates.

On any trading day, the “Heating Oil Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Heating Oil Excess Return Index Return} = \frac{\text{Heating Oil Excess Return Index Closing Level} - \text{Heating Oil Excess Return Starting Level}}{\text{Heating Oil Excess Return Starting Level}}$$

where the “Heating Oil Excess Return Index Starting Level” is the closing level of the Heating Oil Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Heating Oil Excess Return Index on each of the Initial Averaging Dates, and the “Heating Oil Excess Return Index Closing Level” is the closing level of the Heating Oil Excess Return Index on such trading day. However, if the Basket consists of only the Heating Oil Excess Return Index, the “Heating Oil Excess Return Index Closing Level” is the closing level of the Heating Oil Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Heating Oil Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Heating Oil Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Heating Oil Total Return Index Return} = \frac{\text{Heating Oil Total Return Index Closing Level} - \text{Heating Oil Total Return Index Starting Level}}{\text{Heating Oil Total Return Index Starting Level}}$$

where the “Heating Oil Total Return Index Starting Level” is the closing level of the Heating Oil Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Heating Oil Total Return Index on each of the Initial Averaging Dates, and the “Heating Oil Total Return Index Closing Level” is the closing level of the Heating Oil Total Return Index on such trading day. However, if the Basket consists of only the Heating Oil Total Return Index, the “Heating Oil Total Return Index Closing Level” is the closing level of the Heating Oil Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Heating Oil Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Natural Gas Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Natural Gas Price Index Return} = \frac{\text{Natural Gas Price Index Closing Level} - \text{Natural Gas Price Index Starting Level}}{\text{Natural Gas Price Index Starting Level}}$$

where the “Natural Gas Price Index Starting Level” is the closing level of the Natural Gas Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Natural Gas Price Index on each of the Initial Averaging Dates, and the “Natural Gas Price Index Closing Level” is the closing level of the Natural Gas Price Index on such trading day. However, if the Basket consists of only the Natural Gas Price Index, the “Natural Gas Price Index Closing Level” is the closing level of the Natural Gas Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Natural Gas Price Index on each of the Ending Averaging Dates.

On any trading day, the “Natural Gas Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Natural Gas Excess Return Index Return} = \frac{\text{Natural Gas Excess Return Index Closing Level} - \text{Natural Gas Excess Return Starting Level}}{\text{Natural Gas Excess Return Starting Level}}$$

where the “Natural Gas Excess Return Index Starting Level” is the closing level of the Natural Gas Excess Return Index Return on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Natural Gas Excess Return Index on each of the Initial Averaging Dates, and the “Natural Gas Excess Return Index Closing Level” is the closing level of the Natural Gas Excess Return Index on such trading day. However, if the Basket consists of only the Natural Gas Excess Return Index, the “Natural Gas Excess Return Index Closing Level” is the closing level of the Natural Gas Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Natural Gas Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Natural Gas Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Natural Gas Total Return Index Return} = \frac{\text{Natural Gas Total Return Index Closing Level} - \text{Natural Gas Total Return Index Starting Level}}{\text{Natural Gas Total Return Index Starting Level}}$$

where the “Natural Gas Total Return Index Starting Level” is the closing level of the Natural Gas Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Natural Gas Total Return Index on each of the Initial Averaging Dates, and the “Natural Gas Total Return Index Closing Level” is the closing level of the Natural Gas Total Return Index on such trading day. However, if the Basket consists of only the Natural Gas Total Return Index, the “Natural Gas Total Return Index Closing Level” is the closing level of the Natural Gas Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Natural Gas Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Brent Crude Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Brent Crude Price Index Return} = \frac{\text{Brent Crude Price Index Closing Level} - \text{Brent Crude Price Index Starting Level}}{\text{Brent Crude Price Index Starting Level}}$$

where the “Brent Crude Price Index Starting Level” is the closing level of the Brent Crude Price Index Return on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Brent Crude Price Index on each of the Initial Averaging Dates, and the “Brent Crude Price Index Closing Level” is the closing level of the Brent Crude Price Index on such trading day. However, if the Basket consists of only the Brent Crude Price Index, the “Brent Crude Price Index Closing Level” is the closing level of the Brent Crude Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Brent Crude Price Index on each of the Ending Averaging Dates.

On any trading day, the “Brent Crude Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Brent Crude Excess Return Index Return} = \frac{\text{Brent Crude Excess Return Index Closing Level} - \text{Brent Crude Excess Return Starting Level}}{\text{Brent Crude Excess Return Starting Level}}$$

where the “Brent Crude Excess Return Index Starting Level” is the closing level of the Brent Crude Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Brent Crude Excess Return Index on each of the Initial Averaging Dates, and the “Brent Crude Excess Return Index Closing Level” is the closing level of the Brent Crude Excess Return Index on such trading day. However, if the Basket consists of only the Brent Crude Excess Return Index, the “Brent Crude Excess Return Index Closing Level” is the closing level of the Brent Crude Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Brent Crude Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Brent Crude Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Brent Crude Total Return Index Return} = \frac{\text{Brent Crude Total Return Index Closing Level} - \text{Brent Crude Total Return Index Starting Level}}{\text{Brent Crude Total Return Index Starting Level}}$$

where the “Brent Crude Total Return Index Starting Level” is the closing level of the Brent Crude Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Brent Crude Total Return Index on each of the Initial Averaging Dates, and the “Brent Crude Total Return Index Closing Level” is the closing level of the Brent Crude Total Return Index on such trading day. However, if the Basket consists of only the Brent Crude Total Return Index, the “Brent Crude Total Return Index Closing Level” is the closing level of the Brent Crude Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Brent Crude Total Return Index on each of the Ending Averaging Dates.

On any trading day, the "Gas Oil Price Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Gas Oil Price Index Return} = \frac{\text{Gas Oil Price Index Closing Level} - \text{Gas Oil Price Index Starting Level}}{\text{Gas Oil Price Index Starting Level}}$$

where the "Gas Oil Price Index Starting Level" is the closing level of the Gas Oil Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gas Oil Price Index on each of the Initial Averaging Dates, and the "Gas Oil Price Index Closing Level" is the closing level of the Gas Oil Price Index on such trading day. However, if the Basket consists of only the Gas Oil Price Index, the "Gas Oil Price Index Closing Level" is the closing level of the Gas Oil Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gas Oil Price Index on each of the Ending Averaging Dates.

On any trading day, the "Gas Oil Excess Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Gas Oil Excess Return Index Return} = \frac{\text{Gas Oil Excess Return Index Closing Level} - \text{Gas Oil Excess Return Starting Level}}{\text{Gas Oil Excess Return Starting Level}}$$

where the "Gas Oil Excess Return Index Starting Level" is the closing level of the Gas Oil Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gas Oil Excess Return Index on each of the Initial Averaging Dates, and the "Gas Oil Excess Return Index Closing Level" is the closing level of the Gas Oil Excess Return Index on such trading day. However, if the Basket consists of only the Gas Oil Excess Return Index, the "Gas Oil Excess Return Index" is the closing level of the Gas Oil Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gas Oil Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the "Gas Oil Total Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Gas Oil Total Return Index Return} = \frac{\text{Gas Oil Total Return Index Closing Level} - \text{Gas Oil Total Return Index Starting Level}}{\text{Gas Oil Total Return Index Starting Level}}$$

where the "Gas Oil Total Return Index Starting Level" is the closing level of the Gas Oil Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gas Oil Total Return Index on each of the Initial Averaging Dates, and the "Gas Oil Total Return Index Closing Level" is the closing level of the Gas Oil Total Return Index on such trading day. However, if the Basket consists of only the Gas Oil Total Return Index, the "Gas Oil Total Return Index Closing Level" is the closing level of the Gas Oil Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gas Oil Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Gold Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Gold Price Index Return} = \frac{\text{Gold Price Index Closing Level} - \text{Gold Price Index Starting Level}}{\text{Gold Price Index Starting Level}}$$

where the “Gold Price Index Starting Level” is the closing level of the Gold Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gold Price Index on each of the Initial Averaging Dates, and the “Gold Price Index Closing Level” is the closing level of the Gold Price Index on such trading day. However, if the Basket consists of only the Gold Price Index, the “Gold Price Index Closing Level” is the closing level of the Gold Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gold Price Index on each of the Ending Averaging Dates.

On any trading day, the “Gold Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Gold Excess Return Index Return} = \frac{\text{Gold Excess Return Index Closing Level} - \text{Gold Excess Return Starting Level}}{\text{Gold Excess Return Starting Level}}$$

where the “Gold Excess Return Index Starting Level” is the closing level of the Gold Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gold Excess Return Index on each of the Initial Averaging Dates, and the “Gold Excess Return Index Closing Level” is the closing level of the Gold Excess Return Index on such trading day. However, if the Basket consists of only the Gold Excess Return Index, the “Gold Excess Return Index Closing Level” is the closing level of the Gold Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gold Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Gold Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Gold Total Return Index Return} = \frac{\text{Gold Total Return Index Closing Level} - \text{Gold Total Return Index Starting Level}}{\text{Gold Total Return Index Starting Level}}$$

where the “Gold Total Return Index Starting Level” is the closing level of the Gold Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gold Total Return Index on each of the Initial Averaging Dates, and the “Gold Total Return Index Closing Level” is the closing level of the Gold Total Return Index on such trading day. However, if the Basket consists of only the Gold Total Return Index, the “Gold Total Return Index Closing Level” is the closing level of the Gold Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Gold Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Silver Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Silver Price Index Return} = \frac{\text{Silver Price Index Closing Level} - \text{Silver Price Index Starting Level}}{\text{Silver Price Index Starting Level}}$$

where the “Silver Price Index Starting Level” is the closing level of the Silver Price Index Return on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Silver Price Index on each of the Initial Averaging Dates, and the “Silver Price Index Closing Level” is the closing level of the Silver Price Index on such trading day. However, if the Basket consists of only the Silver Price Index, the “Silver Price Index Closing Level” is the closing level of the Silver Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Silver Price Index on each of the Ending Averaging Dates.

On any trading day, the “Silver Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Silver Excess Return Index Return} = \frac{\text{Silver Excess Return Index Closing Level} - \text{Silver Excess Return Starting Level}}{\text{Silver Excess Return Starting Level}}$$

where the “Silver Excess Return Index Starting Level” is the closing level of the Silver Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Silver Excess Return Index on each of the Initial Averaging Dates, and the “Silver Excess Return Index Closing Level” is the closing level of the Silver Excess Return Index on such trading day. However, if the Basket consists of only the Silver Excess Return Index, the “Silver Excess Return Index Closing Level” is the closing level of the Silver Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Silver Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Silver Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Silver Total Return Index Return} = \frac{\text{Silver Total Return Index Closing Level} - \text{Silver Total Return Index Starting Level}}{\text{Silver Total Return Index Starting Level}}$$

where the “Silver Total Return Index Starting Level” is the closing level of the Silver Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Silver Total Return Index on each of the Initial Averaging Dates, and the “Silver Total Return Index Closing Level” is the closing level of the Silver Total Return Index on such trading day. However, if the Basket consists of only the Silver Total Return Index, the “Silver Total Return Index Closing Level” is the closing level of the Silver Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Silver Total Return Index on each of the Ending Averaging Dates.



On any trading day, the “Palladium Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Palladium Price Index Return} = \frac{\text{Palladium Price Index Closing Level} - \text{Palladium Price Index Starting Level}}{\text{Palladium Price Index Starting Level}}$$

where the “Palladium Price Index Starting Level” is the closing level of the Palladium Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Palladium Price Index on each of the Initial Averaging Dates, and the “Palladium Price Index Closing Level” is the closing level of the Palladium Price Index on such trading day. However, if the Basket consists of only the Palladium Price Index, the “Palladium Price Index Closing Level” is the closing level of the Palladium Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Palladium Price Index on each of the Ending Averaging Dates.

On any trading day, the “Palladium Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Palladium Excess Return Index Return} = \frac{\text{Palladium Excess Return Index Closing Level} - \text{Palladium Excess Return Starting Level}}{\text{Palladium Excess Return Starting Level}}$$

where the “Palladium Excess Return Index Starting Level” is the closing level of the Palladium Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Palladium Excess Return Index on each of the Initial Averaging Dates, and the “Palladium Excess Return Index Closing Level” is the closing level of the Palladium Excess Return Index on such trading day. However, if the Basket consists of only the Palladium Excess Return Index, the “Palladium Excess Return Index Closing Level” is the closing level of the G Palladium Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Palladium Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Palladium Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Palladium Total Return Index Return} = \frac{\text{Palladium Total Return Index Closing Level} - \text{Palladium Total Return Index Starting Level}}{\text{Palladium Total Return Index Starting Level}}$$

where the “Palladium Total Return Index Starting Level” is the closing level of the Palladium Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Palladium Total Return Index on each of the Initial Averaging Dates, and the “Palladium Total Return Index Closing Level” is the closing level of the Palladium Total Return Index on such trading day. However, if the Basket consists of only the Palladium Total Return Index, the “Palladium Total Return Index Closing Level” is the closing level of the Palladium Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Palladium Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Platinum Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Platinum Price Index Return} = \frac{\text{Platinum Price Index Closing Level} - \text{Platinum Price Index Starting Level}}{\text{Platinum Price Index Starting Level}}$$

where the “Platinum Price Index Starting Level” is the closing level of the Platinum Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Platinum Price Index on each of the Initial Averaging Dates, and the “Platinum Price Index” is the closing level of the Platinum Price Index on such trading day. However, if the Basket consists of only the Platinum Price Index, the “Platinum Price Index Closing Level” is the closing level of the Platinum Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Platinum Price Index on each of the Ending Averaging Dates.

On any trading day, the “Platinum Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Platinum Excess Return Index Return} = \frac{\text{Platinum Excess Return Index Closing Level} - \text{Platinum Excess Return Starting Level}}{\text{Platinum Excess Return Starting Level}}$$

where the “Platinum Excess Return Index Starting Level” is the closing level of the Platinum Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Platinum Excess Return Index on each of the Initial Averaging Dates, and the “Platinum Excess Return Index Closing Level” is the closing level of the Platinum Excess Return Index on such trading day. However, if the Basket consists of only the Platinum Excess Return Index, the “Platinum Excess Return Index Closing Level” is the closing level of the Platinum Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Platinum Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Platinum Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Platinum Total Return Index Return} = \frac{\text{Platinum Total Return Index Closing Level} - \text{Platinum Total Return Index Starting Level}}{\text{Platinum Total Return Index Starting Level}}$$

where the “Platinum Total Return Index Starting Level” is the closing level of the Platinum Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Platinum Total Return Index on each of the Initial Averaging Dates, and the “Platinum Total Return Index Closing Level” is the closing level of the Platinum Total Return Index on such trading day. However, if the Basket consists of only the Platinum Total Return Index, the “Platinum Total Return Index Closing Level” is the closing level of the Platinum Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Platinum Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Aluminum Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Aluminum Price Index Return} = \frac{\text{Aluminum Price Index Closing Level} - \text{Aluminum Price Index Starting Level}}{\text{Aluminum Price Index Starting Level}}$$

where the “Aluminum Price Index Starting Level” is the closing level of the Aluminum Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aluminum Price Index on each of the Initial Averaging Dates, and the “Aluminum Price Index Closing Level” is the closing level of the Aluminum Price Index on such trading day. However, if the Basket consists of only the Aluminum Price Index, the “Aluminum Price Index Closing Level” is the closing level of the Aluminum Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aluminum Price Index on each of the Ending Averaging Dates.

On any trading day, the “Aluminum Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Aluminum Excess Return Index Return} = \frac{\text{Aluminum Excess Return Index Closing Level} - \text{Aluminum Excess Return Starting Level}}{\text{Aluminum Excess Return Starting Level}}$$

where the “Aluminum Excess Return Index Starting Level” is the closing level of the Aluminum Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aluminum Excess Return Index on each of the Initial Averaging Dates, and the “Aluminum Excess Return Index Closing Level” is the closing level of the Aluminum Excess Return Index on such trading day. However, if the Basket consists of only the Aluminum Excess Return Index, the “Aluminum Excess Return Index Closing Level” is the closing level of the Aluminum Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aluminum Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Aluminum Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Aluminum Total Return Index Return} = \frac{\text{Aluminum Total Return Index Closing Level} - \text{Aluminum Total Return Index Starting Level}}{\text{Aluminum Total Return Index Starting Level}}$$

where the “Aluminum Total Return Index Starting Level” is the closing level of the Aluminum Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aluminum Total Return Index on each of the Initial Averaging Dates, and the “Aluminum Total Return Index Closing Level” is the closing level of the Aluminum Total Return Index on such trading day. However, if the Basket consists of only the Aluminum Total Return Index, the “Aluminum Total Return Index Closing Level” is the closing level of the Aluminum Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aluminum Total Return Index on each of the Ending Averaging Dates.

On any trading day, the "Copper Price Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Copper Price Index Return} = \frac{\text{Copper Price Index Closing Level} - \text{Copper Price Index Starting Level}}{\text{Copper Price Index Starting Level}}$$

where the "Copper Price Index Starting Level" is the closing level of the Copper Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Copper Price Index on each of the Initial Averaging Dates, and the "Copper Price Index Closing Level" is the closing level of the Copper Price Index on such trading day. However, if the Basket consists of only the Copper Price Index, the "Copper Price Index Closing Level" is the closing level of the Copper Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Copper Price Index on each of the Ending Averaging Dates.

On any trading day, the "Copper Excess Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Copper Excess Return Index Return} = \frac{\text{Copper Excess Return Index Closing Level} - \text{Copper Excess Return Starting Level}}{\text{Copper Excess Return Starting Level}}$$

where the "Copper Excess Return Index Starting Level" is the closing level of the Copper Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Copper Excess Return Index on each of the Initial Averaging Dates, and the "Copper Excess Return Index Closing Level" is the closing level of the Copper Excess Return Index on such trading day. However, if the Basket consists of only the Copper Excess Return Index, the "Copper Excess Return Index Closing Level" is the closing level of the Copper Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Copper Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the "Copper Total Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Copper Total Return Index Return} = \frac{\text{Copper Total Return Index Closing Level} - \text{Copper Total Return Index Starting Level}}{\text{Copper Total Return Index Starting Level}}$$

where the "Copper Total Return Index Starting Level" is the closing level of the Copper Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Copper Total Return Index on each of the Initial Averaging Dates, and the "Copper Total Return Index Closing Level" is the closing level of the Copper Total Return Index on such trading day. However, if the Basket consists of only the Copper Total Return Index, the "Copper Total Return Index Closing Level" is the closing level of the Copper Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Copper Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Lead Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Lead Price Index Return} = \frac{\text{Lead Price Index Closing Level} - \text{Lead Price Index Starting Level}}{\text{Lead Price Index Starting Level}}$$

where the “Lead Price Index Starting Level” is the closing level of the Lead Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Lead Price Index on each of the Initial Averaging Dates, and the “Lead Price Index Closing Level” is the closing level of the Lead Price Index on such trading day. However, if the Basket consists of only the Lead Price Index, the “Lead Price Index Closing Level” is the closing level of the Lead Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Lead Price Index on each of the Ending Averaging Dates.

On any trading day, the “Lead Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Lead Excess Return Index Return} = \frac{\text{Lead Excess Return Index Closing Level} - \text{Lead Excess Return Starting Level}}{\text{Lead Excess Return Starting Level}}$$

where the “Lead Excess Return Index Starting Level” is the closing level of the Lead Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Lead Excess Return Index on each of the Initial Averaging Dates, and the “Lead Excess Return Index Closing Level” is the closing level of the Lead Excess Return Index on such trading day. However, if the Basket consists of only the Lead Excess Return Index, the “Lead Excess Return Index Closing Level” is the closing level of the Lead Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Lead Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Lead Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Lead Total Return Index Return} = \frac{\text{Lead Total Return Index Closing Level} - \text{Lead Total Return Index Starting Level}}{\text{Lead Total Return Index Starting Level}}$$

where the “Lead Total Return Index Starting Level” is the closing level of the Lead Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Lead Total Return Index on each of the Initial Averaging Dates, and the “Lead Total Return Index Closing Level” is the closing level of the Lead Total Return Index on such trading day. However, if the Basket consists of only the Lead Total Return Index, the “Lead Total Return Index Closing Level” is the closing level of the Lead Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Lead Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Nickel Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Nickel Price Index Return} = \frac{\text{Nickel Price Index Closing Level} - \text{Nickel Price Index Starting Level}}{\text{Nickel Price Index Starting Level}}$$

where the “Nickel Price Index Starting Level” is the closing level of the Nickel Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Nickel Price Index on each of the Initial Averaging Dates, and the “Nickel Price Index Closing Level” is the closing level of the Nickel Price Index on such trading day. However, if the Basket consists of only the Nickel Price Index, the “Nickel Price Index Closing Level” is the closing level of the Nickel Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Nickel Price Index on each of the Ending Averaging Dates.

On any trading day, the “Nickel Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Nickel Excess Return Index Return} = \frac{\text{Nickel Excess Return Index Closing Level} - \text{Nickel Excess Return Starting Level}}{\text{Nickel Excess Return Starting Level}}$$

where the “Nickel Excess Return Index Starting Level” is the closing level of the Nickel Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Nickel Excess Return Index on each of the Initial Averaging Dates, and the “Nickel Excess Return Index Closing Level” is the closing level of the Nickel Excess Return Index on such trading day. However, if the Basket consists of only the Nickel Excess Return Index, the “Nickel Excess Return Index Closing Level” is the closing level of the Nickel Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Nickel Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Nickel Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Nickel Total Return Index Return} = \frac{\text{Nickel Total Return Index Closing Level} - \text{Nickel Total Return Index Starting Level}}{\text{Nickel Total Return Index Starting Level}}$$

where the “Nickel Total Return Index Starting Level” is the closing level of the Nickel Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Nickel Total Return Index on each of the Initial Averaging Dates, and the “Nickel Total Return Index Closing Level” is the closing level of the Nickel Total Return Index on such trading day. However, if the Basket consists of only the Nickel Total Return Index, the “Nickel Total Return Index Closing Level” is the closing level of the Nickel Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Nickel Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Zinc Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Zinc Price Index Return} = \frac{\text{Zinc Price Index Closing Level} - \text{Zinc Price Index Starting Level}}{\text{Zinc Price Index Starting Level}}$$

where the “Zinc Price Index Starting Level” is the closing level of the Zinc Price Index Return on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Zinc Price Index on each of the Initial Averaging Dates, and the “Zinc Price Index Closing Level” is the closing level of the Zinc Price Index on such trading day. However, if the Basket consists of only the Zinc Price Index, the “Zinc Price Index Closing Level” is the closing level of the Zinc Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Zinc Price Index on each of the Ending Averaging Dates.

On any trading day, the “Zinc Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Zinc Excess Return Index Return} = \frac{\text{Zinc Excess Return Index Closing Level} - \text{Zinc Excess Return Starting Level}}{\text{Zinc Excess Return Starting Level}}$$

where the “Zinc Excess Return Index Starting Level” is the closing level of the Zinc Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Zinc Excess Return Index on each of the Initial Averaging Dates, and the “Zinc Excess Return Index Closing Level” is the closing level of the Zinc Excess Return Index on such trading day. However, if the Basket consists of only the Zinc Excess Return Index, the “Zinc Excess Return Index Closing Level” is the closing level of the Zinc Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Zinc Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Zinc Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Zinc Total Return Index Return} = \frac{\text{Zinc Total Return Index Closing Level} - \text{Zinc Total Return Index Starting Level}}{\text{Zinc Total Return Index Starting Level}}$$

where the “Zinc Total Return Index Starting Level” is the closing level of the Zinc Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Zinc Total Return Index on each of the Initial Averaging Dates, and the “Zinc Total Return Index Closing Level” is the closing level of the Zinc Total Return Index on such trading day. However, if the Basket consists of only the Zinc Total Return Index, the “Zinc Total Return Index Closing Level” is the closing level of the Zinc Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Zinc Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Tin Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Tin Price Index Return} = \frac{\text{Tin Price Index Closing Level} - \text{Tin Price Index Starting Level}}{\text{Tin Price Index Starting Level}}$$

where the “Tin Price Index Starting Level” is the closing level of the Tin Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Tin Price Index on each of the Initial Averaging Dates, and the “Tin Price Index Closing Level” is the closing level of the Tin Price Index on such trading day. However, if the Basket consists of only the Tin Price Index, the “Tin Price Index Closing Level” is the closing level of the Tin Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Tin Price Index on each of the Ending Averaging Dates.

On any trading day, the “Tin Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Tin Excess Return Index Return} = \frac{\text{Tin Excess Return Index Closing Level} - \text{Tin Excess Return Starting Level}}{\text{Tin Excess Return Starting Level}}$$

where the “Tin Excess Return Index Starting Level” is the closing level of the Tin Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Tin Excess Return Index on each of the Initial Averaging Dates, and the “Tin Excess Return Index Closing Level” is the closing level of the Tin Excess Return Index on such trading day. However, if the Basket consists of only the Tin Excess Return Index, the “Tin Excess Return Index Closing Level” is the closing level of the Tin Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Tin Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Tin Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Tin Total Return Index Return} = \frac{\text{Tin Total Return Index Closing Level} - \text{Tin Total Return Index Starting Level}}{\text{Tin Total Return Index Starting Level}}$$

where the “Tin Total Return Index Starting Level” is the closing level of the Tin Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Tin Total Return Index on each of the Initial Averaging Dates, and the “Tin Total Return Index Closing Level” is the closing level of the Tin Total Return Index on such trading day. However, if the Basket consists of only the Tin Total Return Index, the “Tin Total Return Index Closing Level” is the closing level of the Tin Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Tin Total Return Index on each of the Ending Averaging Dates.



On any trading day, the "Corn Price Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Corn Price Index Return} = \frac{\text{Corn Price Index Closing Level} - \text{Corn Price Index Starting Level}}{\text{Corn Price Index Starting Level}}$$

where the "Corn Price Index Starting Level" is the closing level of the Corn Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Corn Price Index on each of the Initial Averaging Dates, and the "Corn Price Index Closing Level" is the closing level of the Corn Price Index on such trading day. However, if the Basket consists of only the Corn Price Index, the "Corn Price Index Closing Level" is the closing level of the Corn Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Corn Price Index on each of the Ending Averaging Dates.

On any trading day, the "Corn Excess Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Corn Excess Return Index Return} = \frac{\text{Corn Excess Return Index Closing Level} - \text{Corn Excess Return Starting Level}}{\text{Corn Excess Return Starting Level}}$$

where the "Corn Excess Return Index Starting Level" is the closing level of the Corn Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Corn Excess Return Index on each of the Initial Averaging Dates, and the "Corn Excess Return Index Closing Level" is the closing level of the Corn Excess Return Index on such trading day. However, if the Basket consists of only the Corn Excess Return Index, the "Corn Excess Return Index Closing Level" is the closing level of the Corn Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Corn Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the "Corn Total Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Corn Total Return Index Return} = \frac{\text{Corn Total Return Index Closing Level} - \text{Corn Total Return Index Starting Level}}{\text{Corn Total Return Index Starting Level}}$$

where the "Corn Total Return Index Starting Level" is the closing level of the Corn Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Corn Total Return Index on each of the Initial Averaging Dates, and the "Corn Total Return Index Closing Level" is the closing level of the Corn Total Return Index on such trading day. However, if the Basket consists of only the Corn Total Return Index, the "Corn Total Return Index Closing Level" is the closing level of the Corn Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Corn Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Soybeans Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Soybeans Price Index Return} = \frac{\text{Soybeans Price Index Closing Level} - \text{Soybeans Price Index Starting Level}}{\text{Soybeans Price Index Starting Level}}$$

where the “Soybeans Price Index Starting Level” is the closing level of the Soybeans Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Soybeans Price Index on each of the Initial Averaging Dates, and the “Soybeans Price Index Closing Level” is the closing level of the Soybeans Price Index on such trading day. However, if the Basket consists of only the Soybeans Price Index, the “Soybeans Price Index Closing Level” is the closing level of the Soybeans Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Soybeans Price Index on each of the Ending Averaging Dates.

On any trading day, the “Soybeans Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Soybeans Excess Return Index Return} = \frac{\text{Soybeans Excess Return Index Closing Level} - \text{Soybeans Excess Return Starting Level}}{\text{Soybeans Excess Return Starting Level}}$$

where the “Soybeans Excess Return Index Starting Level” is the closing level of the Soybeans Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Soybeans Excess Return Index on each of the Initial Averaging Dates, and the “Soybeans Excess Return Index Closing Level” is the closing level of the Soybeans Excess Return Index on such trading day. However, if the Basket consists of only the Soybeans Excess Return Index, the “Soybeans Excess Return Index Closing Level” is the closing level of the Soybeans Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Soybeans Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Soybeans Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Soybeans Total Return Index Return} = \frac{\text{Soybeans Total Return Index Closing Level} - \text{Soybeans Total Return Index Starting Level}}{\text{Soybeans Total Return Index Starting Level}}$$

where the “Soybeans Total Return Index Starting Level” is the closing level of the Soybeans Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Soybeans Total Return Index on each of the Initial Averaging Dates, and the “Soybeans Total Return Index Closing Level” is the closing level of the Soybeans Total Return Index on such trading day. However, if the Basket consists of only the Soybeans Total Return Index, the “Soybeans Total Return Index Closing Level” is the closing level of the Soybeans Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Soybeans Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Soybeans Meal Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Soybeans Meal Price Index Return} = \frac{\text{Soybeans Meal Price Index Closing Level} - \text{Soybeans Meal Price Index Starting Level}}{\text{Soybeans Meal Price Index Starting Level}}$$

where the “Soybeans Meal Price Index Starting Level” is the closing level of the Soybeans Meal Price Index Return on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Soybeans Meal Price Index on each of the Initial Averaging Dates, and the “Soybeans Meal Price Index Closing Level” is the closing level of the Soybeans Meal Price Index on such trading day. However, if the Basket consists of only the Soybeans Meal Price Index, the “Soybeans Meal Price Index Closing Level” is the closing level of the Soybeans Meal Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Soybeans Meal Price Index on each of the Ending Averaging Dates.

On any trading day, the “Soybeans Meal Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Soybeans Meal Excess Return Index Return} = \frac{\text{Soybeans Meal Excess Return Index Closing Level} - \text{Soybeans Meal Excess Return Starting Level}}{\text{Soybeans Meal Excess Return Starting Level}}$$

where the “Soybeans Meal Excess Return Index Starting Level” is the closing level of the Soybeans Meal Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Soybeans Meal Excess Return Index on each of the Initial Averaging Dates, and the “Soybeans Meal Excess Return Index Closing Level” is the closing level of the Soybeans Meal Excess Return Index on such trading day. However, if the Basket consists of only the Soybeans Meal Excess Return Index, the “Soybeans Meal Excess Return Index Closing Level” is the closing level of the Soybeans Meal Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Soybeans Meal Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Soybeans Meal Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Soybeans Meal Total Return Index Return} = \frac{\text{Soybeans Meal Total Return Index Closing Level} - \text{Soybeans Meal Total Return Index Starting Level}}{\text{Soybeans Meal Total Return Index Starting Level}}$$

where the “Soybeans Meal Total Return Index Starting Level” is the closing level of the Soybeans Meal Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Soybeans Meal Total Return Index on each of the Initial Averaging Dates, and the “Soybeans Meal Total Return Index Closing Level” is the closing level of the Soybeans Meal Total Return Index on such trading day. However, if the Basket consists of only the Soybeans Meal Total Return Index, the “Soybeans Meal Total Return Index Closing Level” is the closing level of the Soybeans Meal Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Soybeans Meal Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Wheat Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Wheat Price Index Return} = \frac{\text{Wheat Price Index Closing Level} - \text{Wheat Price Index Starting Level}}{\text{Wheat Price Index Starting Level}}$$

where the “Wheat Price Index Starting Level” is the closing level of the Wheat Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Wheat Price Index on each of the Initial Averaging Dates, and the “Wheat Price Index Closing Level” is the closing level of the Wheat Price Index on such trading day. However, if the Basket consists of only the Wheat Price Index, the “Wheat Price Index Closing Level” is the closing level of the Wheat Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Wheat Price Index on each of the Ending Averaging Dates.

On any trading day, the “Wheat Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Wheat Excess Return Index Return} = \frac{\text{Wheat Excess Return Index Closing Level} - \text{Wheat Excess Return Starting Level}}{\text{Wheat Excess Return Starting Level}}$$

where the “Wheat Excess Return Index Starting Level” is the closing level of the Wheat Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Wheat Excess Return Index on each of the Initial Averaging Dates, and the “Wheat Excess Return Index Closing Level” is the closing level of the Wheat Excess Return Index on such trading day. However, if the Basket consists of only the Wheat Excess Return Index, the “Wheat Excess Return Index Closing Level” is the closing level of the Wheat Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Wheat Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Wheat Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Wheat Total Return Index Return} = \frac{\text{Wheat Total Return Index Closing Level} - \text{Wheat Total Return Index Starting Level}}{\text{Wheat Total Return Index Starting Level}}$$

where the “Wheat Total Return Index Starting Level” is the closing level of the Wheat Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Wheat Total Return Index on each of the Initial Averaging Dates, and the “Wheat Total Return Index Closing Level” is the closing level of the Wheat Total Return Index on such trading day. However, if the Basket consists of only the Wheat Total Return Index, the “Wheat Total Return Index Closing Level” is the closing level of the Wheat Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Wheat Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Rough Rice Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Rough Rice Price Index Return} = \frac{\text{Rough Rice Price Index Closing Level} - \text{Rough Rice Price Index Starting Level}}{\text{Rough Rice Price Index Starting Level}}$$

where the “Rough Rice Price Index Starting Level” is the closing level of the Rough Rice Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Rough Rice Price Index on each of the Initial Averaging Dates, and the “Rough Rice Price Index Closing Level” is the closing level of the Rough Rice Price Index on such trading day. However, if the Basket consists of only the Rough Rice Price Index, the “Rough Rice Price Index Closing Level” is the closing level of the Rough Rice Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Rough Rice Price Index on each of the Ending Averaging Dates.

On any trading day, the “Rough Rice Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Rough Rice Excess Return Index Return} = \frac{\text{Rough Rice Excess Return Index Closing Level} - \text{Rough Rice Excess Return Starting Level}}{\text{Rough Rice Excess Return Starting Level}}$$

where the “Rough Rice Excess Return Index Starting Level” is the closing level of the Rough Rice Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Rough Rice Excess Return Index on each of the Initial Averaging Dates, and the “Rough Rice Excess Return Index Closing Level” is the closing level of the Rough Rice Excess Return Index on such trading day. However, if the Basket consists of only the Rough Rice Excess Return Index, the “Rough Rice Excess Return Index Closing Level” is the closing level of the Rough Rice Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Rough Rice Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Rough Rice Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Rough Rice Total Return Index Return} = \frac{\text{Rough Rice Total Return Index Closing Level} - \text{Rough Rice Total Return Index Starting Level}}{\text{Rough Rice Total Return Index Starting Level}}$$

where the “Rough Rice Total Return Index Starting Level” is the closing level of the Rough Rice Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Rough Rice Total Return Index on each of the Initial Averaging Dates, and the “Rough Rice Total Return Index Closing Level” is the closing level of the Rough Rice Total Return Index on such trading day. However, if the Basket consists of only the Rough Rice Total Return Index, the “Rough Rice Total Return Index Closing Level” is the closing level of the Rough Rice Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Rough Rice Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Winter Wheat Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Winter Wheat Price Index Return} = \frac{\text{Winter Wheat Price Index Closing Level} - \text{Winter Wheat Price Index Starting Level}}{\text{Winter Wheat Price Index Starting Level}}$$

where the “Winter Wheat Price Index Starting Level” is the closing level of the Winter Wheat Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Winter Wheat Price Index on each of the Initial Averaging Dates, and the “Winter Wheat Price Index Closing Level” is the closing level of the Winter Wheat Price Index on such trading day. However, if the Basket consists of only the Winter Wheat Price Index, the “Winter Wheat Price Index Closing Level” is the closing level of the Winter Wheat Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Winter Wheat Price Index on each of the Ending Averaging Dates.

On any trading day, the “Winter Wheat Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Winter Wheat Excess Return Index Return} = \frac{\text{Winter Wheat Excess Return Index Closing Level} - \text{Winter Wheat Excess Return Starting Level}}{\text{Winter Wheat Excess Return Starting Level}}$$

where the “Winter Wheat Excess Return Index Starting Level” is the closing level of the Winter Wheat Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Winter Wheat Excess Return Index on each of the Initial Averaging Dates, and the “Winter Wheat Excess Return Index Closing Level” is the closing level of the Winter Wheat Excess Return Index on such trading day. However, if the Basket consists of only the Winter Wheat Excess Return Index, the “Winter Wheat Excess Return Index Closing Level” is the closing level of the Winter Wheat Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Winter Wheat Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Winter Wheat Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Winter Wheat Total Return Index Return} = \frac{\text{Winter Wheat Total Return Index Closing Level} - \text{Winter Wheat Total Return Index Starting Level}}{\text{Winter Wheat Total Return Index Starting Level}}$$

where the “Winter Wheat Total Return Index Starting Level” is the closing level of the Winter Wheat Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Winter Wheat Total Return Index on each of the Initial Averaging Dates, and the “Winter Wheat Total Return Index Closing Level” is the closing level of the Winter Wheat Total Return Index on such trading day. However, if the Basket consists of only the Winter Wheat Total Return Index, the “Winter Wheat Total Return Index Closing Level” is the closing level of the Winter Wheat Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Winter Wheat Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Spring Wheat Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Spring Wheat Price Index Return} = \frac{\text{Spring Wheat Price Index Closing Level} - \text{Spring Wheat Price Index Starting Level}}{\text{Spring Wheat Price Index Starting Level}}$$

where the “Spring Wheat Price Index Starting Level” is the closing level of the Spring Wheat Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Spring Wheat Price Index on each of the Initial Averaging Dates, and the “Spring Wheat Price Index Closing Level” is the closing level of the Spring Wheat Price Index on such trading day. However, if the Basket consists of only the Spring Wheat Price Index, the “Spring Wheat Price Index Closing Level” is the closing level of the Spring Wheat Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Spring Wheat Price Index on each of the Ending Averaging Dates.

On any trading day, the “Spring Wheat Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Spring Wheat Excess Return Index Return} = \frac{\text{Spring Wheat Excess Return Index Closing Level} - \text{Spring Wheat Excess Return Starting Level}}{\text{Spring Wheat Excess Return Starting Level}}$$

where the “Spring Wheat Excess Return Index Starting Level” is the closing level of the Spring Wheat Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Spring Wheat Excess Return Index on each of the Initial Averaging Dates, and the “Spring Wheat Excess Return Index Closing Level” is the closing level of the Spring Wheat Excess Return Index on such trading day. However, if the Basket consists of only the Spring Wheat Excess Return Index, the “Spring Wheat Excess Return Index Closing Level” is the closing level of the Spring Wheat Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Spring Wheat Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Spring Wheat Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Spring Wheat Total Return Index Return} = \frac{\text{Spring Wheat Total Return Index Closing Level} - \text{Spring Wheat Total Return Index Starting Level}}{\text{Spring Wheat Total Return Index Starting Level}}$$

where the “Spring Wheat Total Return Index Starting Level” is the closing level of the Spring Wheat Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Spring Wheat Total Return Index on each of the Initial Averaging Dates, and the “Spring Wheat Total Return Index Closing Level” is the closing level of the Spring Wheat Total Return Index on such trading day. However, if the Basket consists of only the Spring Wheat Total Return Index, the “Spring Wheat Total Return Index Closing Level” is the closing level of the Spring Wheat Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Spring Wheat Total Return Index on each of the Ending Averaging Dates.

On any trading day, the "Cocoa Price Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Cocoa Price Index Return} = \frac{\text{Cocoa Price Index Closing Level} - \text{Cocoa Price Index Starting Level}}{\text{Cocoa Price Index Starting Level}}$$

where the "Cocoa Price Index Starting Level" is the closing level of the Cocoa Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Cocoa Price Index on each of the Initial Averaging Dates, and the "Cocoa Price Index Closing Level" is the closing level of the Cocoa Price Index on such trading day. However, if the Basket consists of only the Cocoa Price Index, the "Cocoa Price Index Closing Level" is the closing level of the Cocoa Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Cocoa Price Index on each of the Ending Averaging Dates.

On any trading day, the "Cocoa Excess Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Cocoa Excess Return Index Return} = \frac{\text{Cocoa Excess Return Index Closing Level} - \text{Cocoa Excess Return Starting Level}}{\text{Cocoa Excess Return Starting Level}}$$

where the "Cocoa Excess Return Index Starting Level" is the closing level of the Cocoa Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Cocoa Excess Return Index on each of the Initial Averaging Dates, and the "Cocoa Excess Return Index Closing Level" is the closing level of the Cocoa Excess Return Index on such trading day. However, if the Basket consists of only the Cocoa Excess Return Index, the "Cocoa Excess Return Index Closing Level" is the closing level of the Cocoa Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Cocoa Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the "Cocoa Total Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Cocoa Total Return Index Return} = \frac{\text{Cocoa Total Return Index Closing Level} - \text{Cocoa Total Return Index Starting Level}}{\text{Cocoa Total Return Index Starting Level}}$$

where the "Cocoa Total Return Index Starting Level" is the closing level of the Cocoa Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Cocoa Total Return Index on each of the Initial Averaging Dates, and the "Cocoa Total Return Index Closing Level" is the closing level of the Cocoa Total Return Index on such trading day. However, if the Basket consists of only the Cocoa Total Return Index, the "Cocoa Total Return Index Closing Level" is the closing level of the Cocoa Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Cocoa Total Return Index on each of the Ending Averaging Dates.



On any trading day, the "Coffee Price Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Coffee Price Index Return} = \frac{\text{Coffee Price Index Closing Level} - \text{Coffee Price Index Starting Level}}{\text{Coffee Price Index Starting Level}}$$

where the "Coffee Price Index Starting Level" is the closing level of the Coffee Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Coffee Price Index on each of the Initial Averaging Dates, and the "Coffee Price Index Closing Level" is the closing level of the Coffee Price Index on such trading day. However, if the Basket consists of only the Coffee Price Index, the "Coffee Price Index Closing Level" is the closing level of the Coffee Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Coffee Price Index on each of the Ending Averaging Dates.

On any trading day, the "Coffee Excess Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Coffee Excess Return Index Return} = \frac{\text{Coffee Excess Return Index Closing Level} - \text{Coffee Excess Return Starting Level}}{\text{Coffee Excess Return Starting Level}}$$

where the "Coffee Excess Return Index Starting Level" is the closing level of the Coffee Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Coffee Excess Return Index on each of the Initial Averaging Dates, and the "Coffee Excess Return Index Closing Level" is the closing level of the Coffee Excess Return Index on such trading day. However, if the Basket consists of only the Coffee Excess Return Index, the "Coffee Excess Return Index Closing Level" is the closing level of the Coffee Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Coffee Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the "Coffee Total Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Coffee Total Return Index Return} = \frac{\text{Coffee Total Return Index Closing Level} - \text{Coffee Total Return Index Starting Level}}{\text{Coffee Total Return Index Starting Level}}$$

where the "Coffee Total Return Index Starting Level" is the closing level of the Coffee Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Coffee Total Return Index on each of the Initial Averaging Dates, and the "Coffee Total Return Index Closing Level" is the closing level of the Coffee Total Return Index on such trading day. However, if the Basket consists of only the Coffee Total Return Index, the "Coffee Total Return Index Closing Level" is the closing level of the Coffee Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Coffee Total Return Index on each of the Ending Averaging Dates.

On any trading day, the "Cotton Price Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Cotton Price Index Return} = \frac{\text{Cotton Price Index Closing Level} - \text{Cotton Price Index Starting Level}}{\text{Cotton Price Index Starting Level}}$$

where the "Cotton Price Index Starting Level" is the closing level of the Cotton Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Cotton Price Index on each of the Initial Averaging Dates, and the "Cotton Price Index Closing Level" is the closing level of the Cotton Price Index on such trading day. However, if the Basket consists of only the Cotton Price Index, the "Cotton Price Index Closing Level" is the closing level of the Cotton Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Cotton Price Index on each of the Ending Averaging Dates.

On any trading day, the "Cotton Excess Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Cotton Excess Return Index Return} = \frac{\text{Cotton Excess Return Index Closing Level} - \text{Cotton Excess Return Starting Level}}{\text{Cotton Excess Return Starting Level}}$$

where the "Cotton Excess Return Index Starting Level" is the closing level of the Cotton Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Cotton Excess Return Index on each of the Initial Averaging Dates, and the "Cotton Excess Return Index Closing Level" is the closing level of the Cotton Excess Return Index on such trading day. However, if the Basket consists of only the Cotton Excess Return Index, the "Cotton Excess Return Index Closing Level" is the closing level of the Cotton Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Cotton Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the "Cotton Total Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Cotton Total Return Index Return} = \frac{\text{Cotton Total Return Index Closing Level} - \text{Cotton Total Return Index Starting Level}}{\text{Cotton Total Return Index Starting Level}}$$

where the "Cotton Total Return Index Starting Level" is the closing level of the Cotton Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Cotton Total Return Index on each of the Initial Averaging Dates, and the "Cotton Total Return Index Closing Level" is the closing level of the Cotton Total Return Index on such trading day. However, if the Basket consists of only the Cotton Total Return Index, the "Cotton Total Return Index Closing Level" is the closing level of the Cotton Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Cotton Total Return Index on each of the Ending Averaging Dates.

On any trading day, the "Orange Juice Price Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Orange Juice Price Index Return} = \frac{\text{Orange Juice Price Index Closing Level} - \text{Orange Juice Price Index Starting Level}}{\text{Orange Juice Price Index Starting Level}}$$

where the "Orange Juice Price Index Starting Level" is the closing level of the Orange Juice Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Orange Juice Price Index on each of the Initial Averaging Dates, and the "Orange Juice Price Index Closing Level" is the closing level of the Orange Juice Price Index on such trading day. However, if the Basket consists of only the Orange Juice Price Index, the "Orange Juice Price Index Closing Level" is the closing level of the Orange Juice Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Orange Juice Price Index on each of the Ending Averaging Dates.

On any trading day, the "Orange Juice Excess Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Orange Juice Excess Return Index Return} = \frac{\text{Orange Juice Excess Return Index Closing Level} - \text{Orange Juice Excess Return Starting Level}}{\text{Orange Juice Excess Return Starting Level}}$$

where the "Orange Juice Excess Return Index Starting Level" is the closing level of the Orange Juice Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Orange Juice Excess Return Index on each of the Initial Averaging Dates, and the "Orange Juice Excess Return Index Closing Level" is the closing level of the Orange Juice Excess Return Index on such trading day. However, if the Basket consists of only the Orange Juice Excess Return Index, the "Orange Juice Excess Return Index Closing Level" is the closing level of the Orange Juice Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Orange Juice Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the "Orange Juice Total Return Index Return" is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Orange Juice Total Return Index Return} = \frac{\text{Orange Juice Total Return Index Closing Level} - \text{Orange Juice Total Return Index Starting Level}}{\text{Orange Juice Total Return Index Starting Level}}$$

where the "Orange Juice Total Return Index Starting Level" is the closing level of the Orange Juice Total Return Index Return on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Orange Juice Total Return Index on each of the Initial Averaging Dates, and the "Orange Juice Total Return Index Closing Level" is the closing level of the Orange Juice Total Return Index on such trading day. However, if the Basket consists of only the Orange Juice Total Return Index, the "Orange Juice Total Return Index Closing Level" is the closing level of the Orange Juice Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Orange Juice Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Sugar Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Sugar Price Index Return} = \frac{\text{Sugar Price Index Closing Level} - \text{Sugar Price Index Starting Level}}{\text{Sugar Price Index Starting Level}}$$

where the “Sugar Price Index Starting Level” is the closing level of the Sugar Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Sugar Price Index on each of the Initial Averaging Dates, and the “Sugar Price Index Closing Level” is the closing level of the Sugar Price Index on such trading day. However, if the Basket consists of only the Sugar Price Index, the “Sugar Price Index Closing Level” is the closing level of the Sugar Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Sugar Price Index on each of the Ending Averaging Dates.

On any trading day, the “Sugar Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Sugar Excess Return Index Return} = \frac{\text{Sugar Excess Return Index Closing Level} - \text{Sugar Excess Return Starting Level}}{\text{Sugar Excess Return Starting Level}}$$

where the “Sugar Excess Return Index Starting Level” is the closing level of the Sugar Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Sugar Excess Return Index on each of the Initial Averaging Dates, and the “Sugar Excess Return Index Closing Level” is the closing level of the Sugar Excess Return Index on such trading day. However, if the Basket consists of only the Sugar Excess Return Index, the “Sugar Excess Return Index Closing Level” is the closing level of the Sugar Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Sugar Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Sugar Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Sugar Total Return Index Return} = \frac{\text{Sugar Total Return Index Closing Level} - \text{Sugar Total Return Index Starting Level}}{\text{Sugar Total Return Index Starting Level}}$$

where the “Sugar Total Return Index Starting Level” is the closing level of the Sugar Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Sugar Total Return Index on each of the Initial Averaging Dates, and the “Sugar Total Return Index Closing Level” is the closing level of the Sugar Total Return Index on such trading day. However, if the Basket consists of only the Sugar Total Return Index, the “Sugar Total Return Index Closing Level” is the closing level of the Sugar Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Sugar Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Robusta Coffee Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Robusta Coffee Price Index Return} = \frac{\text{Robusta Coffee Price Index Closing Level} - \text{Robusta Coffee Price Index Starting Level}}{\text{Robusta Coffee Price Index Starting Level}}$$

where the “Robusta Coffee Price Index Starting Level” is the closing level of the Robusta Coffee Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Robusta Coffee Price Index on each of the Initial Averaging Dates, and the “Robusta Coffee Price Index Closing Level” is the closing level of the Robusta Coffee Price Index on such trading day. However, if the Basket consists of only the Robusta Coffee Price Index, the “Robusta Coffee Price Index Closing Level” is the closing level of the Robusta Coffee Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Robusta Coffee Price Index on each of the Ending Averaging Dates.

On any trading day, the “Robusta Coffee Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Robusta Coffee Excess Return Index Return} = \frac{\text{Robusta Coffee Excess Return Index Closing Level} - \text{Robusta Coffee Excess Return Starting Level}}{\text{Robusta Coffee Excess Return Starting Level}}$$

where the “Robusta Coffee Excess Return Index Starting Level” is the closing level of the Robusta Coffee Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Robusta Coffee Excess Return Index on each of the Initial Averaging Dates, and the “Robusta Coffee Excess Return Index Closing Level” is the closing level of the Robusta Coffee Excess Return Index on such trading day. However, if the Basket consists of only the Robusta Coffee Excess Return Index, the “Robusta Coffee Excess Return Index Closing Level” is the closing level of the Robusta Coffee Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Robusta Coffee Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Robusta Coffee Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Robusta Coffee Total Return Index Return} = \frac{\text{Robusta Coffee Total Return Index Closing Level} - \text{Robusta Coffee Total Return Index Starting Level}}{\text{Robusta Coffee Total Return Index Starting Level}}$$

where the “Robusta Coffee Total Return Starting Level” is the closing level of the Robusta Coffee Total Return on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Robusta Coffee Total Return on each of the Initial Averaging Dates, and the “Robusta Coffee Total Return Closing Level” is the closing level of the Robusta Coffee Total Return on such trading day. However, if the Basket consists of only the Robusta Coffee Total Return, the “Robusta Coffee Total Return Closing Level” is the closing level of the Robusta Coffee Total Return on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Robusta Coffee Total Return on each of the Ending Averaging Dates.

On any trading day, the “White Sugar Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{White Sugar Price Index Return} = \frac{\text{White Sugar Price Index Closing Level} - \text{White Sugar Price Index Starting Level}}{\text{White Sugar Price Index Starting Level}}$$

where the “White Sugar Price Index Starting Level” is the closing level of the White Sugar Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the White Sugar Price Index on each of the Initial Averaging Dates, and the “White Sugar Price Index Closing Level” is the closing level of the White Sugar Price Index on such trading day. However, if the Basket consists of only the White Sugar Price Index, the “White Sugar Price Index Closing Level” is the closing level of the White Sugar Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the White Sugar Price Index on each of the Ending Averaging Dates.

On any trading day, the “White Sugar Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{White Sugar Excess Return Index Return} = \frac{\text{White Sugar Excess Return Index Closing Level} - \text{White Sugar Excess Return Starting Level}}{\text{White Sugar Excess Return Starting Level}}$$

where the “White Sugar Excess Return Index Starting Level” is the closing level of the White Sugar Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the White Sugar Excess Return Index on each of the Initial Averaging Dates, and the “White Sugar Excess Return Index Closing Level” is the closing level of the White Sugar Excess Return Index on such trading day. However, if the Basket consists of only the White Sugar Excess Return Index, the “White Sugar Excess Return Index Closing Level” is the closing level of the White Sugar Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the White Sugar Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “White Sugar Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{White Sugar Total Return Index Return} = \frac{\text{White Sugar Total Return Index Closing Level} - \text{White Sugar Total Return Index Starting Level}}{\text{White Sugar Total Return Index Starting Level}}$$

where the “White Sugar Total Return Index Starting Level” is the closing level of the White Sugar Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the White Sugar Total Return Index on each of the Initial Averaging Dates, and the “White Sugar Total Return Index Closing Level” is the closing level of the White Sugar Total Return Index on such trading day. However, if the Basket consists of only the White Sugar Total Return Index, the “White Sugar Total Return Index Closing Level” is the closing level of the White Sugar Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the White Sugar Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Feeder Cattle Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Feeder Cattle Price Index Return} = \frac{\text{Feeder Cattle Price Index Closing Level} - \text{Feeder Cattle Price Index Starting Level}}{\text{Feeder Cattle Price Index Starting Level}}$$

where the “Feeder Cattle Price Index Starting Level” is the closing level of the Feeder Cattle Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Feeder Cattle Price Index on each of the Initial Averaging Dates, and the “Feeder Cattle Price Index Closing Level” is the closing level of the Feeder Cattle Price Index on such trading day. However, if the Basket consists of only the Feeder Cattle Price Index, the “Feeder Cattle Price Index Closing Level” is the closing level of the Feeder Cattle Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Feeder Cattle Price Index on each of the Ending Averaging Dates.

On any trading day, the “Feeder Cattle Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Feeder Cattle Excess Return Index Return} = \frac{\text{Feeder Cattle Excess Return Index Closing Level} - \text{Feeder Cattle Excess Return Starting Level}}{\text{Feeder Cattle Excess Return Starting Level}}$$

where the “Feeder Cattle Excess Return Index Starting Level” is the closing level of the Feeder Cattle Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Feeder Cattle Excess Return Index on each of the Initial Averaging Dates, and the “Feeder Cattle Excess Return Index Closing Level” is the closing level of the Feeder Cattle Excess Return Index on such trading day. However, if the Basket consists of only the Feeder Cattle Excess Return Index, the “Feeder Cattle Excess Return Index Closing Level” is the closing level of the Feeder Cattle Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Feeder Cattle Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Feeder Cattle Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Feeder Cattle Total Return Index Return} = \frac{\text{Feeder Cattle Total Return Index Closing Level} - \text{Feeder Cattle Total Return Index Starting Level}}{\text{Feeder Cattle Total Return Index Starting Level}}$$

where the “Feeder Cattle Total Return Index Starting Level” is the closing level of the Feeder Cattle Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Feeder Cattle Total Return Index on each of the Initial Averaging Dates, and the “Feeder Cattle Total Return Index Closing Level” is the closing level of the Feeder Cattle Total Return Index on such trading day. However, if the Basket consists of only the Feeder Cattle Total Return Index, the “Feeder Cattle Total Return Index Closing Level” is the closing level of the Feeder Cattle Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Feeder Cattle Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “Lean Hogs Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Lean Hogs Price Index Return} = \frac{\text{Lean Hogs Price Index Closing Level} - \text{Lean Hogs Price Index Starting Level}}{\text{Lean Hogs Price Index Starting Level}}$$

where the “Lean Hogs Price Index Starting Level” is the closing level of the Lean Hogs Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Lean Hogs Price Index on each of the Initial Averaging Dates, and the “Lean Hogs Price Index Closing Level” is the closing level of the Lean Hogs Price Index on such trading day. However, if the Basket consists of only the Lean Hogs Price Index, the “Lean Hogs Price Index Closing Level” is the closing level of the Lean Hogs Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Lean Hogs Price Index on each of the Ending Averaging Dates.

On any trading day, the “Lean Hogs Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Lean Hogs Excess Return Index Return} = \frac{\text{Lean Hogs Excess Return Index Closing Level} - \text{Lean Hogs Excess Return Starting Level}}{\text{Lean Hogs Excess Return Starting Level}}$$

where the “Lean Hogs Excess Return Index Starting Level” is the closing level of the Lean Hogs Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Lean Hogs Excess Return Index on each of the Initial Averaging Dates, and the “Lean Hogs Excess Return Index Closing Level” is the closing level of the Lean Hogs Excess Return Index on such trading day. However, if the Basket consists of only the Lean Hogs Excess Return Index, the “Lean Hogs Excess Return Index Closing Level” is the closing level of the Lean Hogs Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Lean Hogs Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Lean Hogs Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Lean Hogs Total Return Index Return} = \frac{\text{Lean Hogs Total Return Index Closing Level} - \text{Lean Hogs Total Return Index Starting Level}}{\text{Lean Hogs Total Return Index Starting Level}}$$

where the “Lean Hogs Total Return Index Starting Level” is the closing level of the Lean Hogs Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Lean Hogs Total Return Index on each of the Initial Averaging Dates, and the “Lean Hogs Total Return Index Closing Level” is the closing level of the Lean Hogs Total Return Index on such trading day. However, if the Basket consists of only the Lean Hogs Total Return Index, the “Lean Hogs Total Return Index Closing Level” is the closing level of the Lean Hogs Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Lean Hogs Total Return Index on each of the Ending Averaging Dates.



On any trading day, the “Live Cattle Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Live Cattle Price Index Return} = \frac{\text{Live Cattle Price Index Closing Level} - \text{Live Cattle Price Index Starting Level}}{\text{Live Cattle Price Index Starting Level}}$$

where the “Live Cattle Price Index Starting Level” is the closing level of the Live Cattle Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Live Cattle Price Index on each of the Initial Averaging Dates, and the “Live Cattle Price Index Closing Level” is the closing level of the Live Cattle Price Index on such trading day. However, if the Basket consists of only the Live Cattle Price Index, the “Live Cattle Price Index Closing Level” is the closing level of the Live Cattle Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Live Cattle Price Index on each of the Ending Averaging Dates.

On any trading day, the “Live Cattle Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Live Cattle Excess Return Index Return} = \frac{\text{Live Cattle Excess Return Index Closing Level} - \text{Live Cattle Excess Return Starting Level}}{\text{Live Cattle Excess Return Starting Level}}$$

where the “Live Cattle Excess Return Index Starting Level” is the closing level of the Live Cattle Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Live Cattle Excess Return Index on each of the Initial Averaging Dates, and the “Live Cattle Excess Return Index Closing Level” is the closing level of the Live Cattle Excess Return Index on such trading day. However, if the Basket consists of only the Live Cattle Excess Return Index, the “Live Cattle Excess Return Index Closing Level” is the closing level of the Live Cattle Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Live Cattle Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Live Cattle Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Live Cattle Total Return Index Return} = \frac{\text{Live Cattle Total Return Index Closing Level} - \text{Live Cattle Total Return Index Starting Level}}{\text{Live Cattle Total Return Index Starting Level}}$$

where the “Live Cattle Total Return Index Starting Level” is the closing level of the Live Cattle Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Live Cattle Total Return Index on each of the Initial Averaging Dates, and the “Live Cattle Total Return Index Closing Level” is the closing level of the Live Cattle Total Return Index on such trading day. However, if the Basket consists of only the Live Cattle Total Return Index, the “Live Cattle Total Return Index Closing Level” is the closing level of the Live Cattle Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Live Cattle Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Energy Light Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Energy Light Price Index Return} = \frac{\text{JPMCCI Energy Light Price Index Closing Level} - \text{JPMCCI Energy Light Price Index Starting Level}}{\text{JPMCCI Energy Light Price Index Starting Level}}$$

where the “JPMCCI Energy Light Price Index Starting Level” is the closing level of the JPMCCI Energy Light Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Energy Light Price Index on each of the Initial Averaging Dates, and the “JPMCCI Energy Light Price Index Closing Level” is the closing level of the JPMCCI Energy Light Price Index on such trading day. However, if the Basket consists of only the JPMCCI Energy Light Price Index, the “JPMCCI Energy Light Price Index Closing Level” is the closing level of the JPMCCI Energy Light Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Energy Light Price Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Energy Light Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Energy Light Excess Return Index Return} = \frac{\text{JPMCCI Energy Light Excess Return Index Closing Level} - \text{JPMCCI Energy Light Excess Return Starting Level}}{\text{JPMCCI Energy Light Excess Return Starting Level}}$$

where the “JPMCCI Energy Light Excess Return Index Starting Level” is the closing level of the JPMCCI Energy Light Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Energy Light Excess Return Index on each of the Initial Averaging Dates, and the “JPMCCI Energy Light Excess Return Index Closing Level” is the closing level of the JPMCCI Energy Light Excess Return Index on such trading day. However, if the Basket consists of only the JPMCCI Energy Light Excess Return Index, the “JPMCCI Energy Light Excess Return Index Closing Level” is the closing level of the JPMCCI Energy Light Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Energy Light Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Energy Light Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Energy Light Total Return Index Return} = \frac{\text{JPMCCI Energy Light Total Return Index Closing Level} - \text{JPMCCI Energy Light Total Return Index Starting Level}}{\text{JPMCCI Energy Light Total Return Index Starting Level}}$$

where the “JPMCCI Energy Light Excess Return Index Starting Level” is the closing level of the JPMCCI Energy Light Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Energy Light Excess Return Index on each of the Initial Averaging Dates, and the “JPMCCI Energy Light Excess Return Index Closing Level” is the closing level of the JPMCCI Energy Light Excess Return Index on such trading day. However, if the Basket consists of only the JPMCCI Energy Light Excess Return Index, the “JPMCCI Energy Light Excess Return Index Closing Level” is the closing level of the JPMCCI Energy Light Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Energy Light Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Aggregate JPMCCI Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Aggregate JPMCCI Price Index Return} = \frac{\text{Aggregate JPMCCI Price Index Closing Level} - \text{Aggregate JPMCCI Price Index Starting Level}}{\text{Aggregate JPMCCI Price Index Starting Level}}$$

where the “Aggregate JPMCCI Price Index Starting Level” is the closing level of the Aggregate JPMCCI Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aggregate JPMCCI Price Index on each of the Initial Averaging Dates, and the “Aggregate JPMCCI Price Index Closing Level” is the closing level of the Aggregate JPMCCI Price Index on such trading day. However, if the Basket consists of only the Aggregate JPMCCI Price Index, the “Aggregate JPMCCI Price Index Closing Level” is the closing level of the Aggregate JPMCCI Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aggregate JPMCCI Price Index on each of the Ending Averaging Dates.

On any trading day, the “Aggregate JPMCCI Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Aggregate JPMCCI Excess Return Index Return} = \frac{\text{Aggregate JPMCCI Excess Return Index Closing Level} - \text{Aggregate JPMCCI Excess Return Starting Level}}{\text{Aggregate JPMCCI Excess Return Starting Level}}$$

where the “Aggregate JPMCCI Excess Return Index Starting Level” is the closing level of the Aggregate JPMCCI Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aggregate JPMCCI Excess Return Index on each of the Initial Averaging Dates, and the “Aggregate JPMCCI Excess Return Index Closing Level” is the closing level of the Aggregate JPMCCI Excess Return Index on such trading day. However, if the Basket consists of only the Aggregate JPMCCI Excess Return Index, the “Aggregate JPMCCI Excess Return Index Closing Level” is the closing level of the Aggregate JPMCCI Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aggregate JPMCCI Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “Aggregate JPMCCI Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{Aggregate JPMCCI Total Return Index Return} = \frac{\text{Aggregate JPMCCI Total Return Index Closing Level} - \text{Aggregate JPMCCI Total Return Index Starting Level}}{\text{Aggregate JPMCCI Total Return Index Starting Level}}$$

where the “Aggregate JPMCCI Excess Return Index Starting Level” is the closing level of the Aggregate JPMCCI Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aggregate JPMCCI Excess Return Index on each of the Initial Averaging Dates, and the “Aggregate JPMCCI Excess Return Index Closing Level” is the closing level of the Aggregate JPMCCI Excess Return Index on such trading day. However, if the Basket consists of only the Aggregate JPMCCI Excess Return Index, the “Aggregate JPMCCI Excess Return Index Closing Level” is the closing level of the Aggregate JPMCCI Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aggregate JPMCCI Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Energy Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Energy Price Index Return} = \frac{\text{JPMCCI Energy Price Index Closing Level} - \text{JPMCCI Energy Price Index Starting Level}}{\text{JPMCCI Energy Price Index Starting Level}}$$

where the “Aggregate JPMCCI Total Return Index Starting Level” is the closing level of the Aggregate JPMCCI Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aggregate JPMCCI Total Return Index on each of the Initial Averaging Dates, and the “Aggregate JPMCCI Total Return Index Closing Level” is the closing level of the Aggregate JPMCCI Total Return Index on such trading day. However, if the Basket consists of only the Aggregate JPMCCI Total Return Index, the “Aggregate JPMCCI Total Return Index Closing Level” is the closing level of the Aggregate JPMCCI Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the Aggregate JPMCCI Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Energy Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Energy Excess Return Index Return} = \frac{\text{JPMCCI Energy Excess Return Index Closing Level} - \text{JPMCCI Energy Excess Return Starting Level}}{\text{JPMCCI Energy Excess Return Starting Level}}$$

where the “JPMCCI Energy Excess Return Index Starting Level” is the closing level of the JPMCCI Energy Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Energy Excess Return Index on each of the Initial Averaging Dates, and the “JPMCCI Energy Excess Return Index Closing Level” is the closing level of the JPMCCI Energy Excess Return Index on such trading day. However, if the Basket consists of only the JPMCCI Energy Excess Return Index, the “JPMCCI Energy Excess Return Index Closing Level” is the closing level of the JPMCCI Energy Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Energy Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Energy Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Energy Total Return Index Return} = \frac{\text{JPMCCI Energy Total Return Index Closing Level} - \text{JPMCCI Energy Total Return Index Starting Level}}{\text{JPMCCI Energy Total Return Index Starting Level}}$$

where the “JPMCCI Energy Total Return Index Starting Level” is the closing level of the JPMCCI Energy Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Energy Total Return Index on each of the Initial Averaging Dates, and the “JPMCCI Energy Total Return Index Closing Level” is the closing level of the JPMCCI Energy Total Return Index on such trading day. However, if the Basket consists of only the JPMCCI Energy Total Return Index, the “JPMCCI Energy Total Return Index Closing Level” is the closing level of the JPMCCI Energy Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Energy Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Non-Energy Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Non-Energy Price Index Return} = \frac{\text{JPMCCI Non-Energy Price Index Closing Level} - \text{JPMCCI Non-Energy Price Index Starting Level}}{\text{JPMCCI Non-Energy Price Index Starting Level}}$$

where the “JPMCCI Non-Energy Price Index Starting Level” is the closing level of the JPMCCI Non-Energy Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Non-Energy Price Index on each of the Initial Averaging Dates, and the “JPMCCI Non-Energy Price Index Closing Level” is the closing level of the JPMCCI Non-Energy Price Index on such trading day. However, if the Basket consists of only the JPMCCI Non-Energy Price Index, the “JPMCCI Non-Energy Price Index Closing Level” is the closing level of the JPMCCI Non-Energy Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Non-Energy Price Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Non-Energy Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Non-Energy Excess Return Index Return} = \frac{\text{JPMCCI Non-Energy Excess Return Index Closing Level} - \text{JPMCCI Non-Energy Excess Return Starting Level}}{\text{JPMCCI Non-Energy Excess Return Starting Level}}$$

where the “JPMCCI Non-Energy Excess Return Index Starting Level” is the closing level of the JPMCCI Non-Energy Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Non-Energy Excess Return Index on each of the Initial Averaging Dates, and the “JPMCCI Non-Energy Excess Return Index Closing Level” is the closing level of the JPMCCI Non-Energy Excess Return Index on such trading day. However, if the Basket consists of only the JPMCCI Non-Energy Excess Return Index, the “JPMCCI Non-Energy Excess Return Index Closing Level” is the closing level of the JPMCCI Non-Energy Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Non-Energy Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Non-Energy Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Non-Energy Total Return Index Return} = \frac{\text{JPMCCI Non-Energy Total Return Index Closing Level} - \text{JPMCCI Non-Energy Total Return Index Starting Level}}{\text{JPMCCI Non-Energy Total Return Index Starting Level}}$$

where the “JPMCCI Non-Energy Total Return Index Starting Level” is the closing level of the JPMCCI Non-Energy Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Non-Energy Total Return Index on each of the Initial Averaging Dates, and the “JPMCCI Non-Energy Total Return Index Closing Level” is the closing level of the JPMCCI Non-Energy Total Return Index on such trading day. However, if the Basket consists of only the JPMCCI Non-Energy Total Return Index, the “JPMCCI Non-Energy Total Return Index Closing Level” is the closing level of the JPMCCI Non-Energy Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Non-Energy Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Precious Metals Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Precious Metals Price Index Return} = \frac{\text{JPMCCI Precious Metals Price Index Closing Level} - \text{JPMCCI Precious Metals Price Index Starting Level}}{\text{JPMCCI Precious Metals Price Index Starting Level}}$$

where the “JPMCCI Precious Metals Price Index Starting Level” is the closing level of the JPMCCI Precious Metals Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Precious Metals Price Index on each of the Initial Averaging Dates, and the “JPMCCI Precious Metals Price Index Closing Level” is the closing level of the JPMCCI Precious Metals Price Index on such trading day. However, if the Basket consists of only the JPMCCI Precious Metals Price Index, the “JPMCCI Precious Metals Price Index Closing Level” is the closing level of the JPMCCI Precious Metals Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Precious Metals Price Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Precious Metals Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Precious Metals Excess Return Index Return} = \frac{\text{JPMCCI Precious Metals Excess Return Index Closing Level} - \text{JPMCCI Precious Metals Excess Return Starting Level}}{\text{JPMCCI Precious Metals Excess Return Starting Level}}$$

where the “JPMCCI Precious Metals Excess Return Index Starting Level” is the closing level of the JPMCCI Precious Metals Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Precious Metals Excess Return Index on each of the Initial Averaging Dates, and the “JPMCCI Precious Metals Excess Return Index Closing Level” is the closing level of the JPMCCI Precious Metals Excess Return Index on such trading day. However, if the Basket consists of only the JPMCCI Precious Metals Excess Return Index, the “JPMCCI Precious Metals Excess Return Index Closing Level” is the closing level of the JPMCCI Precious Metals Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Precious Metals Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Precious Metals Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Precious Metals Total Return Index Return} = \frac{\text{JPMCCI Precious Metals Total Return Index Closing Level} - \text{JPMCCI Precious Metals Total Return Index Starting Level}}{\text{JPMCCI Precious Metals Total Return Index Starting Level}}$$

where the “JPMCCI Precious Metals Total Return Index Starting Level” is the closing level of the JPMCCI Precious Metals Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Precious Metals Total Return Index on each of the Initial Averaging Dates, and the “JPMCCI Precious Metals Total Return Index Closing Level” is the closing level of the JPMCCI Precious Metals Total Return Index on such trading day. However, if the Basket consists of only the JPMCCI Precious Metals Total Return Index, the “JPMCCI Precious Metals Total Return Index Closing Level” is the closing level of the JPMCCI Precious Metals Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Precious Metals Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Base Metals Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Base Metals Price Index Return} = \frac{\text{JPMCCI Base Metals Price Index Closing Level} - \text{JPMCCI Base Metals Price Index Starting Level}}{\text{JPMCCI Base Metals Price Index Starting Level}}$$

where the “JPMCCI Base Metals Price Index Starting Level” is the closing level of the JPMCCI Base Metals Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Base Metals Price Index on each of the Initial Averaging Dates, and the “JPMCCI Base Metals Price Index Closing Level” is the closing level of the JPMCCI Base Metals Price Index on such trading day. However, if the Basket consists of only the JPMCCI Base Metals Price Index, the “JPMCCI Base Metals Price Index Closing Level” is the closing level of the JPMCCI Base Metals Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Base Metals Price Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Base Metals Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Base Metals Excess Return Index Return} = \frac{\text{JPMCCI Base Metals Excess Return Index Closing Level} - \text{JPMCCI Base Metals Excess Return Starting Level}}{\text{JPMCCI Base Metals Excess Return Starting Level}}$$

where the “JPMCCI Base Metals Excess Return Index Starting Level” is the closing level of the JPMCCI Base Metals Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Base Metals Excess Return Index on each of the Initial Averaging Dates, and the “JPMCCI Base Metals Excess Return Index Closing Level” is the closing level of the JPMCCI Base Metals Excess Return Index on such trading day. However, if the Basket consists of only the JPMCCI Base Metals Excess Return Index, the “JPMCCI Base Metals Excess Return Index Closing Level” is the closing level of the JPMCCI Base Metals Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Base Metals Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Base Metals Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Base Metals Total Return Index Return} = \frac{\text{JPMCCI Base Metals Total Return Index Closing Level} - \text{JPMCCI Base Metals Total Return Index Starting Level}}{\text{JPMCCI Base Metals Total Return Index Starting Level}}$$

where the “JPMCCI Base Metals Total Return Index Starting Level” is the closing level of the JPMCCI Base Metals Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Base Metals Total Return Index on each of the Initial Averaging Dates, and the “JPMCCI Base Metals Total Return Index Closing Level” is the closing level of the JPMCCI Base Metals Total Return Index on such trading day. However, if the Basket consists of only the JPMCCI Base Metals Total Return Index, the “JPMCCI Base Metals Total Return Index Closing Level” is the closing level of the JPMCCI Base Metals Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Base Metals Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI All Metals Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI All Metals Price Index Return} = \frac{\text{JPMCCI All Metals Price Index Closing Level} - \text{JPMCCI All Metals Price Index Starting Level}}{\text{JPMCCI All Metals Price Index Starting Level}}$$

where the “JPMCCI All Metals Price Index Starting Level” is the closing level of the JPMCCI All Metals Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI All Metals Price Index on each of the Initial Averaging Dates, and the “JPMCCI All Metals Price Index Closing Level” is the closing level of the JPMCCI All Metals Price Index on such trading day. However, if the Basket consists of only the JPMCCI All Metals Price Index, the “JPMCCI All Metals Price Index Closing Level” is the closing level of the JPMCCI All Metals Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI All Metals Price Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI All Metals Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI All Metals Excess Return Index Return} = \frac{\text{JPMCCI All Metals Excess Return Index Closing Level} - \text{JPMCCI All Metals Excess Return Starting Level}}{\text{JPMCCI All Metals Excess Return Starting Level}}$$

where the “JPMCCI All Metals Excess Return Index Starting Level” is the closing level of the JPMCCI All Metals Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI All Metals Excess Return Index on each of the Initial Averaging Dates, and the “JPMCCI All Metals Excess Return Index Closing Level” is the closing level of the JPMCCI All Metals Excess Return Index on such trading day. However, if the Basket consists of only the JPMCCI All Metals Excess Return Index, the “JPMCCI All Metals Excess Return Index Closing Level” is the closing level of the JPMCCI All Metals Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI All Metals Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI All Metals Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI All Metals Total Return Index Return} = \frac{\text{JPMCCI All Metals Total Return Index Closing Level} - \text{JPMCCI All Metals Total Return Index Starting Level}}{\text{JPMCCI All Metals Total Return Index Starting Level}}$$

where the “JPMCCI All Metals Total Return Index Starting Level” is the closing level of the JPMCCI All Metals Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI All Metals Total Return Index on each of the Initial Averaging Dates, and the “JPMCCI All Metals Total Return Index Closing Level” is the closing level of the JPMCCI All Metals Total Return Index on such trading day. However, if the Basket consists of only the JPMCCI All Metals Total Return Index, the “JPMCCI All Metals Total Return Index Closing Level” is the closing level of the JPMCCI All Metals Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI All Metals Total Return Index on each of the Ending Averaging Dates.



On any trading day, the “JPMCCI Livestock Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Livestock Price Index Return} = \frac{\text{JPMCCI Livestock Price Index Closing Level} - \text{JPMCCI Livestock Price Index Starting Level}}{\text{JPMCCI Livestock Price Index Starting Level}}$$

where the “JPMCCI Livestock Price Index Starting Level” is the closing level of the JPMCCI Livestock Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Livestock Price Index on each of the Initial Averaging Dates, and the “JPMCCI Livestock Price Index Closing Level” is the closing level of the JPMCCI Livestock Price Index on such trading day. However, if the Basket consists of only the JPMCCI Livestock Price Index, the “JPMCCI Livestock Price Index Closing Level” is the closing level of the JPMCCI Livestock Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Livestock Price Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Livestock Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Livestock Excess Return Index Return} = \frac{\text{JPMCCI Livestock Excess Return Index Closing Level} - \text{JPMCCI Livestock Excess Return Starting Level}}{\text{JPMCCI Livestock Excess Return Starting Level}}$$

where the “JPMCCI Livestock Excess Return Index Starting Level” is the closing level of the JPMCCI Livestock Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Livestock Excess Return Index on each of the Initial Averaging Dates, and the “JPMCCI Livestock Excess Return Index Closing Level” is the closing level of the JPMCCI Livestock Excess Return Index on such trading day. However, if the Basket consists of only the JPMCCI Livestock Excess Return Index, the “JPMCCI Livestock Excess Return Index Closing Level” is the closing level of the JPMCCI Livestock Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Livestock Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Livestock Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Livestock Total Return Index Return} = \frac{\text{JPMCCI Livestock Total Return Index Closing Level} - \text{JPMCCI Livestock Total Return Index Starting Level}}{\text{JPMCCI Livestock Total Return Index Starting Level}}$$

where the “JPMCCI Livestock Total Return Index Starting Level” is the closing level of the JPMCCI Livestock Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Livestock Total Return Index on each of the Initial Averaging Dates, and the “JPMCCI Livestock Total Return Index Closing Level” is the closing level of the JPMCCI Livestock Total Return Index on such trading day. However, if the Basket consists of only the JPMCCI Livestock Total Return Index, the “JPMCCI Livestock Total Return Index Closing Level” is the closing level of the JPMCCI Livestock Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Livestock Total Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Agriculture Price Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Agriculture Price Index Return} = \frac{\text{JPMCCI Agriculture Price Index Closing Level} - \text{JPMCCI Agriculture Price Index Starting Level}}{\text{JPMCCI Agriculture Price Index Starting Level}}$$

where the “JPMCCI Agriculture Price Index Starting Level” is the closing level of the JPMCCI Agriculture Price Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Agriculture Price Index on each of the Initial Averaging Dates, and the “JPMCCI Agriculture Price Index Closing Level” is the closing level of the JPMCCI Agriculture Price Index on such trading day. However, if the Basket consists of only the JPMCCI Agriculture Price Index, the “JPMCCI Agriculture Price Index Closing Level” is the closing level of the JPMCCI Agriculture Price Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Agriculture Price Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Agriculture Excess Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Agriculture Excess Return Index Return} = \frac{\text{JPMCCI Agriculture Excess Return Index Closing Level} - \text{JPMCCI Agriculture Excess Return Starting Level}}{\text{JPMCCI Agriculture Excess Return Starting Level}}$$

where the “JPMCCI Agriculture Excess Return Index Starting Level” is the closing level of the JPMCCI Agriculture Excess Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Agriculture Excess Return Index on each of the Initial Averaging Dates, and the “JPMCCI Agriculture Excess Return Index Closing Level” is the closing level of the JPMCCI Agriculture Excess Return Index on such trading day. However, if the Basket consists of only the JPMCCI Agriculture Excess Return Index, the “JPMCCI Agriculture Excess Return Index Closing Level” is the closing level of the JPMCCI Agriculture Excess Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Agriculture Excess Return Index on each of the Ending Averaging Dates.

On any trading day, the “JPMCCI Agriculture Total Return Index Return” is calculated as follows, unless otherwise specified in the relevant terms supplement:

$$\text{JPMCCI Agriculture Total Return Index Return} = \frac{\text{JPMCCI Agriculture Total Return Index Closing Level} - \text{JPMCCI Agriculture Total Return Index Starting Level}}{\text{JPMCCI Agriculture Total Return Index Starting Level}}$$

where the “JPMCCI Agriculture Total Return Index Starting Level” is the closing level of the JPMCCI Agriculture Total Return Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Agriculture Total Return Index on each of the Initial Averaging Dates, and the “JPMCCI Agriculture Total Return Index Closing Level” is the closing level of the JPMCCI Agriculture Total Return Index on such trading day. However, if the Basket consists of only the JPMCCI Agriculture Total Return Index, the “JPMCCI Agriculture Total Return Index Closing Level” is the closing level of the JPMCCI Agriculture Total Return Index on the Observation Date or other relevant date as specified in the relevant terms supplement, or the arithmetic average of the closing levels of the JPMCCI Agriculture Total Return Index on each of the Ending Averaging Dates.

With respect to each Basket Index, the “closing level” on any trading day will equal the official closing value of such Basket Index or any successor index thereto published following the regular official weekday close of trading for such Basket Index on that trading day. In certain circumstances, the “closing level” for a Basket Index will be based on the alternate calculation of such Basket Index described under “The JPMorgan Commodity Curve Index.”

With respect to each Basket Index, a “trading day” is, unless otherwise specified in the relevant terms supplement, a day, as determined by the calculation agent, on which trading is generally conducted on the relevant exchange.

With respect to each Basket Index or any relevant successor index, “Relevant Exchange” means any primary exchange or market of trading related to such Basket Index or successor Basket Index, as applicable, or any futures or options contracts relating to such Basket Index or such successor Basket Index, as applicable.

The Initial Averaging Dates, if applicable, will be specified in the relevant terms supplement and any such date is subject to adjustment as described below. If an Initial Averaging Date is not a trading day with respect to any Basket Index, or there is a market disruption event (as defined in “General Terms of the Notes—Market Disruption Events”) with respect to any Basket Index on such Initial Averaging Date (any such Basket Index affected by a non-trading day or a market disruption event, a “Disrupted Basket Index”), the applicable Initial Averaging Date will be the immediately succeeding trading day for any such Disrupted Basket Index during which no market disruption event for such Disrupted Basket Index shall have occurred or be continuing; *provided* that the Basket Closing Level on such Initial Averaging Date, as postponed, shall be determined by using (1) the closing level, as applicable, for each Basket Index (other than any such Disrupted Basket Index) on the originally scheduled Initial Averaging Date and (2) the closing level, as applicable, for any such Disrupted Basket Index on the immediately succeeding trading day for such Disrupted Basket Index during which no market disruption event for such Disrupted Basket Index shall have occurred or be continuing. For the avoidance of doubt, if an Initial Averaging Date is to be postponed as described above, and there are two or more Disrupted Basket Indices and the first trading day on which there is no market disruption event relating to the first Disrupted Basket Index is different from such trading day for one or more of the other Disrupted Basket Indices, such Initial Averaging Date for any Disrupted Basket Index will be postponed to the first trading day on which there is no market disruption event for the applicable Disrupted Basket Index, irrespective of any other Disrupted Basket Index and such trading day shall be the Initial Averaging Date for that specific Disrupted Basket Index. The remaining Disrupted Basket Indices shall be determined individually and irrespective of any other Disrupted Basket Index, on the next trading day on which there is no market disruption event. Under these circumstances, the calculation agent will calculate the Basket Closing Level using the settlement prices, fixing levels or closing levels, as applicable, of the Disrupted Basket Indices on different trading days.

In no event, however, will any Initial Averaging Date for any Disrupted Basket Index be postponed more than ten business days following the date originally scheduled to be such Initial Averaging Date. If the tenth business day following the date originally scheduled to be the applicable Initial Averaging Date is not a trading day with respect to any Disrupted Basket Index, or there is a market disruption event with respect to any Disrupted Basket Index on such tenth business day, the calculation agent will determine the closing level, as applicable, for any such Disrupted Basket Index for such date in accordance with the formula for and method of calculating such closing level, as applicable, last in effect prior to commencement of the market disruption event (or prior to the non-trading day), using the daily settlement price or fixing level, as applicable (or, if trading in the relevant commodities or futures contracts has been materially suspended or materially limited, the calculation agent’s good faith estimate of the daily settlement price or fixing level, as applicable, that would have prevailed but for such suspension or limitation or non-trading day) on such tenth scheduled business day or, in the case of a Disrupted Basket Index that is a Basket Index, on such tenth scheduled business day of each futures contract most recently constituting such Disrupted Basket Index.

The Basket Valuation Date(s), which will either be a single date, which we refer to as the Observation Date, or several dates, each of which we refer to as an Ending Averaging Date, will be specified in the relevant terms supplement, and any such date is subject to adjustment as described below. If a Basket Valuation Date is not a trading day or if any Basket Index is a Disrupted Basket Index on such Basket Valuation Date, the applicable Basket Valuation Date will be postponed to the immediately succeeding trading day for any such Disrupted Basket Index during which no market disruption event for such Disrupted Basket Index shall have occurred or be continuing; *provided* that the Basket Closing Level on such Basket Valuation Date, as postponed, shall be determined by using (1) the closing level, as applicable, for each Basket Index (other than any such Disrupted Basket Index) on the originally scheduled Basket Valuation Date and (2) the closing level, as applicable, for any such Disrupted Basket Index on the immediately succeeding trading day for such Disrupted Basket Index during which no market disruption event for such Disrupted Basket Index shall have occurred or be continuing. For the avoidance of doubt, if a Basket Valuation Date is to be postponed as described above, and there are two or more Disrupted Basket Indices and the first trading day on which there is no market disruption event relating to the first Disrupted Basket Index is different from such trading day for one or more of the other Disrupted Basket Indices, such Basket Valuation Date for any Disrupted Basket Index will be postponed to the first trading day on which there is no market disruption event for the applicable Disrupted Basket Index, irrespective of any other Disrupted Basket Index and such trading day shall be the Basket Valuation Date for that specific Disrupted Basket Index. The remaining Disrupted Basket Indices shall be determined individually and irrespective of any other Disrupted Basket Index, on the next trading day on which there is no market disruption event. Under these circumstances, the calculation agent will calculate the Basket Closing Level using the settlement prices, fixing levels or closing levels, as applicable, of the Disrupted Basket Indices on different trading days.

In no event, however, will any Basket Valuation Date for any Disrupted Basket Index be postponed more than ten business days following the date originally scheduled to be such Basket Valuation Date. If the tenth business day following the date originally scheduled to be the applicable Basket Valuation Date is not a trading day, or if there is a market disruption event on such date, the calculation agent will determine the Basket Closing Level for the Basket Valuation Date on such date in accordance with the formula for and method of calculating the Basket Closing Level last in effect prior to commencement of the market disruption event (or prior to the non-trading day), using the value of the commodity futures contracts underlying the Basket Index or Indices, as applicable (or, if trading in the relevant commodities has been materially suspended or materially limited, the calculation agent's good faith estimate of the value that would have prevailed but for the suspension or limitation or non-trading day) on such tenth scheduled business day for the Basket Index or Indices, as applicable.

The maturity date will be specified in the relevant terms supplement. If the scheduled maturity date (as specified in the relevant terms supplement) is not a business day, then the maturity date will be the next succeeding business day following such scheduled maturity date. If, due to a market disruption event or otherwise, the final Basket Valuation Date is postponed so that it falls less than three business days prior to the scheduled maturity date, the maturity date will be the third business day following the final Basket Valuation Date, as postponed, unless otherwise specified in the relevant terms supplement. We describe market disruption events under "General Terms of Notes — Market Disruption Events."

We will irrevocably deposit with DTC no later than the opening of business on the applicable date funds sufficient to make payments of the amount payable with respect to the notes on such date. We will give DTC irrevocable instructions and authority to pay such amount to the holders of the notes entitled thereto.

A "business day" is, unless otherwise specified in the relevant terms supplement, any day other than a day on which banking institutions in The City of New York are authorized or required by law, regulation or executive order to close or a day on which transactions in dollars are not conducted.

Subject to the foregoing and to applicable law (including, without limitation, U.S. federal laws), we or our affiliates may, at any time and from time to time, purchase outstanding notes by tender, in the open market or by private agreement.

#### **Notes Linked to a Single Basket Index**

If the relevant terms supplement specifies that the notes are linked to only one Basket Index, unless otherwise specified in the relevant terms supplement, all references to (1) the "Basket Return" will be deemed to refer to the Index Return of such Basket Index and may be referred to as the "Index Return" in the relevant terms supplement, (2) the "Ending Basket Level" will be deemed to refer to the closing level of such Basket Index and may be referred to as the "Ending Index Level" in the relevant terms supplement and (3) the "Starting Basket Level" will be deemed to refer to the closing level of such Basket Index on the pricing date or other relevant date specified in the relevant terms supplement, or the arithmetic average of the closing levels of such Basket Index on each of the Initial Averaging Dates and may be referred to as the "Initial Index Level" in the relevant terms supplement.

## RISK FACTORS

*Your investment in the notes will involve certain risks. The notes do not pay interest or guarantee any return of principal at, or prior to, maturity (other than the Additional Amount). Investing in the notes is not equivalent to investing directly in the Basket, any of the Basket Indices or any futures contracts or exchange-traded or over-the-counter instruments based on, or other instruments linked to, any of the Basket Indices. You should consider carefully the following discussion of risks before you decide that an investment in the notes is suitable for you.*

### **The notes do not pay interest or guarantee the return of your investment.**

The notes do not pay interest and may not return any of your investment, other than the Additional Amount. The amount payable at maturity will reflect the performance of the Basket plus an Additional Amount, and will be determined pursuant to the terms described in this product supplement no. 154-I and the relevant terms supplement. If the Ending Basket Level has decreased as compared to the Starting Basket Level, you may lose some or all of your investment in the notes, although in all cases you will receive the Additional Amount at maturity.

### **The appreciation potential of the notes is limited to the Maximum Total Return, if applicable.**

If the notes are subject to a Maximum Total Return, the appreciation potential of the notes will be limited to the Maximum Total Return. Any applicable Maximum Total Return will be a percentage which we will determine on the pricing date and which will be set forth in the relevant terms supplement. Accordingly, if the relevant terms supplement specifies a Maximum Total Return for the notes, the appreciation potential of the notes will be limited to that Maximum Total Return even if the Basket Return multiplied by the upside leverage factor is greater than that Maximum Total Return.

### **The Basket Indices may not be equally weighted.**

Unless otherwise specified in the relevant terms supplement, the Basket Indices may have a different weight in determining the value of the Basket, depending on the Index Weighting specified for each Basket Index in the relevant terms supplement. For example, the relevant terms supplement may specify that the Index Weighting for the JPMCCI Crude Oil Index, JPMCCI Gasoline Index, JPMCCI Heating Oil Index, JPMCCI Natural Gas Index, JPMCCI Brent Crude Index, JPMCCI Gas Oil Index, JPMCCI Gold Index, JPMCCI Silver Index, JPMCCI Palladium Index, JPMCCI Platinum Index, JPMCCI Aluminum Index, JPMCCI Copper Index, JPMCCI Lead Index, JPMCCI Nickel Index, JPMCCI Zinc Index, JPMCCI Tin Index, JPMCCI Corn Index, JPMCCI Soybeans Index, JPMCCI Soybean Meal Index, JPMCCI Wheat Index, JPMCCI Rough Rice Index, JPMCCI Winter Wheat Index, JPMCCI Spring Wheat Index are 7%, 10%, 12%, 15%, 9%, 5%, 8%, 7%, 5%, 5%, 5%, 2%, 2%, 3%, 3%, 1% and 1% respectively. One consequence of such an unequal weighting of the Basket Indices is that the same percentage change in two of the Basket Indices may have different effects on the Basket Closing Level. For example, if the Index Weighting for the JPMCCI Gasoline Index is greater than the Index Weighting for JPMCCI Heating Oil Index, a 5% decrease in the JPMCCI Gasoline will have a greater effect on the Basket Closing Level than a 5% decrease in the JPMCCI Heating Oil Index.

### **The Basket may consist of only one Basket Index.**

In certain cases, only one Basket Index may compose the entire Basket. If there is only one Basket Index, that Basket Index will be weighted as 100% of the Basket. In these cases, the Basket Closing Level will be determined with respect to the closing level of that single Basket Index.

### **The weight of each Basket Index may be determined on a date other than the pricing date.**

If so specified in the relevant terms supplement, the weight of each Basket Index in the Basket may be determined on a date or dates other than the pricing date. For example, the relevant terms supplement may specify that the weights of the Basket Indices in the Basket will be determined based on the relative magnitude of the Index Return of each Basket Index on the Observation Date. As a result, if the relevant terms supplement so specifies, you will not know the weight assigned to each Basket Index until a date later than the pricing date, and you may not know the weight assigned to each Basket Index in the Basket prior to the final Basket Valuation Date.

## **Changes in the value of the Indices may offset each other.**

Unless otherwise specified in the relevant terms supplement, the notes are linked to a weighted Basket composed of the Basket Indices. Price movements in the Basket Indices may not correlate with each other. At a time when the value of one or more of the Basket Indices increases, the value of the other Basket Indices may not increase as much or may even decline. Therefore, in calculating the Ending Basket Level, increases in the value of one or more of the Basket Indices may be moderated, or more than offset, by lesser increases or declines in the level of the other Basket Index or Indices, particularly if the Basket Index or Indices that appreciate are of relatively low weight in the Basket. There can be no assurance that the Ending Basket Level will be higher than the Starting Basket Level or, if applicable, the Strike Level. You may lose some or all of your investment in the notes if the Ending Basket Level is lower than the Starting Basket Level or, if applicable, the Strike Level.

## **Commodity prices are characterized by high and unpredictable volatility, which could lead to high and unpredictable volatility in the Basket Indices.**

Market prices of the commodity options futures contracts underlying the Basket Indices tend to be highly volatile and may fluctuate rapidly based on numerous factors, including: changes in supply and demand relationships; governmental programs and policies, national and international monetary, trade, political and economic events, changes in interest and exchange rates, speculation and trading activities in commodities and related contracts, weather, and agricultural, trade, fiscal and exchange control policies. Many commodities are also highly cyclical. These factors may affect the level of the Basket Indices in varying ways, and different factors may cause the value of different commodities included in the Basket, and the commodity futures contracts of their prices, to move in inconsistent directions at inconsistent rates. This, in turn, will affect the value of the notes linked to the Basket.

An investment in an instrument linked to the Basket Indices provides one avenue for exposure to commodities. The high volatility and cyclical nature of commodity markets may render such an investment inappropriate as the focus of an investment portfolio.

## **The commodity futures contracts underlying the Basket Indices are subject to legal and regulatory regimes that may change in ways that could affect our ability to hedge our obligations under the notes, could result in a modification of the Rules and/or could lead to the early acceleration of your notes.**

The commodity futures contracts that underlie the Basket Indices are subject to legal and regulatory regimes in the United States and, in some cases, in other countries that may change in ways that could negatively affect the value of the Basket Indices. For example, the United States House of Representatives and the United States Senate have considered legislation intended to decrease speculation and increase transparency in the commodities markets. If enacted such legislation may, among other things, require the United States Commodity Futures Trading Commission ("CFTC") to adopt rules that would subject us to position limits on positions in commodity futures contracts.

Changes to the legal or regulatory regimes applicable to the commodity futures contracts that underlie the Basket Indices could result in a modification of the Rules, which may, in turn, have a negative effect on the level of the Basket Indices and your payment, if any, at maturity.

In addition, upon the occurrence of legal or regulatory changes that the calculation agent determines have interfered with our or our affiliates' ability to hedge our obligations under the notes, or if for any other reason we or our affiliates are unable to enter into or maintain hedge positions the calculation agent deems necessary to hedge our obligations under the notes, we may, in our sole and absolute discretion, accelerate the payment on your notes early and pay you an amount determined in good faith and in a commercially reasonable manner by the calculation agent. If the payment on your notes is accelerated, your investment may result in a loss and you may not be able to reinvest your money in a comparable investment. See "General Terms of Notes – Consequences of a Commodity Hedging Disruption Event."

**JPMCCI lacks an operating history and may perform in unanticipated ways.**

JPMCCI was established in November 2007, and therefore lacks historical performance. Any back-testing or similar analysis in respect of the JPMCCI must be considered illustrative only and may be based on estimates or assumptions not used by the calculation agent when determining JPMCCI levels. Past performance should not be considered indicative of future performance.

**An investment in the notes carries the risks associated with the JPMCCI's open interest investment strategy.**

JPMCCI seeks to offer a diversified and representative approach to passive commodity investing. Unlike other commodity indices which focus exposure at a single maturity (traditionally, the front month contract or a single deferred contract), JPMCCI seeks to track exposure along the entire futures curve (*i.e.*, exposure to futures contracts with different maturities) in proportion to their open interest.

No assurance can be given that the investment strategy used to construct the JPMCCI will be successful or that the JPMCCI will outperform any alternative basket that might be constructed from commodity indices that focus exposure at a single maturity.

**Suspension or disruptions of market trading in the commodity and related options futures markets may adversely affect the level of the Basket, and therefore the value of the notes.**

The commodity markets are subject to temporary distortions or other disruptions due to various factors, including the lack of liquidity in the markets, the participation of speculators and government regulation and intervention. In addition, U.S. futures exchanges and some foreign exchanges have regulations that limit the amount of fluctuation in options futures contract prices that may occur during a single business day. These limits are generally referred to as "daily price fluctuation limits" and the maximum or minimum price of a contract on any given day as a result of these limits is referred to as a "limit price." Once the limit price has been reached in a particular contract, no trades may be made at a different price. Limit prices have the effect of precluding trading in a particular contract or forcing the liquidation of contracts at disadvantageous times or prices. These circumstances could adversely affect the level of the Basket Indices and, therefore, the value of your notes.

**Higher future prices of the commodity futures contracts underlying the Basket Indices relative to the current prices of such contracts may affect the value of the Basket Indices and the value of the notes.**

The Basket Indices are composed of futures contracts on physical commodities. Unlike equities, which typically entitle the holder to a continuing stake in a corporation, commodity futures contracts normally specify a certain date for delivery of the underlying physical commodity. As the exchange-traded futures contracts that compose the Basket Indices approach expiration, they are replaced by contracts that have a later expiration. Thus, for example, a contract purchased and held in August may specify an October expiration. As time passes, the contract expiring in October is replaced with a contract for delivery in November. This process is referred to as "rolling." If the market for these contracts is (putting aside other considerations) in "backwardation," where the prices are lower in the distant delivery months than in the nearer delivery months, the sale of the October contract would take place at a price that is higher than the price of the November contract, thereby creating a positive "roll yield." While many of the contracts included in the Basket Indices have historically exhibited consistent periods of backwardation, backwardation will most likely not exist at all times and there can be no assurance that backwardation will exist at times that are advantageous, with respect to your interests as a holder of the notes, to the valuation of the Basket Indices. The presence of contango in the commodity markets could result in negative "roll yields," which could adversely affect the value of the Basket Indices and thus the value of notes linked to the Basket Indices.



**Some of the Basket Indices will be subject to pronounced risks of pricing volatility.**

As a general matter, the risk of low liquidity or volatile pricing around the maturity date of a commodity futures contract is greater than in the case of other commodity futures contracts. Many commodities, like those in the energy and industrial metals sectors, have fluid futures contracts on a comparative basis. Contracts based on certain other commodities, most notably agricultural and livestock products, tend to trade with substantially less liquidity on a comparative basis. Thus, these commodities can have further pronounced pricing volatility (compared to futures contracts on other commodities) during extended periods of low liquidity. However, with respect to Basket Indices related to energy futures contracts, it should also be noted that due to the significant level of continuous consumption, limited reserves, and oil cartel controls, futures contracts related to energy commodities are subject to rapid price increases in the event of perceived or actual shortages of such energy commodities.

**Commodities prices are volatile and the roll return generated by rolling commodity futures included in the Basket Indices will have an effect on the level of the Basket Indices and the value of the notes.**

JPMCCI is comprised of commodity futures with different maturities selected on the basis of historical open interest. Each month, contracts that are about to mature, whose weighting in the Basket Indices have been decreased or that cease to be available for trading before the end of the next roll period will be rolled into contracts with different maturities. In addition, because JPMCCI is weighted by open-interest, all contracts included in JPMCCI will be re-weighted on a monthly basis, whether they are approaching maturity or not, to reflect the monthly change in their open interest. The act of replacing and re-weighting the commodity futures that comprise JPMCCI will generate a profit or loss known as the roll return. This return will be affected by a number of factors including, whether the prices of the relevant longer dated contracts are more or less than the prices of the shorter dated contracts. The roll return will generally be negative if the prices of the relevant longer dated contracts are greater than the prices of the shorter dated contracts. Conversely, if the prices of the longer dated contracts are less than the prices of the shorter dated contracts then the roll return will generally be positive. The prices of commodity futures can be volatile and the roll return generated by rolling commodity futures included in JPMCCI will have an effect, be positive or negative, on the JPMCCI, and therefore the level of the Basket Indices and the value of the notes.

**There can be no assurance that the historical average open interest figures will resemble the actual open interest for any particular commodity futures contract.**

JPMCCI is intended to be a benchmark weighted across the commodity futures curve by open interest so that it is representative of the investment opportunities in the agricultural commodity futures market. However, it is impossible to weight by actual open interest because those figures cannot be determined at the time the weightings are calculated. JPMCCI is therefore weighted using historical average open interest figures, averaged over the previous three years. A three year average was chosen by the Index Calculation Agent to capture structural and cyclical shifts in liquidity and filter out any short term anomalies. However, there can be no assurance that the historical average open interest figures will resemble the actual open interest for any particular commodity futures contract.

**There may be potential conflicts between your interests and those of JPMorgan Chase & Co., the Index Calculation Agent and other affiliates of ours.**

We and our affiliates play a variety of roles in connection with the notes linked to the Basket, including acting as Index Calculation Agent and hedging our obligations under such notes. In performing these duties, the economic interests of the Index Calculation Agent and other affiliates of ours would be potentially adverse to your interests as an investor in such notes.

**The Index Calculation Agent has discretion in relation to the JPMCCI and is under no obligation to consider your interests as holder of the notes.**

The Index Calculation Agent has responsibility for calculating and publishing JPMCCI levels. It is entitled to exercise discretion in relation to the JPMCCI, including but not limited to, the determination of the levels to be used in the event of market disruptions that affect its ability to calculate and publish the strategy and the interpretation of the JPMCCI rules. Although the Index Calculation Agent will make all determinations and take all action in relation to the JPMCCI acting in good faith, it should be noted that such discretion could have an impact, positive or negative, on JPMCCI levels. The Index Calculation Agent is under no obligation to consider your interests as a holder of the notes in taking any actions that might affect the value of your notes.

**JPMCCI is not a fully diversified portfolio.**

Diversification is generally considered to reduce the amount of risk associated with generating returns. There can be no assurance, however, that an investment in an instrument related to the Basket Indices will be sufficiently diversified at any time to reduce or minimize such risks to any extent. In particular, if the Basket Indices are weighted, as specified in the relevant terms supplement, to reflect a relatively high concentration of exposure to certain JPMCCI indices, the extent to which your overall investment portfolio is diversified will be reduced relative to an investment in an instrument with less concentrated exposures.

**Owning the notes is not the same as owning the commodities included in the Basket Indices.**

The return on your notes will not reflect the return you would realize if you actually held commodity contracts replicating the Basket Indices. JPMCCI is a hypothetical construct that does not hold any underlying assets of any kind. As a result, a holder of the notes will not have any direct or indirect rights to any commodity contracts or interests in the Basket Indices.

**The Ending Basket Level may be less than the Basket Closing Level at the maturity date of the notes or at other times during the term of the notes.**

Because the Ending Basket Level will be calculated based on the Basket Closing Level on one or more Basket Valuation Dates near the end of the term of the notes, the Basket Closing Level at the maturity date or at various other times during the term of the notes, including dates near the Basket Valuation Date(s), could be higher than the Ending Basket Level. This difference could be particularly large if there is a significant increase in the prices of the commodity futures contracts included in the Basket Indices after the final Basket Valuation Date but prior to the maturity date, or if there is a significant decrease in the prices of the commodity futures contracts included in the Basket Indices around the time of the Basket Valuation Dates or if there is significant volatility in the Basket Closing Level during the term of the notes (especially on dates near the Basket Valuation Date(s)). For example, when the Basket Valuation Date for the notes is near the end of the term of the notes, then if the Basket Closing Level increases or remains relatively constant during the initial term of the notes and then decreases below the Starting Basket Level (or the Strike Level, if applicable), the Ending Basket Level may be significantly less than if it were calculated on a date earlier than the Basket Valuation Date. Under these circumstances, you may receive a lower payment at maturity than you would have received if you had invested in commodities included in the Basket Indices directly.

**The Starting Levels for the Basket Indices may be determined after the issue date of the notes.**

If so specified in the relevant terms supplement, the Starting Levels for the Basket Indices will be determined based on the arithmetic average of the settlement prices, fixing levels or closing levels of the Basket Indices on the Initial Averaging Dates specified in that relevant terms supplement. One or more of the Initial Averaging Dates specified may occur on or following the issue date of the notes; as a result, the Starting Level for each Basket Index or Indices may not be determined, and you may therefore not know such value, until after the issue date. Similarly, the global note certificate constituting the notes, which will be deposited with DTC on the issue date as described under "General Terms of Notes — Book-Entry Only Issuance — The Depository Trust Company," will not set forth the Starting Levels for the Basket Indices. The Starting Levels for the Basket Index or Indices will be used in the calculation of the various Basket Index Returns, and the Basket Returns will be used in calculating the Basket Return and the payment at maturity. If there are any changes in the settlement prices, fixing levels or closing levels for the Basket Indices on the Initial Averaging Dates that occur after the issue date and such changes result in the Starting Levels for one or more of the Basket Indices being higher or lower than the settlement prices, fixing levels or closing levels of such Basket Indices on the issue date, this may establish higher or lower levels that the Basket must achieve for you to obtain a positive return on your investment or avoid a loss of principal at maturity (other than the Additional Amount).

**Secondary trading may be limited.**

Unless otherwise specified in the relevant terms supplement, the notes will not be listed on a securities exchange. There may be little or no secondary market for the notes. Even if there is a secondary market, it may not provide enough liquidity to allow you to trade or sell the notes easily.

J.P. Morgan Securities Inc., or JPMSI may act as a market maker for the notes, but is not required to do so. Because we do not expect that other market makers will participate significantly in the secondary market for the notes, the price at which you may be able to trade your notes is likely to depend on the price, if any, at which JPMSI is willing to buy the notes. If at any time JPMSI or another Agent does not act as a market maker, it is likely that there would be little or no secondary market for the notes.

**The notes are not designed to be short-term trading instruments.**

The price at which you will be able to sell your notes to us or our affiliates prior to maturity, if at all, may be at a substantial discount from the principal amount of the notes, even in cases where the Basket has appreciated since the pricing date. The potential returns described in the relevant terms supplement assume that your notes, which are not designed to be short-term trading instruments, are held to maturity.

**Prior to maturity, the value of the notes will be influenced by many unpredictable factors.**

Many economic and market factors will influence the value of the notes. We expect that, generally, the level of the Basket Indices and interest rates on any day will affect the value of the notes more than any other single factor. However, you should not expect the value of the notes in the secondary market to vary in proportion to changes in the level of the Basket Indices. The value of the notes will be affected by a number of other factors that may either offset or magnify each other, including:

- the expected volatility in the Basket Indices;
- the time to maturity of the notes;
- the market price of the physical commodities upon which the futures contracts that compose the Basket Indices are based;
- interest and yield rates in the market generally;
- economic, financial, political, regulatory, geographical, agricultural, meteorological or judicial events that affect the commodities included in the Basket Indices or markets generally and which may affect the value of the commodity futures contracts, and thus the closing levels of the Basket Indices; and
- our creditworthiness, including actual or anticipated downgrades in our credit ratings.

You cannot predict the future performance of the Basket based on its historical performance. The level of the Basket may decrease such that you may not receive any return of your investment at maturity, although in all cases you will still receive the Additional Amount. You will lose some or all of your investment if the Basket Return is negative, although in all cases you will still receive the Additional Amount.

**The inclusion in the original issue price of each agent's commission and the estimated cost of hedging our obligations under the notes through one or more of our affiliates is likely to adversely affect the value of the notes prior to maturity.**

While the payment at maturity will be based on the full principal amount of your notes as described in the relevant terms supplement, the original issue price of the notes includes each agent's commission and the estimated cost of hedging our obligations under the notes through one or more of our affiliates. Such estimated cost includes our affiliates' expected cost of providing such hedge, as well as the profit our affiliates expect to realize in consideration for assuming the risks inherent in providing such hedge. As a result, assuming no change in market conditions or any other relevant factors, the price, if any, at which JPMSI will be willing to purchase notes from you in secondary market transactions, if at all, will likely be lower than the original issue price. In addition, any such prices may differ from values determined by pricing models used by JPMSI, as a result of such compensation or other transaction costs.

**We or our affiliates may have adverse economic interests to the holders of the notes.**

JPMSI and other affiliates of ours trade the futures contracts included in the Basket Indices, options on such futures contracts, the individual commodities on which such futures contracts are based and other financial instruments related to the Basket Indices, such futures contracts, options or commodities on a regular basis, for their accounts and for other accounts under their management. JPMSI and these affiliates may also issue or underwrite or assist unaffiliated entities in the issuance or underwriting of other securities or financial instruments with returns linked to any of the commodities included in the JPMCCI. To the extent that we or one of our affiliates serves as issuer, agent or underwriter for such securities or financial instruments, our or their interests with respect to such products may be adverse to those of the holders of the notes. Any of these trading activities could potentially affect the level of one or more of the Basket Indices and, accordingly, could affect the value of the notes and the amount, if any, payable to you at maturity.

We or one of our affiliates may currently or from time to time engage in trading activities related to the commodities on which the futures contracts included in the Basket Indices are based or the related futures contracts or options. We or one or more of our affiliates may also publish research reports, or otherwise express views, with respect to such investments or regarding expected movements in levels of the Basket indices or the commodities on which the futures contracts composing the Basket Indices are based or the related futures contracts or options. We do not make any representation or warranty to any purchaser of a note with respect to any matters whatsoever relating to such activities or future price movements of any of the Basket Indices.

Additionally, we or one of our affiliates may serve as issuer, agent or underwriter for additional issuances of notes with returns linked or related to changes in the level of the Basket Indices or the price of the futures contracts composing the Basket Indices or the commodities upon which such futures contracts are based. By introducing competing products into the marketplace in this manner, we or one or more of our affiliates could adversely affect the value of the notes.

We may hedge or have hedged our obligations under the notes through certain affiliates, who would expect to make a profit on such hedge. Because hedging our obligations entails risk and may be influenced by market forces beyond our or our affiliates' control, such hedging may result in a profit that is more or less than expected, or it may result in a loss.

JPMSI, one of our affiliates, will act as the calculation agent. The calculation agent will determine, among other things, the Starting Basket Level, the Ending Basket Level, the Basket Return, whether there has been a market disruption event or a discontinuance of any of the Basket Indices, the amount payable to you in the event of an early acceleration and whether there has been a material change in the method of calculating the Basket Indices. In performing these duties, JPMSI may have interests adverse to the interests of the holders of the notes, which may affect your return on the notes, particularly where JPMSI, as the calculation agent, is entitled to exercise discretion.

**Market disruptions may adversely affect your return.**

The calculation agent may, in its sole discretion, determine that the markets have been affected in a manner that prevents it from properly determining the Basket Closing Level on any Basket Valuation Date or any Initial Averaging Date, if applicable, and calculating the amount that we are required to pay to you, if any, at maturity. These events may include disruptions or suspensions of trading in the markets as a whole or the termination or suspension of, or material limitation or disruption in the trading of any commodity futures contract included in one or more of the Basket Indices. If the calculation agent, in its sole discretion, determines that any of these events prevents us or any of our affiliates from properly hedging our obligations under the notes, it is possible that one or more of the Basket Valuation Dates and the maturity date will be postponed and your return will be adversely affected. In addition, if we or our affiliates are unable to effect transactions necessary to hedge our obligations under the notes, we have the right, but not the obligation, to accelerate the payment on your notes and pay you an amount determined in good faith in a commercially reasonable manner by the calculation agent. If the payment on your notes is accelerated, your investment may result in a loss and you may not be able to reinvest your money in a comparable investment. See "Description of Notes — Market Disruption Events" and "General Terms of Notes — Consequences of a Commodity Hedging Disruption Event."

**The tax consequences of an investment in the notes are unclear.**

There is no direct legal authority as to the proper U.S. federal income tax characterization of the notes, and we do not intend to request a ruling from the Internal Revenue Service (the "IRS") regarding the notes. No assurance can be given that the IRS will accept, or that a court will uphold, the characterization and tax treatment of the notes described in "Certain U.S. Federal Income Tax Consequences." If the IRS were successful in asserting an alternative characterization or treatment for the notes, the timing and character of income on the notes could differ materially from our description herein. In addition, on December 7, 2007, Treasury and the IRS released a notice requesting comments on the U.S. federal income tax treatment of "prepaid forward contracts" and similar instruments, which might include the notes. The notice focuses in particular on whether to require holders of these instruments to accrue income over the term of their investment. It also asks for comments on a number of related topics, including the character of income or loss with respect to these instruments; the relevance of factors such as the nature of the underlying property to which the instruments are linked; the degree, if any, to which income (including any mandated accruals) realized by Non-U.S. Holders should be subject to withholding tax; and whether these instruments are or should be subject to the "constructive ownership" regime, which very generally can operate to recharacterize certain long-term capital gain as ordinary income that is subject to an interest charge. While the notice requests comments on appropriate transition rules and effective dates, any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the notes, possibly with retroactive effect. Both U.S. and Non-U.S. Holders should consult their tax advisers regarding the U.S. federal income tax consequences of an investment in the notes, including possible alternative treatments and the issues presented by this notice. Non-U.S. Holders should also note that they may be withheld upon at a rate of 30% unless they have submitted a properly completed IRS Form W-8BEN or otherwise satisfied the applicable documentation requirements. You should review carefully the section entitled "Certain U.S. Federal Income Tax Consequences" in this product supplement no. 154-I and consult your tax adviser regarding your particular circumstances.

**JPMorgan Chase & Co. employees holding the notes must comply with policies that limit their ability to trade the notes and may affect the value of their notes.**

If you are an employee of JPMorgan Chase & Co. or one of its affiliates, you may only acquire the notes for investment purposes and you must comply with all of our internal policies and procedures. Because these policies and procedures limit the dates and times that you may transact in the notes, you may not be able to purchase any notes described in the relevant terms supplement from us and your ability to trade or sell any such notes in the secondary market may be limited.

## USE OF PROCEEDS

Unless otherwise specified in the relevant terms supplement, the net proceeds we receive from the sale of the notes will be used for general corporate purposes and, in part, by us or by one or more of our affiliates in connection with hedging our obligations under the notes. The original issue price of the notes includes each agent's commissions (as shown on the cover page of the relevant terms supplement) paid with respect to the notes and the estimated cost of hedging our obligations under the notes.

Unless otherwise specified in the relevant terms supplement, each agent's commissions will include the projected profit that our affiliates expect to realize in consideration for assuming the risks inherent in hedging our obligations under the notes. Because hedging our obligations entails risk and may be influenced by market forces beyond our or our affiliates' control, our projected profit resulting from such hedging may result in a profit that is more or less than expected, or could result in a loss. See also "Use of Proceeds" in the accompanying prospectus.

On or prior to the date of the relevant terms supplement, we, through our affiliates or others, may hedge some or all of our anticipated exposure in connection with the notes by taking positions in instruments the value of which is derived from the Basket Indices, or positions in options or futures contracts included in such Basket Indices, or positions in related options or futures contracts. While we cannot predict an outcome, such hedging activity or other hedging or investment activities of ours could potentially increase the level of the Basket Indices, and therefore effectively establish a higher level that the Basket must achieve for you to obtain a return on your investment or to avoid a loss of principal at maturity. From time to time, prior to maturity of the notes, we may pursue a dynamic hedging strategy that may involve taking long or short positions in the instruments described above. Although we have no reason to believe that any of these activities will have a material impact on the price of commodity futures contracts that determine the level of the Basket Indices, or the value of the notes, we cannot assure you that these activities will not have such an effect.

We have no obligation to engage in any manner of hedging activity and will do so solely at our discretion and for our own account. No note holder will have any rights or interest in our hedging activity or any positions we may take in connection with our hedging activity.

## THE JPMORGAN COMMODITY CURVE INDEX

*The following is a qualitative description of the 2008 edition of the rules for the JPMorgan Commodity Curve Index, as of November 2007 and as amended in April 2008 (the "Index Rules"). A copy of the Index Rules is attached to this product supplement as Annex A. For a more detailed and quantitative description of the Index Rules, please see Annex A attached to this product supplement. The Index Rules, and not this description, will govern the calculation and constitution of the JPMorgan Commodity Curve Index and other decisions and actions related to the JPMorgan Commodity Curve Index's calculation and maintenance, including (but not limited to) the calculation of each constituent's index values.*

*The JPMorgan Commodity Curve Index is the intellectual property of J.P. Morgan Securities Ltd., and J.P. Morgan Securities Ltd. reserves all rights with respect to its ownership of the JPMorgan Commodity Curve Index. JPMorgan Chase & Co. makes no representation or warranty as to the accuracy or completeness of the information regarding the JPMorgan Commodity Curve Index contained in, or attached as an annex to, this Product Supplement.*

### General

The JPMorgan Commodity Curve Index (collectively, with its constituent single commodity indices, sector indices and aggregate index, "JPMCCI") is an index family that seeks to offer a diversified and representative approach to passive commodity investing. Unlike other commodity indices that focus exposure at a single maturity (traditionally, the front month contract or a single deferred contract), JPMCCI seeks to track exposure along the entire futures curve (*i.e.*, exposure to futures contracts with different maturities) for each commodity included in any JPMCCI Constituent Index, as defined below under "— JPMCCI Index Types") in proportion to their "open interest."

"Open interest," refers to the total number of outstanding futures contracts with respect to a particular commodity that are held by market participants. At any time, open interest refers to the total number of open futures contracts with respect to a particular physical commodity at any time and can be used to determine the approximate size of a particular commodity futures market, a segment of that market or the market for an individual commodity futures contract. Commodity futures are different from other investments, such as equities. Whereas an equity security represents an ownership interest in a particular company and theoretically may exist in perpetuity, a commodity futures contract is a financial contract that obligates a buyer to purchase a specific quantity of a commodity on a future date. On that future date, the contract is settled and terminated. Buyers and sellers enter into or "open" these contracts at different monthly maturities on different exchanges, and open interest is a measure of the size of the market in these existing contracts.

As used in this product supplement no. 154-I, the "futures curve," is the hypothetical curve created by plotting contract prices for futures contracts of a particular commodity or a group of commodities along a vertical axis at different contract maturities along a horizontal axis. This "curve" is representative of commodity prices at different contract maturities and is typically upward sloping (*i.e.*, in contango) or downward sloping (*i.e.*, in backwardation).

As of the date of this product supplement no. 154-I, JPMCCI uses open interest in the futures curve for certain commodities market traded on the New York Mercantile Exchange (the "NYMEX"), the Chicago Board of Trade (the "CBOT"), the London Metals Exchange ("LME"), the Kansas City Board of Trade ("KCBOT"), the Minneapolis Grain Exchange ("MGE"), the New York Board of Trade ("NYBOT"), IntercontinentalExchange, Inc. ("ICE"), Euronext.LIFFE ("LIFFE"), the Chicago Mercantile Exchange (the "CME") and COMEX to determine the inclusion and relative weights of the individual commodity futures contract included in JPMCCI. Each commodity's monthly contract compositions are determined by reference to the historical distribution of the open interest of contracts across the futures curve for the relevant calendar month in each of the preceding three years. Although positions will be evaluated for potential adjustments on a monthly basis, many contracts are deemed held by JPMCCI for multiple months, and upon a rebalancing, deferred months move forward and positions are added (or subtracted) to reflect the historical monthly open interest in the futures curve.

In November of each calendar year, the Index Calculation Agent (as defined below) reviews the then-current Potential JPMCCI Exchange Commodities (as defined below), and, subject to the review of the JPMCCI Supervisory Committee (as defined below), determines and publishes the JPMCCI Exchange Commodities (as defined below) for the following calendar year on the JPMCCI Exchange Commodity Publication Date. "JPMCCI Exchange Commodity Publication Date" means, for each calendar year, a date determined by the Index Calculation Agent that occurs on or before the last Scheduled Index Valuation Date (as defined below) in November of each calendar year.

The following table sets for the hypothetical historical percentage composition and contract allocations from July 2007 to December 2007 for the JPMCCI Crude Oil Index, which is based off of the historical open interest of the NYMEX WTI crude oil futures contract. The information set forth in the following table was based on the historical information available to JPMSL and was produced based on the rules governing JPMCCI. We make no representation or warranty as to the accuracy or completeness of the information obtained from JPMSL. The hypothetical back-tested values of the specific contracts and percentage compositions deemed held by JPMCCI in various months should not be taken as indication of the future percentage composition of this sub-index. No assurances can be given as to the future percentage composition of a JPMCCI Index. The following table is solely for informational purposes and should only be used to illustrate the manner in which futures contracts are deemed held at deferred points of the futures curve and how positions are increased (or decreased) monthly based on distribution of open interest on the futures curve.

Month	Contracts/Percentage Composition							
July 2007	Sep-07	Oct -07	Nov-07	Dec-07	Jan-08	Jun-08	Dec-08	Dec-09
	37.7%	12.4%	6.1%	14.9%	5.0%	5.5%	11.7%	6.7%
August 2007	Oct -07	Nov-07	Dec-07	Jan-08	Jun-08	Dec-08	Dec-09	
	35.6%	13.6%	17.8%	7.0%	6.5%	12.3%	7.3%	
September 2007	Nov-07	Dec-07	Jan-08	Mar-08	Jun-08	Dec-08	Dec-09	
	36.1%	23.1%	9.5%	4.9%	7.3%	12.0%	7.1%	
October 2007	Dec-07	Jan-08	Feb-08	Mar-08	Jun-08	Dec-08	Dec-09	
	43.6%	15.6%	7.0%	5.6%	8.2%	12.2%	7.8%	
November 2007	Jan-08	Feb-08	Mar-08	Apr-08	Jun-08	Dec-08	Dec-09	Dec-10
	38.9%	11.9%	8.2%	5.3%	8.9%	12.9%	9.1%	4.7%
December 2007	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Dec-08	Dec-09	Dec-10
	33.3%	15.8%	8.2%	5.0%	9.4%	13.9%	9.4%	5.1%

As illustrated above, JPMCCI synthetically owns contracts at deferred points on the futures curve, and each month as those positions move forward in time, positions are added to (or subtracted from) to obtain the desired weighting. For example, in July 2007, the Crude Oil JPMCCI Index had a 12.4% exposure to the October 2007 NYMEX WTI futures contract, and in August 2007, that allocation was increased to 35.6%. In that example, additional contracts were purchased while the existing contracts were held to account for a 23.2% increase in exposure to the October 2007 contract for August 2007. As compared to other commodity indices, in July 2007, other commodity indices would have 100% of their exposure in the September contract, and upon rolling its hypothetical positions to August 2007, other indices would sell their entire exposure to the September contract and establish an entirely new position in the October 2007 contract.

JPMCCI is described as a "notional" or "synthetic" portfolio or basket because there is no actual portfolio of assets to which any person is entitled nor in which any person has any ownership interest. Instead, JPMCCI identifies certain assets in the market, the performance of which will be used as a reference point for the purposes of calculating the value of JPMCCI.



## JPMCCI Index Types

J.P. Morgan Securities Ltd. (“JPMSL”), an affiliate of JPMorgan Chase & Co., launched JPMCCI in November 2007 and currently maintains and calculates thirty-two single commodity indices (each, a “JPMCCI Single Commodity Index”), eight sector indices (each, a “JPMCCI Sector Index”), an aggregate commodity index (the “JPMCCI Aggregate Index”), and a variation of the JPMCCI Aggregate Index with a lesser weighting given to the energy sector components (the “JPMCCI Energy Light Index”) (each, a “JPMCCI Constituent Index” and together, the “JPMCCI Constituent Indices”).

JPMSL is solely responsible for the development, calculation and publication of JPMCCI. The performance of each JPMCCI Constituent Index is available in three different types of indices: a Price Index, an Excess Return Index and a Total Return Index:

- The “Price Index” for each JPMCCI Constituent Index measures the aggregate price levels of the relevant commodity futures contract(s) of such JPMCCI Constituent Index;
- The “Excess Return Index” for each JPMCCI Constituent Index measures the return from a hypothetical investment in the relevant commodity futures contract(s) of such JPMCCI Constituent Index, taking into account the effect of any monthly composition changes with respect to the relevant commodity(s) in each roll period; and
- The “Total Return Index” for each JPMCCI Constituent Index measures the return from a fully collateralized hypothetical investment in the relevant commodity futures contract(s) of such JPMCCI Constituent Index, taking into account the monthly rolling of those contracts. (Section A.2 of the Index Rules)

The table below presents the constituents of JPMCCI as of the date of this product supplement no. 154-I, each in its respective the Price Index, Excess Return Index and Total Return Index variants along with the applicable Bloomberg ticker symbol. Currently, 45 constituent indices are in JPMCCI.

Constituent	Price Index	Excess Return Index	Total Return Index
Aggregate	JMCXPI	JMCXER	JMCXTR
Energy Light	JMCXELPI	JMCXELER	JMCXELTR
Energy	JMCXENPI	JMCXENER	JMCXENTR
Non-Energy	JMCXNEPI	JMCXNEER	JMCXNETR
Industrial Metals	JMCXIMPI	JMCXIMER	JMCXIMTR
Precious Metals	JMCXPMPI	JMCXPMER	JMCXPMTR
All Metals	JMCXMEPI	JMCXMEER	JMCXMETR
Agriculture	JMCXAGPI	JMCXAGER	JMCXAGTR
Livestock	JMCXLIPI	JMCXLIER	JMCXLITR
Crude Oil	JMCXCLPI	JMCXCLER	JMCXCLTR
Gasoline	JMCXXBPI	JMCXXBER	JMCXXBTR
Heating Oil	JMCXHOPI	JMCXHOER	JMCXHOTR
Natural Gas	JMCXNGPI	JMCXNGER	JMCXNGTR
Brent Crude	JMCXCOPI	JMCXCOER	JMCXCOTR
Gas Oil	JMCXQSPI	JMCXQSER	JMCXQSTR

Gold	JMCXGCPI	JMCXGCER	JMCXGCTR
Silver	JMCXSIPI	JMCXSIER	JMCXSITR
Palladium	JMCXPAPI	JMCXPAER	JMCXPATR
Platinum	JMCXPLPI	JMCXPLER	JMCXPLTR
Aluminum	JMCXLAPI	JMCXLAER	JMCXLATR
Copper	JMCXLPPPI	JMCXLPER	JMCXLPTR
Lead	JMCXLLPI	JMCXLLER	JMCXLLTR
Nickel	JMCXLNPI	JMCXLNER	JMCXLNTR
Zinc	JMCXLXPI	JMCXLXER	JMCXLXTR
Tin	JMCXLTPPI	JMCXLTER	JMCXLTR
Copper	JMCXHGPPI	JMCXHGER	JMCXHGTR
Corn	JMCXCPI	JMCXCER	JMCXCTR
Soybeans	JMCXSPI	JMCXSER	JMCXSTR
Soybean Meal	JMCXSBPI	JMCXSMER	JMCXSMTR
Soybean Oil	JMCXBOPI	JMCXBOER	JMCXBOTR
Wheat	JMCXWPI	JMCXWER	JMCXWTR
Rough Rice	JMCXRRPI	JMCXRRER	JMCXRRTR
Winter Wheat	JMCXKWPI	JMCXKWER	JMCXKWTR
Spring Wheat	JMCXMWPI	JMCXMWER	JMCXMWTR
Cocoa	JMCXCCPI	JMCXCCER	JMCXCCTR
Coffee	JMCXKCPI	JMCXKCER	JMCXKCTR
Cotton	JMCXCTPI	JMCXCTER	JMCXCTTR
Orange Juice	JMCXJOPI	JMCXJOER	JMCXJOTR
Sugar	JMCXSBPI	JMCXSBER	JMCXSBTR
Robusta Coffee	JMCXCFPI	JMCXCFER	JMCXCFTR
White Sugar	JMCXQWPI	JMCXQWER	JMCXQWTR
Feeder Cattle	JMCXFCPI	JMCXFCTR	JMCXFCTR
Lean Hogs	JMCXLHPI	JMCXLHTR	JMCXLHTR
Live Cattle	JMCXLCPI	JMCXLCTR	JMCXLCTR

The table below show the JPMCCI Sector Indices as of the date of this product supplement no. 154-I, the JPMCCI Exchange Commodities included in each JPMCCI Sector Index and the 2008 estimated post-rebalancing weights for JPMCCI. The estimated post-rebalancing weights for JPMCCI were calculated using 2008 Aggregate Commodity Units and weighted average prices based on open interest (except with respect to LME Tin and CBOT Rough Rice, which were based on the front month contract on November 28, 2007) for the commodities based on the compositions and prices of the JPMCCI on November 28, 2007. The JPMCCI Aggregate Indices include all 35 JPMCCI Exchange Commodities set out below. The JPMCCI Energy Light Indices also include all 35 JPMCCI Exchange Commodities set out below, with a target dollar weight of the JPMCCI Exchange Commodities included in the energy JPMCCI Sector Index set to a maximum weight of 33% of such JPMCCI Energy Light Indices.

	Aggregate Weighting	Energy Light Weighting		Aggregate Weighting	Energy Light Weighting
<b>Energy</b>	<b>51.42%</b>	<b>33.00%</b>	<b>Agriculture</b>	<b>19.17%</b>	<b>27.90%</b>
NYMEX Crude Oil	22.33%	14.40%	CBOT Corn	4.28%	6.50%
NYMEX Gasoline	2.94%	2.00%	CBOT Soybean	3.94%	5.80%
NYMEX Heating Oil	4.09%	2.60%	CBOT Soybean Meal	1.04%	1.60%
NYMEX Natural Gas	9.86%	6.30%	CBOT Soybean Oil	1.23%	1.80%
ICE Brent Crude	8.20%	5.20%	CBOT Rough Rice	0.06%	0.10%
ICE Gas Oil	4.00%	2.50%	CBOT Wheat	2.91%	4.00%
			KCBOT Winter Wheat	0.99%	1.40%
<b>Precious Metals</b>	<b>7.67%</b>	<b>10.70%</b>	MGE Spring Wheat	0.39%	0.60%
COMEX Gold	5.67%	7.90%	NYBOT Cocoa	0.53%	0.80%
COMEX Silver	1.75%	2.40%	NYBOT Coffee	1.12%	1.60%
NYMEX Palladium	0.10%	0.10%	NYBOT Cotton	0.99%	1.40%
NYMEX Platinum	0.15%	0.20%	NYBOT Orange Juice	0.13%	0.20%
			NYBOT Sugar	1.15%	1.70%
<b>Industrial Metals</b>	<b>19.14%</b>	<b>25.00%</b>	LIFFE Robusta Coffee	0.26%	0.40%
LME Aluminum	6.25%	8.10%	LIFFE White Sugar	0.17%	0.30%
LME Copper	7.12%	9.50%			
LME Lead	0.87%	1.00%	<b>Livestock</b>	<b>2.60%</b>	<b>3.40%</b>
LME Nickel	1.56%	2.00%	CME Feeder Cattle	0.30%	0.40%
LME Tin	0.26%	2.20%	CME Lean Hogs	0.74%	0.90%
LME Zinc	1.73%	0.30%	CME Live Cattle	1.56%	2.10%
COMEX Copper	1.34%	1.80%			

## JPMCCI Methodology

### *Selection of JPMCCI Exchange Commodities*

JPMSL acts as the calculation agent for JPMCCI. When discussing JPMSL's role as the calculation agent, we refer to JPMSL as the "Index Calculation Agent." The Index Calculation Agent selects the commodities futures contracts that will be considered for inclusion in JPMCCI each year (the "JPMCCI Exchange Commodities"). A two-stage process is followed by the Index Calculation Agent under the supervision of the JPMCCI Supervisory Committee to select futures contracts to be included in JPMCCI in any given year. First, the Index Calculation Agent identifies Potential JPMCCI Exchange Commodities and, second, the Index Calculation Agent selects JPMCCI Exchange Commodities for inclusion in JPMCCI.

"Potential JPMCCI Exchange Commodity" means each physical commodity futures contract (but in respect of which physical delivery is not a requirement for inclusion in this definition) which:

- is listed on an exchange that meets the geographical or other criteria published by Index Calculation Agent from time to time;
- is denominated in U.S. dollars;

- has an Estimated Market Size of at least \$250 million. If a Potential JPMCCI Exchange Commodity is already included in JPMCCI, its Estimated Market Size must not have fallen below \$150 million as of the relevant JPMCCI Exchange Commodity Publication Date. The “Estimated Market Size” means, in respect of a Potential JPMCCI Exchange Commodity on any day, a notional amount expressed in U.S. dollars equal to the most recent complete thirty-six monthly average historical open interest on such day calculated using data published by the Futures Industry Association for such exchange commodity *multiplied by* the settlement price for the monthly contract on such exchange commodity with the nearest expiration date on the last Scheduled Index Valuation Day in October of the applicable year; *provided* that the Index Calculation Agent may, in its good faith and commercially reasonable judgment, use a shorter historical period in respect of Potential JPMCCI Exchange Commodities that have a shorter trading history or as other data limitations necessitate.
- has a sufficiently liquid market for general trading, as determined by the Index Calculation Agent in a good faith and commercially reasonable manner and subject to the review of the JPMCCI Supervisory Committee;
- is not a “mini-contract” (as defined by the Relevant Exchange) or a swap contract, basis contract, spread contract or weather contract, as determined by the Index Calculation Agent.
- has traded for at least one year prior to its inclusion in JPMCCI, unless the Index Calculation Agent waives this requirement. The Index Calculation Agent may waive this requirement if it determines, in its good faith and commercially reasonable judgment, and subject to the review of the JPMCCI Supervisory Committee, that the JPMCCI Exchange Commodity’s significance in terms of investor interest is so great that its omission would significantly undermine the representativeness of JPMCCI; and
- has sufficient data available to allow the Index Calculation Agent to appropriately determine its historical performance and analyze its performance on an on-going basis, determined based on the existence of adequate independent historical data. The Index Calculation Agent may determine that the historical performance of a Potential JPMCCI Exchange Commodity may be reasonably calculated in the absence of what would normally be considered adequate independent historical data. (Section B.1 of the Index Rules)

“JPMCCI Exchange Commodity” means, with respect to the version of JPMCCI established in a particular calendar year (*e.g.*, the 2008 version of JPMCCI established in November 2007), each Potential JPMCCI Exchange Commodity chosen for inclusion in JPMCCI in that calendar year. The Index Calculation Agent will select for inclusion in JPMCCI, subject to the review of the JPMCCI Supervisory Committee, each Potential JPMCCI Exchange Commodity which (a) is not related to milk, electricity or coal, (b) is not “Sugar #14” (traded on NYBOT) and (c) with respect to aluminum (*i.e.*, High Grade Primary Aluminum, Aluminum Alloy and North American Special Aluminum Alloy), the aluminum futures contract with the greatest open interest.

On each JPMCCI Exchange Commodity Publication Date, the Index Calculation Agent will calculate and publish the JPMCCI Exchange Commodities for inclusion in JPMCCI for the following calendar year. In addition, the composition of the JPMCCI Sector Indices for the following calendar year are determined by the Index Calculation Agent on each JPMCCI Exchange Commodity Publication Date, subject to the review and approval of the JPMCCI Supervisory Committee. The Index Calculation Agent may introduce additional JPMCCI Sector Indices on any future date.

Based on the above criteria, the 2008 composition for JPMCCI includes two new JPMCCI Exchange Commodities, London Mercantile Exchange (“LME”) Tin and Chicago Board of Trade (“CBOT”) Rough Rice. (Appendix G, Table 1 of the Index Rules)

The table below sets forth two JPMCCI Exchange Commodities that were reviewed for inclusion in the 2008 version of JPMCCI in November 2007. If the Estimated Market Size is below \$250 million, the Potential JPMCCI Exchange Commodity is not considered. The final inclusion decision is indicated in the last column. Estimated market sizes are computed using settlement prices as of October 31, 2007. See Appendix H, Table 4 of the Index Rules for a complete description of the Commodity Inclusion Process and list of JPMCCI Exchange Commodities reviewed for inclusion in JPMCCI in 2008.

Country	Exchange	JPMCCI Exchange Commodity	Avg montly OI in obs period	Units per contract		\$ per unit	Estimated market size, US\$m	Considered for 2008?	Included for 2008?
US	CBOT	Wheat	344,690	5,000	BUSHELS	8.08	13,925	Yes	Yes
UK	LME	Aluminium Alloy	6,034	20	METRIC TONS	2,207.75	266	Yes	No

In certain exceptional cases, the Index Calculation Agent may substitute a JPMCCI Exchange Commodity with a physical commodity futures contract not then selected as a JPMCCI Exchange Commodity, such as when a JPMCCI Exchange Commodity is known to be ceasing trading in the future and a new physical commodity futures contract has emerged as a natural substitute for such existing JPMCCI Exchange Commodity, as determined by the Index Calculation Agent in a good faith and commercially reasonable manner, subject to the review of the JPMCCI Supervisory Committee. For example, the replacement contract proposed by the Relevant Exchange for a discontinued JPMCCI Exchange Commodity will generally constitute a “natural substitute.” In making the calculation of Aggregate Commodity Units (as defined below) and Monthly Contract Weights (as defined below) upon such substitution, the Index Calculation Agent relies on a combination of data based on such affected JPMCCI Exchange Commodity and the Potential JPMCCI Exchange Commodity that will be introduced as a result of the Index Calculation Agent’s determination. The methodology by which any such substitution will be effected will be announced by the Index Calculation Agent as soon as reasonably practicable in the circumstances then prevailing. The Index Calculation Agent will obtain the approval of the JPMCCI Supervisory Committee prior to making any substitutions or other changes described in this paragraph. (Section B.2 of the Index Rules)

“Aggregate Commodity Units” means, in relation to the JPMCCI Aggregate Indices, the JPMCCI Energy Light Indices and the JPMCCI Sector Indices, the average monthly units of each JPMCCI Exchange Commodity over a three year period ending on a given calendar year corresponding to contracts outstanding used in calculating the JPMCCI Aggregate Indices, the JPMCCI Energy Light Indices and the JPMCCI Sector Indices. In the case of the Aggregate Commodity Units in relation to the JPMCCI Energy Light Indices, the Aggregate Commodity Units corresponding to the JPMCCI Exchange Commodities included in the energy JPMCCI Sector Indices may be adjusted in order to assign the energy sector Estimated Post Rebalance Market Capitalization (as defined in Section C.3 of the Index Rules) a maximum of 33% of the total Estimated Post Rebalance Market Capitalization related to the JPMCCI Energy Light Indices.

“Monthly Contract Weight” means, with respect to any JPMCCI Exchange Commodity, the weighting allocated in the relevant Composition to a given Monthly Contract with respect to a JPMCCI Exchange Commodity as discussed in more detail in “—Monthly Calculation of Monthly Contract Weights” below.

“Composition” means, with respect to each JPMCCI Exchange Commodity and each month, the hypothetical portfolio of Monthly Contracts and associated Monthly Contract Weights.

“Monthly Contract” means, with respect to each JPMCCI Exchange Commodity and each month, the contract considered most associated to such month as determined by the Index Calculation Agent based (i) with respect to all JPMCCI Exchange Commodities other than JPMCCI Exchange Commodities that are traded on the London Metals Exchange, the contract designated by the Relevant Exchange (typically being the contract that will expire in such month, or the contract in which delivery or settlement will occur immediately following such month) that (ii) with respect to a JPMCCI Exchange Commodity whose Relevant Exchange is the London Metals Exchange, the Monthly Contract will be the relevant contract expiring on the third Wednesday of such month.

*Representation of JPMCCI Exchange Commodities and Monthly Contract Open Interest*

When there is more than one eligible Potential JPMCCI Exchange Commodity related to a particular underlying physical commodity, the Index Calculation Agent may, where deemed appropriate and subject to the approval of the JPMCCI Supervisory Committee, aggregate the Monthly Contract Open Interest of similar non-selected Potential JPMCCI Exchange Commodities with those of the relevant JPMCCI Exchange Commodities and thus increase the number of Aggregate Commodity Units for the relevant JPMCCI Exchange Commodity. (Section B.3 of the Index Rules)

The Monthly Contracts combined as described in Section B.3 of the Index Rules will be published in May and November of each calendar year and as additionally necessary in light of market developments between those months. The table below sets out the four currently selected JPMCCI Exchange Commodities whose Monthly Contract Open Interest has been combined with non-selected potential alternative JPMCCI Exchange Commodities as of the date of this product supplement no. 154-I. (Appendix G of the Index Rules)

Open Interest for:	Combined for JPMCCI Exchange Commodity	since
ICE Crude Oil	NYMEX Crude Oil	Feb-2006
ICE Heating Oil	NYMEX Heating Oil	Apr-2006
CBOT Gold	COMEX Gold	Oct-2004
CBOT Silver	COMEX Silver	Oct-2004

The Index Calculation Agent will publish any changes or additions to the combinations set forth in the table above on or before the effective date of any changes and/or additions.

*Final Inclusion Determination and Rebalancing Announcement*

The Index Calculation Agent will present to the JPMCCI Supervisory Committee for review the JPMCCI Exchange Commodities for any given year after the completion of the procedures set forth above. The Index Calculation Agent will publish the determination of the JPMCCI Exchange Commodities for a given year no later than the last Scheduled Index Valuation Day in November of each calendar year immediately preceding the relevant year for inclusion. (Section B.4 of the Index Rules)

*Calculation of Monthly Contract Weights*

Each JPMCCI Exchange Commodity included in a JPMCCI Constituent Index includes one or more Monthly Contracts related to such JPMCCI Exchange Commodity (except in circumstances of substitution of contracts, where the Monthly Contracts may be related to different JPMCCI Exchange Commodities). Each JPMCCI Exchange Commodity included in a JPMCCI Constituent Index is thus represented by futures contracts from across its respective futures curve, as described under “— General” above, with a range of maturities (and which are weighted according to their respective open interests).

The Composition with respect to each JPMCCI Exchange Commodity is determined monthly by averaging the historical open interests of relevant futures contracts across the futures curve for such JPMCCI Exchange Commodity in the relevant calendar month in each of the preceding three years, which is intended to capture shifts of open interest in each relevant futures contract along the futures curve. For example, to determine the weightings of the Monthly Contracts for a JPMCCI Exchange Commodity in July 2008, the Index Calculation Agent will determine the numerical unweighted average of the open interests for each Monthly Contract available on such JPMCCI Exchange Commodity in July 2005, July 2006 and July 2007.

First, the Index Calculation Agent will calculate the “Monthly Contract Open Interest” in month  $m$ , denominated in physical units, for the JPMCCI Exchange Commodity  $c$  Monthly Contract expiring  $n$  months after month  $m$ , through the following formula:

$$MCOI_{m,n}^c = F^c \times \sum_{d \in D_m^c} DCOI_{d,m,n}^c$$

where:

$DCOI_{d,m,n}^c$  is the Daily Contract Open Interest on day  $d$  of month  $m$ , denominated in number of contracts, for JPMCCI Exchange Commodity  $c$  Monthly Contract expiring  $n$  months after month  $m$ ;

$D_m^c$  is the set of all days in month  $m$  for which open interest data for one or more Monthly Contracts of JPMCCI Exchange Commodity  $c$  is obtainable by the Index Calculation Agent from the relevant information source (as set out in Table X of Appendix Y of the Index Rules);

$F^c$  is the number of physical units of JPMCCI Exchange Commodity  $c$  represented by one contract, given the contract specification (*e.g.* the number of barrels underlying one crude oil futures contract).

For example, if  $m$  corresponds to March 2001 and  $n=15$ , the Monthly Contract being referred to would be the June 2002 contract. In this example, the Monthly Contract Open Interest in March 2001 for a JPMCCI Exchange Commodity would represent the sum of the total number of June 2002 contracts for such JPMCCI Exchange Commodity outstanding on each Scheduled Valuation Day in March 2001 multiplied by the number of physical units represented by one contract for that JPMCCI Exchange Commodity. (Section D.2 of the Index Rules)

Next, the Index Calculation Agent will calculate the monthly contract open interest percentage (“MCOIP”) in month  $m$ , for JPMCCI Exchange Commodity  $c$  Monthly Contract expiring  $n$  months after month  $m$ , through the following formula:

$$MCOIP_{m,n}^c = \frac{MCOI_{m,n}^c}{\sum_i MCOI_{m,i}^c}$$

The MCOIP for a JPMCCI Exchange Commodity represents the percentage of total market open interest for such JPMCCI Exchange Commodity represented by a futures contract in a given month. Continuing with the example from the previous paragraph, if the MCOIP for a June 2002 contract in March 2001 was 500 and the sum of the Monthly Contract Open Interests for all monthly contracts in March 2001 was 10,000, then the MCOIP for June 2002 contracts would be 5%. (Section D.3 of the Index Rules)

Then, the Index Calculation Agent will calculate the historical monthly contract open interest percentage ("HMC OIP") in month  $m$ , for the JPMCCI Exchange Commodity  $c$  Monthly Contract expiring  $n$  months after month  $m$ , through the following formula:

$$HMC OIP_{m,n}^c = \underset{i=12,24,36}{average}(MCOIP_{m-i,n}^c)$$

Continuing with the example from the previous two paragraphs, the HMC OIP for a JPMCCI Exchange Commodity for a June 2003 contract in March 2002 is the arithmetic average of:

- (a) the MCOIP for that JPMCCI Exchange Commodity's June 2002 contract in March 2001 (as calculated in the last paragraph);
  - (b) the MCOIP for that JPMCCI Exchange Commodity's June 2001 contract in March 2000;
  - (c) the MCOIP for that JPMCCI Exchange Commodity's June 2000 contract in March 1999.
- (Section D.4 of the Index Rules)

Finally, the Monthly Contract Weights and Composition for each JPMCCI Exchange Commodity are determined. The following Monthly Contracts are excluded:

- (a) Monthly Contracts with a HMC OIP of less than 3%; and
- (b) Monthly Contracts due to expire, in which there will be a Last Trading Day (as defined below) or First Notice Day (as defined below) prior to the last anticipated Roll Day (as defined below in "— Rolling Process") or if the Monthly Contract is traded on the London Metals Exchange, Monthly Contracts in which there will be a Last Trading Day in a month in which the last anticipated Roll Day falls. (Section D.5 of the Index Rules)

The "Monthly Contract Weight" for month  $m$  for JPMCCI Exchange Commodity  $c$  Monthly Contract expiring  $n$  months after month  $m$  is:

$$CW_{m,n}^c = \frac{HMC OIP_{m,n}^c}{\sum_{i \in N_m^c} HMC OIP_{m,i}^c}$$

where:

$N_m^c$  is the set of all Monthly Contracts for JPMCCI Exchange Commodity  $c$  in month  $m$  that are not excluded by the exclusion rules set forth above

For Monthly Contracts that are excluded by the exclusion rules set forth in the formula above, the Monthly Contract Weight will be deemed to equal zero. The Monthly Contract Weight represents the HMC OIP for a Monthly Contract of the relevant JPMCCI Exchange Commodity in a given month that is not excluded, *divided* by the total sum of the HMC OIP for all Monthly Contracts for such JPMCCI Exchange Commodity in a given month that are not excluded. (Section D.5 of the Index Rules)

"Last Trading Day" means the final day on that a given Monthly Contract may trade or be closed out before delivery of the relevant JPMCCI Exchange Commodity must occur.

"First Notice Day" means the first day a notice of intent to deliver a JPMCCI Exchange Commodity can be made by a clearinghouse to a buyer in fulfillment of a given month's futures contract.



### *Rolling Process*

All JPMCCI Exchange Commodities included in JPMCCI will be deemed to be rolled before their respective maturities into futures contracts with maturities in the more-distant future. JPMCCI Exchange Commodities nominally included in JPMCCI that are approaching maturity will generally be rolled in the calendar month immediately preceding the month in which they are due to mature. In addition, JPMCCI is weighted by open interest, and, thus, all Monthly Contracts included in JPMCCI are re-weighted on a monthly basis whether they are approaching maturity or not to reflect the monthly change in their respective open interests. The re-weighting is achieved by rolling the Monthly Contracts included in the relevant JPMCCI Constituent Index into contracts with a different maturity.

Monthly Contracts included in JPMCCI are deemed to be rolled over a period of the first ten Scheduled Index Valuation Days (each day, a “Roll Day”) of the relevant month, subject to postponement if any such Roll Day is a Disrupted Day (as defined below in “— Calculation and Publication of JPMCCI Values”). Over this period, the Monthly Contract Weight of any Monthly Contract about to mature will be progressively reduced in equal increments of 10% until its weight equals zero and the weight of the replacement Monthly Contract will be progressively increased in equal increments of 10% until it equals its allocated Monthly Contract Weight. Similarly, Monthly Contracts whose Monthly Contract Weights are scheduled to be reduced or increased to reflect a change in their respective open interests will have their respective Monthly Contract Weights progressively reduced or increased, as applicable, in equal increments of 10% until their respective new Monthly Contract Weights are achieved. (Section D.7 of the Index Rules)

If a scheduled Roll Day is a Disrupted Day, then (i) the Monthly Contract Weight will not be amended on that day and (ii) the portion of the Monthly Contract Weight that would have been amended on that day will be amended on the next following Scheduled Index Valuation Day (as defined below in “— Calculation and Publication of JPMCCI Values”) that is not a Disrupted Day. This delayed portion of the deemed roll will be executed on the next following Scheduled Index Valuation Day that is not a Disrupted Day, along with the portion of the deemed roll for all such contracts originally scheduled to occur on such Scheduled Index Valuation Day. Therefore, the incremental change in Monthly Contract Weight for these contracts on the relevant next following Scheduled Index Valuation Day that is not a Disrupted Day will be larger than 10% of the Monthly Contract Weight. (Section D.7 of the Index Rules)

### *Portfolio Continuity Factors*

“Portfolio Continuity Factors” are factors introduced to prevent discontinuities in the JPMCCI Aggregate Indices, the JPMCCI Energy Light Indices and the JPMCCI Sector Indices when rebalancing occurs (in December) from one set of Aggregate Commodity Units to the next set of Aggregate Commodity Units. Portfolio Continuity Factors for each JPMCCI Sector Index are calculated in the same manner as for the JPMCCI Aggregate Index, except that only the Aggregate Commodity Units of the JPMCCI Exchange Commodities relevant to the JPMCCI Sector Index in question will be used in the calculations. (Sections E.1, E.2 and E.3 of the Index Rules)

The Portfolio Continuity Factor  $PCF_y$  for year  $y$  is expressed as follows:

$$PCF_y = PCF_{y-1} \times \frac{\sum_c ACU_y^c \times \sum_n CW_{m_{y-1},n}^c \times CP_{d_{y-1},m_{y-1},n}^c}{\sum_c ACU_{y-1}^c \times \sum_n CW_{m_{y-1},n}^c \times CP_{d_{y-1},m_{y-1},n}^c}$$

where:

$m_{y-1}^*$	means December in year $y-1$
$d_{y-1}^*$	means the last Index Valuation Day in year $y-1$
$CP_{d,m,n}^c$	means the Settlement Price denominated in U.S. dollars per physical unit of the commodity underlying the JPMCCI Exchange Commodity as of day $d$ , for the JPMCCI Exchange Commodity $c$ Monthly Contract expiring $n$ months after month $m$

At inception  $PCF_{inception}$  is set so that  $JPMCCIPR_d$  (see below) is equal to 100.

#### *Calculation and Publication of JPMCCI Values*

The level of each JPMCCI Constituent Index will be published on each Scheduled Index Valuation Day (as defined below), even if such day is a Limit Day (as defined below); *provided, however*, that the Index Calculation Agent will not be obliged to publish any level of any JPMCCI Constituent Index upon the occurrence or continuation of a Force Majeure Event (as defined below). If for any reason a settlement price for a given Monthly Contract cannot be obtained, then the Index Calculation Agent will use the most recently available settlement price to determine the level of the relevant JPMCCI Constituent Index. In these circumstances, the level of the relevant JPMCCI Constituent Index will only approximate the actual performance of the commodity futures contracts that compose such JPMCCI Constituent Index. (Section D.6 of the Index Rules) All JPMCCI levels calculated are rounded to the fifth decimal. (Section F of the Index Rules)

The JPMCCI Single Commodity Price Index Level  $JPMCCIPR_d^c$  for JPMCCI Exchange Commodity  $c$  on Index Valuation Day  $d$  is:

$$JPMCCIPR_d^c = RW_d^c \times \sum_n CW_{m_d-1,n}^c \times CP_{d,m_d-1,n}^c + (1 - RW_d^c) \times \sum_n CW_{m_d,n}^c \times CP_{d,m_d,n}^c$$

where:

$m_d$  is the month on which Index Valuation Day  $d$  falls

The JPMCCI Single Commodity Excess Return Index Level  $JPMCCIER_d^c$  for JPMCCI Exchange Commodity  $c$  on Index Valuation Day  $d$  is:

$$JPMCCIER_d^c = JPMCCIER_{d-1}^c \times (1 + CDER_d^c)$$

Where:

$CDER_d^c$  for JPMCCI Exchange Commodity  $c$  on Index Valuation Day  $d$  means the following:

$$CDER_d^c = \frac{RW_{d-1}^c \times \sum_n CW_{m_{d-1}-1,n}^c \times CP_{d,m_{d-1}-1,n}^c + (1 - RW_{d-1}^c) \times \sum_n CW_{m_{d-1},n}^c \times CP_{d,m_{d-1},n}^c}{RW_{d-1}^c \times \sum_n CW_{m_{d-1}-1,n}^c \times CP_{d-1,m_{d-1}-1,n}^c + (1 - RW_{d-1}^c) \times \sum_n CW_{m_{d-1},n}^c \times CP_{d-1,m_{d-1},n}^c} - 1$$

On the Inception Date, each JPMCCI Single Commodity Excess Return Index Level or  $JPMCCIER_{inception}^c = 100$ .

The JPMCCI Single Commodity Total Return Index Level or  $JPMCCITR_d^c$  for JPMCCI Exchange Commodity c on Index Valuation Day  $d$  is:

$$JPMACCITR_d^c = JPMACCITR_{d-1}^c \times (1 + CDER_d^c + TBR_d) \times \prod_{a \in A} (1 + TBR_a)$$

where:

$TBR_d$  is the " US Treasury Bill Return" on calendar day  $d$ , calculated as follows:

$$TBR_d = \left( \frac{1}{1 - \frac{91}{360} \times TBRATE_{d-1}} \right)^{1/91} - 1$$

$TBRATE_{d-1}$  is the 91-day auction high rate for U.S. Treasury Bills on the most recent weekly auction date available on the calendar day immediately preceding the calendar day  $d$

$A$  is the set of calendar days in between the immediately preceding Index Valuation Day and the Index Valuation Day  $d$  (exclusive)

On the Inception Date, JPMCCI Single Commodity Total Return Index Level or  $JPMCCITR_{inception}^c = 100$ .

The JPMCCI Aggregate Price Index Level or  $JPMACCIPR_d$  on Index Valuation Day  $d$  is:

$$JPMACCIPR_d = \frac{1}{PCF_{y_{m_d-1}}} \times \sum_c ACU_{y_{m_d-1}}^c \times RW_d^c \times \sum_n CW_{m_d-1,n}^c \times CP_{d,m_d-1,n}^c$$

$$+ \frac{1}{PCF_{y_{m_d}}} \times \sum_c ACU_{y_{m_d}}^c \times (1 - RW_d^c) \times \sum_n CW_{m_d,n}^c \times CP_{d,m_d,n}^c$$

where:

$y_{m_d}$  is the year in which month  $m_d$  falls

On the Inception Date, the JPMCCI Aggregate Price Index Level or  $JPMCCIPR_{inception} = 100$

The JPMCCI Aggregate Excess Return Index Level or  $JPMACCIER_d$  on Index Valuation Day  $d$  is:

$$JPMACCIER_d = JPMACCIER_{d-1} \times (1 + ADER_d)$$

where the "Aggregate Daily Excess Return"  $ADER_d$  for Index Valuation Day  $d$  is:

$$ADER_d = \frac{A}{B} - 1$$

where:

$$A = \left\{ \frac{1}{PCF_{y_{m_d-1}-1}} \times \sum_c ACU_{y_{m_d-1}-1}^c \times RW_{d-1}^c \times \sum_n CW_{m_d-1,n}^c \times CP_{d,m_d-1,n}^c \right.$$

$$\begin{aligned}
& + \frac{1}{PCF_{y_{m_{d-1}}}} \times \sum_c ACU_{y_{m_{d-1}}}^c \times (1 - RW_{d-1}^c) \times \sum_n CW_{m_{d-1},n}^c \times CP_{d,m_{d-1},n}^c \Big\} \\
B = & \left\{ \frac{1}{PCF_{y_{m_{d-1}-1}}} \times \sum_c ACU_{y_{m_{d-1}-1}}^c \times RW_{d-1}^c \times \sum_n CW_{m_{d-1}-1,n}^c \times CP_{d-1,m_{d-1}-1,n}^c \right. \\
& \left. + \frac{1}{PCF_{y_{m_{d-1}}}} \times \sum_c ACU_{y_{m_{d-1}}}^c \times (1 - RW_{d-1}^c) \times \sum_n CW_{m_{d-1},n}^c \times CP_{d-1,m_{d-1},n}^c \right\}
\end{aligned}$$

On the Inception Date, the JPMCCI Aggregate Excess Return Index Level  $JPMACCIE_{inception}$  =100.

The JPMCCI Aggregate Total Return Index Level or  $JPMACCITR_d$  on Index Valuation Day  $d$ , is:

$$JPMACCITR_d = JPMACCITR_{d-1} \times (1 + ADER_d + TBR_d) \times \prod_{a \in A} (1 + TBR_a)$$

On the Inception Date, JPMCCI Aggregate Total Return Index Level or  $JPMACCITR_{inception}$  =100.

JPMCCI Sector Price Indices, JPMCCI Excess Return Indices and JPMCCI Total Return Indices are calculated in the same manner as the JPMCCI Aggregate Indices, except that only the Aggregate Commodity Units of the JPMCCI Exchange Commodities included in the relevant JPMCCI Sector Index are used in the calculation of the relevant JPMCCI Sector Index. (Section F.7 of the Index Rules)

The JPMCCI Energy Light Price Index, the JPMCCI Energy Light Excess Return Index and the JPMCCI Energy Light Total Return Index are calculated in the same manner as the JPMCCI Aggregate Indices, except that the Aggregate Commodity Units of the JPMCCI Exchange Commodities included in the energy JPMCCI Sector Indices used in the calculations for the JPMCCI Energy Light Indices may be adjusted to compose a maximum of 33% of the total Aggregate Commodity Units related to the JPMCCI Energy Light Indices. (Section F.8 of the Index Rules)

“Limit Day” means, with respect to a JPMCCI Exchange Commodity and its Relevant Exchange, any day on which there is a limitation on, or suspension of, the trading of options or futures contracts on any physical commodity that underlies a relevant JPMCCI Exchange Commodity imposed by the Relevant Exchange for such JPMCCI Exchange Commodity by reason of movements exceeding “limit up” or “limit down” levels permitted by the Relevant Exchange and that has a material adverse effect on trading volumes and liquidity as compared to other Scheduled Trading Days as determined by the Index Calculation Agent in its commercially reasonable discretion.

“Scheduled Index Valuation Day” means, for any JPMCCI Constituent Index, each Scheduled Trading Day with respect to at least 50% of the JPMCCI Exchange Commodities constituting such JPMCCI Constituent Index.

“Scheduled Trading Day” means, with respect to a JPMCCI Exchange Commodity, a day on which the Relevant Exchange for such JPMCCI Exchange Commodity is scheduled to be open for trading for its regular trading sessions and to publish a settlement price for such JPMCCI Exchange Commodity.

“Disrupted Day” means, with respect to a JPMCCI Exchange Commodity, a Scheduled Trading Day on which either (a) the settlement price for any Monthly Contract for such JPMCCI Exchange Commodity is not obtainable or (b) is a Limit Day with respect to such JPMCCI Exchange Commodity.

“Relevant Exchange” means, with respect to each Potential JPMCCI Exchange Commodity, the primary futures exchange on which futures contracts related to the physical commodity underlying such Potential JPMCCI Exchange Commodity are traded.

“Force Majeure Event” means any event beyond the control of the Index Calculation Agent, including any act of God, act of governmental authority, act of public enemy, or due to war, the outbreak or escalation of hostilities, fire, flood, civil commotion, insurrection, labor difficulty including, without limitation, any strike, other work stoppage, or slow-down, severe or adverse weather conditions, power failure, communications line or other technological failure.

#### *Publication of Corrected Index Levels*

In the event that a settlement price used in the calculation of any JPMCCI Constituent Index Level is corrected subsequent to the publication of such JPMCCI Constituent Index Level that employed such corrected settlement price and the correction is published by the Relevant Exchange for a JPMCCI Exchange Commodity included in such JPMCCI Constituent Index before the next following Rebalancing Date, or any other element used in the calculation of any JPMCCI Constituent Index Level is determined by the Index Calculation Agent, in its sole discretion, to have been incorrect prior to the next following Rebalancing Date, then the Index Calculation Agent may, if practicable and if the correction is deemed material by the Index Calculation Agent, in its sole discretion, adjust or correct the relevant JPMCCI Constituent Index Level published on any relevant Scheduled Index Valuation Day and publish such corrected JPMCCI Constituent Index Level as soon as it is reasonably practicable. (Section F.7 and F.8 of the Index Rules)

#### *Historical Limitations*

There are limitations in the methodology used to calculate historical index levels of the JPMCCI Constituent Indices prior to the launch of JPMCCI. The Index Calculation Agent has exercised its discretion in varying the methodology of calculating such historical Index Levels for various reasons including data availability. For example, for years prior to 2003, the Aggregate Commodity Units were set to those of year 2003 because open interest data were not obtainable from the Futures Industries Association for many commodity contracts prior to 1999, making the first reliable Observation Period from November 1999 to October 2002. (Section L of the Index Rules)

#### *Data Unavailability with regard to HMCOIP*

In determining levels of JPMCCI prior to its actual launch in November 2007, in any year during which any HMCOIP could not be calculated due to missing MCOIP data, all the HMCOIPs of that year were set to the HMCOIPs of the following year for which complete MCOIP data were available. For example, if reliable open interest data were not available prior to 1997 (inclusive), then all the HMCOIPs for 1998 to 2000, all of which rely on MCOIPs of 1997, would have been set to the HMCOIPs of 2001, assuming that MCOIPs for 1998, 1999 and 2000 were intact. (Section L of the Index Rules)

#### *The Index Calculation Agent and the Rules*

The methodology employed in determining the composition and calculation of JPMCCI is set out in the calculations and procedures described in the Index Rules. JPMSC currently acts as Index Calculation Agent with respect to JPMCCI but may be replaced by a substitute index calculation agent at some future date (who, in the event of such replacement, shall be regarded for all purposes of JPMCCI as the Index Calculation Agent). For the avoidance of doubt, the substitution of any Index Calculation Agent will not be deemed to terminate JPMCCI or any instrument referencing JPMCCI. (Section A.4 of the Index Rules)

JPMSC may from time to time revise, amend and/or supplement the Index Rules and in such event will publish the amended JPMCCI rules no later than one calendar month following such revision, amendment or supplement. (Section A.4 of the Index Rules)

### *The JPMCCI Supervisory Committee*

In order to maintain objectivity in the administration and execution of JPMCCI, JPMSL has, pursuant to the rules described below, formed the "JPMCCI Supervisory Committee." The Index Calculation Agent will from time to time (and in any event within one month of any change in the composition of its membership) publish the names, titles and company affiliation of the individuals forming the JPMCCI Supervisory Committee. (Section A.3 of the Index Rules)

The JPMCCI Supervisory Committee will meet annually in November to review and approve the composition of JPMCCI for the following calendar year and any proposed modifications to the methodology of determining the composition and calculation of JPMCCI. (Section A.3 of the Index Rules)

The JPMCCI Supervisory Committee is composed of at most seven voting members and at least one voting member, at most seven non-voting members and at least one non-voting member, each of whom is appointed by JPMSL. Each voting member serving on the JPMCCI Supervisory Committee shall be independent. For the purposes of determining whether a particular member of the JPMCCI Supervisory Committee is independent, "independent" means that the individual in question is not an employee, director, officer, agent or affiliate of JPMorgan Chase & Co. or any of its affiliates and does not have a personal direct financial interest in JPMCCI or any financial product linked to JPMCCI while serving as a voting member of the JPMCCI Supervisory Committee. All voting members of the JPMCCI Supervisory Committee are sufficiently knowledgeable about commodity futures contracts and the commodities markets in general, as determined by JPMSL in a good faith and commercially reasonable manner. JPMSL may from time to time add or remove voting members of the JPMCCI Supervisory Committee; *provided* that such addition or removal does not coincide with a meeting of the committee or is a result of a particular vote of a specific committee member.

Additionally, upon the occurrence of a Disrupted Day, or any other extraordinary or unanticipated market events, the Index Calculation Agent may seek the advice of the JPMCCI Supervisory Committee on the necessary adjustments, methodological amendments or data corrections that may need to be implemented to JPMCCI.

Notwithstanding anything to the contrary set forth herein, if all of the voting members of the JPMCCI Supervisory Committee have resigned or are unavailable at the time and date of any meeting duly called by the Index Calculation Agent, the non-voting member(s) who are not directly involved in the marketing, sale or hedging of any JPMCCI product may make any and all determinations on behalf of the JPMCCI Supervisory Committee and such decisions will have the same force and effect as decisions made by the voting members of the JPMCCI Supervisory Committee.

In the event that JPMSL ceases to act as Index Calculation Agent, the composition and role of the JPMCCI Supervisory Committee may be reviewed and amended by JPMSL. (Section A.3 of the Index Rules)

### **Discontinuation of the JPMCCI; Alteration of Method of Calculation**

If JPMSL discontinues publication of any relevant Basket Index and JPMSL or another entity publishes a successor or substitute index that the calculation agent determines, in its sole discretion, to be comparable to the discontinued Basket Index (such index being referred to herein as a "successor index"), then the closing level of such Basket Index on any relevant Initial Averaging Date, if applicable, Basket Valuation Date or any other relevant date on which the closing level of the Basket Index is to be determined will be determined by reference to the level of such successor index at the close of trading on the relevant exchange for the successor index on such day.

Upon any selection by the calculation agent of a successor index, the calculation agent will cause written notice thereof to be promptly furnished to the trustee, to us and to the holders of the notes.

If JPMSL discontinues publication of any relevant Basket Index prior to, and such discontinuation is continuing on, an Initial Averaging Date, if applicable, a Basket Valuation Date or any other relevant date on which the closing level of such Basket Index is to be determined and the calculation agent determines, in its sole discretion, that no successor index is available at such time, or the calculation agent has previously selected a successor index and publication of such successor index is discontinued prior to, and such discontinuation is continuing on, such Initial Averaging Date, if applicable, Basket Valuation Date, or such other relevant date, then the calculation agent will determine the closing level of such Basket Index for such date. The closing level of such Basket Index will be computed by the calculation agent in accordance with the formula for and method of calculating such Basket Index or successor index, as applicable, last in effect prior to such discontinuation, using the closing price (or, if trading in the relevant securities has been materially suspended or materially limited, the calculation agent's good faith estimate of the closing price that would have prevailed but for such suspension or limitation) at the close of the principal trading session on such date of each security most recently composing such Basket Index or successor index, as applicable. Notwithstanding these alternative arrangements, discontinuation of the publication of a relevant Basket Index or successor index, as applicable, may adversely affect the value of the notes.

If at any time the method of calculating any relevant Basket Index or a successor index, or the level thereof, is changed in a material respect, or if such Basket Index or a successor index is in any other way modified so that such Basket Index or such successor index does not, in the opinion of the calculation agent, fairly represent the level of such Basket Index or successor index had such changes or modifications not been made, then the calculation agent will, at the close of business in New York City on each date on which the closing level of such Basket Index is to be determined, make such calculations and adjustments as, in the good faith judgment of the calculation agent, may be necessary in order to arrive at a level of an index comparable to such Basket Index or such successor index, as the case may be, as if such changes or modifications had not been made, and the calculation agent will calculate the closing level of such Basket Index with reference to such Basket Index or such successor index, as adjusted. Accordingly, if the method of calculating any relevant Basket Index or a successor index is modified so that the level of such Basket Index or such successor index is a fraction of what it would have been if there had been no such modification, then the calculation agent will adjust its calculation of such Basket Index or such successor index in order to arrive at a level of such Basket Index or such successor index as if there had been no such modification.

## GENERAL TERMS OF NOTES

### Calculation Agent and Index Calculation Agent

Your payment on the notes will effectively be determined by calculations undertaken by two entities, each of which is a subsidiary of ours. J.P. Morgan Securities Inc., or JPMSI, which is referred to in this product supplement as the “calculation agent” will act as the calculation agent for the notes and in this capacity will make all determinations with respect to our payment obligations under the notes. J.P. Morgan Securities Ltd. serves as Index Calculation Agent, and in this capacity will make determinations with respect to the composition and level of JPMCCI. For more information on the Index Calculation Agent see “The JPMorgan Commodity Curve Index — The Index Calculation Agent and the Rules” in this product supplement.

The calculation agent will determine, among other things, the Starting Basket Level, the Strike Level, if applicable, the Basket Closing Level on each Initial Averaging Date, if applicable, and each Basket Valuation Date, the Ending Basket Level, the Basket Return, whether there has been a market disruption event or a discontinuance of any of the Basket Indices, the amount payable to you in the event of an early acceleration and the payment at maturity, if any, on the notes. In addition, the calculation agent will determine whether there has been a market disruption event or a discontinuation of any Basket Index, whether there has been a material change in the method of calculating the Underlying. All determinations made by the calculation agent will be at the sole discretion of the calculation agent and will, in the absence of manifest error, be conclusive for all purposes and binding on you and on us. We may appoint a different calculation agent from time to time after the date of this product supplement without your consent and without notifying you.

The calculation agent will provide written notice to the trustee at its New York office, on which notice the trustee may conclusively rely, of the amount to be paid at maturity on or prior to 11:00 a.m., New York City time, on the business day preceding the maturity date.

All calculations with respect to the Starting Basket Level, the Ending Basket Level, the Basket Return or any Basket Closing Level will be rounded to the nearest one hundred-thousandth, with five one-millionths rounded upward (*e.g.*, .876545 would be rounded to .87655); all dollar amounts related to determination of the payment per \$1,000 principal amount note at maturity, if any, per \$1,000 principal amount note will be rounded to the nearest ten-thousandth, with five one hundred-thousandths rounded upward (*e.g.*, .76545 would be rounded up to .7655); and all dollar amounts paid on the aggregate principal amount of notes per holder will be rounded to the nearest cent, with one-half cent rounded upward.

### Market Disruption Events

Certain events may prevent the Index Calculation Agent from calculating the Basket Closing Level on any Initial Averaging Date, if applicable, or Basket Valuation Date. The failure may, in turn, prevent the calculation agent from determining the amount, if any, that we will pay you at maturity. These events may include failure of the Index Calculation Agent to publish the level of any Basket Index, as well as disruptions or suspensions of trading in the markets for derivative products linked to the indices included in the Basket as of such Basket Valuation Date, trading in the markets for commodity futures contracts underlying any Basket Index, or trading in the commodity markets as a whole. In addition, certain events may prevent us or our affiliates from hedging our obligations under the notes including, but not limited to, changes in laws or regulations applicable to the commodity futures contracts underlying the Basket Indices. In the case of such an event we have the right, but not the obligation, to accelerate the payment on the notes as described below under “—Consequences of a Commodity Hedging Disruption Event.” We refer to each of the events described in the following paragraph individually as a “market disruption event.”



With respect to each Basket Index and any relevant successor index, a "market disruption event," unless otherwise specified in the relevant terms supplement, means:

- the termination or suspension of, or material limitation or disruption in the trading of any exchange-traded commodity futures contract (including, but not limited to, the occurrence or announcement of a Limit Day with respect to an applicable exchange-traded commodity futures contract) then underlying any Basket Index (or the relevant successor index); or
- the settlement or quoted price of any exchange-traded commodity futures contract underlying such Basket Index (or the relevant successor index) has increased or decreased by an amount equal to the maximum permitted price change from the previous day's settlement price; or
- the failure of the JPMCCI Index Calculation Agent to calculate and publish the U.S. dollar level for such Basket Index (or the relevant successor index); or
- the settlement price is not published for any individual reference contract underlying such Basket Index (or the relevant successor index); or
- the failure of the Index Calculation Agent to calculate and publish the value of any Basket Index (or any relevant successor index)

in each case as determined by the calculation agent in its sole discretion; and

- a determination by the calculation agent in its sole discretion that the event described above materially interfered with our ability or the ability of any of our affiliates to adjust or unwind all or a material portion of any hedge with respect to the notes.

A limitation on the hours or number of days of trading will not constitute a market disruption event if the limitation results from an announced change in the regular business hours of the relevant exchange or market.

In addition, "market disruption event" means, which in each case is also a "commodity hedging disruption event," that:

(a) due to (i) the adoption of, or any change in, any applicable law, regulation or rule or (ii) the promulgation of, or any change in, the interpretation by any court, tribunal or regulatory authority with competent jurisdiction of any applicable law, rule, regulation or order (including, without limitation, as implemented by the CFTC or any exchange or trading facility), in each case occurring on or after the pricing date, the calculation agent determines in good faith that it is contrary to such law, rule, regulation or order to purchase, sell, enter into, maintain, hold, acquire or dispose of our or our affiliates' (A) positions or contracts in securities, options, futures, derivatives or foreign exchange or (B) other instruments or arrangements, in each case, in order to hedge individually or in the aggregate on a portfolio basis our obligations under the notes ("hedge positions"), including, without limitation, if such hedge positions are (or, but for the consequent disposal thereof, would otherwise be) in excess of any allowable position limit(s) in relation to any commodity traded on any exchange(s) or other trading facility (it being within the sole and absolute discretion of the calculation agent to determine which of the hedge positions are counted towards such limit); or

(b) for any reason, we or our affiliates are unable, after using commercially reasonable efforts, to (i) acquire, establish, re-establish, substitute, maintain, unwind or dispose of any transaction(s) or asset(s) the calculation agent deems necessary to hedge the risk of entering into and performing our commodity-related obligations with respect to the notes, or (ii) realize, recover or remit the proceeds of any such transaction(s) or asset(s).

Please see the risk factor entitled "The commodity futures contracts underlying the Basket Indices are subject to legal and regulatory regimes that may change in ways that could affect our ability to hedge our obligations under the notes, could result in a modification of the Rules and/or could lead to the early acceleration of your notes" on page PS-55 for more information.

## **Consequences of a Commodity Hedging Disruption Event**

If a commodity hedging disruption event occurs, we will have the right, but not the obligation, to accelerate the payment on the notes by providing, or causing the calculation agent to provide, written notice of our election to exercise such right to the trustee at its New York office, on which notice the trustee may conclusively rely, as promptly as possible and in no event later than the business day immediately following the day on which such commodity hedging disruption event occurred. The amount due and payable per \$1,000 principal amount note upon such early acceleration will be determined on the date on which we deliver notice of such acceleration by the calculation agent in good faith in a commercially reasonable manner and will be payable on the fifth business day following the day on which the commodity hedging disruption event occurred. We will provide, or will cause the calculation agent to provide, written notice to the trustee at its New York office, on which notice the trustee may conclusively rely, and to DTC of the cash amount due with respect to the notes as promptly as possible and in no event later than two business days prior to the date on which such payment is due. For the avoidance of doubt, the determination set forth above is only applicable to the amount due with respect to acceleration as a result of a commodity hedging disruption event.

## **Events of Default**

Under the heading “Description of Debt Securities — Events of Default, Waiver, Debt Securities in Foreign Currencies” in the accompanying prospectus is a description of events of default relating to debt securities including the notes.

## **Payment upon an Event of Default**

Unless otherwise specified in the relevant terms supplement, in case an event of default with respect to the notes shall have occurred and be continuing, the amount declared due and payable per \$1,000 principal amount note upon any acceleration of the notes will be determined by the calculation agent and will be an amount in cash equal to the amount payable at maturity per \$1,000 principal amount note as described under the caption “Description of Notes — Payment at Maturity,” calculated as if the date of acceleration were the final Basket Valuation Date. If the notes have more than one Basket Valuation Date, then, for each Basket Valuation Date scheduled to occur after the date of acceleration, the trading days immediately preceding the date of acceleration (in such number equal to the number of Basket Valuation Dates in excess of one) will be the corresponding Basket Valuation Dates, unless otherwise specified in the relevant terms supplement. For the avoidance of doubt, the determination set forth above is only applicable to the amount due with respect to acceleration as a result of an event of default.

If the maturity of the notes is accelerated because of an event of default as described above, we will, or will cause the calculation agent to, provide written notice to the trustee at its New York office, on which notice the trustee may conclusively rely, and to DTC of the cash amount due with respect to the notes as promptly as possible and in no event later than two business days after the date of acceleration.

## **Modification**

Under the heading “Description of Debt Securities — Modification of the Indenture; Waiver of Compliance” in the accompanying prospectus is a description of when the consent of each affected holder of debt securities is required to modify the indenture.

## **Defeasance**

The provisions described in the accompanying prospectus under the heading “Description of Debt Securities — Discharge, Defeasance and Covenant Defeasance” are not applicable to the notes, unless otherwise specified in the relevant terms supplement.

**Listing**

The notes will not be listed on any securities exchange, unless otherwise specified in the relevant terms supplement.

**Book-Entry Only Issuance — The Depository Trust Company**

DTC will act as securities depository for the notes. The notes will be issued only as fully-registered securities registered in the name of Cede & Co. (DTC's nominee). One or more fully-registered global notes certificates, representing the total aggregate principal amount of the notes, will be issued and will be deposited with DTC. See the descriptions contained in the accompanying prospectus supplement under the headings "Description of Notes — Forms of Notes" and "The Depository."

**Registrar, Transfer Agent and Paying Agent**

Payment of amounts due at maturity on the notes will be payable and the transfer of the notes will be registrable at the principal corporate trust office of The Bank of New York in The City of New York.

The Bank of New York or one of its affiliates will act as registrar and transfer agent for the notes. The Bank of New York will also act as paying agent and may designate additional paying agents.

Registration of transfers of the notes will be effected without charge by or on behalf of The Bank of New York, but upon payment (with the giving of such indemnity as The Bank of New York may require) in respect of any tax or other governmental charges that may be imposed in relation to it.

**Governing Law**

The notes will be governed by and interpreted in accordance with the laws of the State of New York.

## CERTAIN U.S. FEDERAL INCOME TAX CONSEQUENCES

The following is a summary of the material U.S. federal income tax consequences of the purchase, ownership and disposition of the notes. This summary applies to you only if you are an initial holder of the notes purchasing the notes at the issue price for cash and if you will hold them as capital assets within the meaning of Section 1221 of the Internal Revenue Code of 1986, as amended (the "Code").

This summary does not address all aspects of U.S. federal income and estate taxation of the notes that may be relevant to you in light of your particular circumstances, nor does it address all of your tax consequences if you are a holder of notes who is subject to special treatment under the U.S. federal income tax laws, such as:

- one of certain financial institutions;
- a tax-exempt entity, including an "individual retirement account" or "Roth IRA" as defined in Code Section 408 or 408A, respectively;
- a dealer in securities;
- a "regulated investment company" as defined in Code Section 851;
- a "real estate investment trust" as defined in Code Section 856;
- a person holding the notes as part of a hedging transaction, straddle, conversion transaction or integrated transaction, or entering into a "constructive sale" with respect to the notes;
- a U.S. Holder (as defined below) whose functional currency is not the U.S. dollar;
- a trader in securities who elects to apply a mark-to-market method of tax accounting; or
- a partnership or other entity classified as a partnership for U.S. federal income tax purposes.

This summary is based on the Code, administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations as of the date of this product supplement, changes to any of which, subsequent to the date of this product supplement, may affect the tax consequences described herein. **You should consult your tax adviser concerning the application of U.S. federal income and estate tax laws to your particular situation (including the possibility of alternative characterizations of the notes), as well as any tax consequences arising under the laws of any state, local or foreign jurisdictions.**

### Tax Treatment of the Notes

The tax consequences of an investment in the notes are unclear. There is no direct legal authority as to the proper U.S. federal income tax characterization of the notes, and we do not intend to request a ruling from the IRS regarding the notes.

We intend to seek an opinion from Davis Polk & Wardwell, our special tax counsel, which will be based upon the terms of the notes at the time of the relevant offering and certain factual representations to be received from us, regarding the treatment of the notes as "open transactions" for U.S. federal income tax purposes. Whether Davis Polk & Wardwell expresses an opinion regarding the characterization of the notes will be indicated in the relevant terms supplement. In either case, we and you will agree to treat the notes for U.S. federal income tax purposes as "open transactions." While other characterizations of the notes could be asserted by the IRS, as discussed below, the following discussion assumes that the notes are treated for U.S. federal income tax purposes as "open transactions" with respect to the Basket Indices and not as debt instruments, unless otherwise indicated.

## **Tax Consequences to U.S. Holders**

You are a "U.S. Holder" if you are a beneficial owner of notes for U.S. federal income tax purposes that is:

- a citizen or resident of the United States;
- a corporation, or other entity taxable as a corporation, created or organized in or under the laws of the United States or any political subdivision thereof; or
- an estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

### ***Tax Treatment of the Notes***

*Tax Treatment Prior to Maturity.* You should not recognize taxable income or loss over the term of the notes prior to maturity, other than pursuant to a sale, exchange, redemption or "deemed exchange" as described below.

*Sale, Exchange or Redemption of the Notes.* Upon a sale or exchange of a note (including redemption of the notes at maturity), you should recognize capital gain or loss equal to the difference between the amount realized on the sale, exchange or redemption and your tax basis in the note, which should equal the amount you paid to acquire the note. This gain or loss should be long-term capital gain or loss if you have held the note for more than one year at that time. The deductibility of capital losses, however, is subject to limitations.

The IRS could assert that a "deemed" taxable exchange has occurred on one or more Rebalancing Dates under certain unexpected circumstances. If the IRS were successful in asserting that a taxable exchange has occurred, you could be required to recognize gain (but probably not loss), which would equal the amount by which the fair market value of the note exceeds your tax basis therein. Any deemed exchange gain should be capital gain. You should consult your tax adviser regarding the possible U.S. federal income tax consequences of rebalancings.

### ***Possible Alternative Tax Treatments of an Investment in the Notes***

Due to the absence of authorities that directly address the proper characterization of the notes and because we are not requesting a ruling from the IRS with respect to the notes, no assurance can be given that the IRS will accept, or that a court will uphold, the characterization and tax treatment of the notes described above. If the IRS were successful in asserting an alternative characterization or treatment of the notes, the timing and character of income on the notes could differ materially and adversely from our description herein. For example, the IRS might treat the notes as debt instruments issued by us, in which event the taxation of the notes would be governed by certain Treasury regulations relating to the taxation of "contingent payment debt instruments" if the term of the notes from issue to maturity (including the last possible date that the notes could be outstanding) is more than one year. In this event, regardless of whether you are an accrual-method or cash-method taxpayer, you would be required to accrue into income original issue discount, or "OID," on the notes at our "comparable yield" for similar noncontingent debt, determined at the time of the issuance of the notes, in each year that you hold the notes (even though you will not receive any cash with respect to the notes during their term) and any gain recognized upon a sale or exchange of the notes (including redemption of the notes at maturity) would generally be treated as ordinary income. Additionally, if you were to recognize a loss above certain thresholds, you could be required to file a disclosure statement with the IRS.

Other alternative U.S. federal income tax characterizations of the notes might also require that you treat your receipt of the Additional Amount at maturity or some portion thereof upon any sale or "deemed" disposition as ordinary income (and calculate capital gain or loss accordingly), might require you to include amounts in income during the term of the notes and/or might treat all or a portion of the gain or loss on the sale or settlement of the notes as ordinary income or loss or as short-term capital gain or loss, without regard to how long you held the notes. In addition, on December 7, 2007,

Treasury and the IRS released a notice requesting comments on the U.S. federal income tax treatment of “prepaid forward contracts” and similar instruments, which might include the notes. The notice focuses in particular on whether to require holders of these instruments to accrue income over the term of their investment. It also asks for comments on a number of related topics, including the character of income or loss with respect to these instruments; the relevance of factors such as the nature of the underlying property to which the instruments are linked; and whether these instruments are or should be subject to the “constructive ownership” regime, which very generally can operate to recharacterize certain long-term capital gain as ordinary income that is subject to an interest charge. While the notice requests comments on appropriate transition rules and effective dates, any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the notes, possibly with retroactive effect. Accordingly, you should consult your tax adviser regarding the U.S. federal income tax consequences of an investment in the notes, including possible alternative treatments and the issues presented by this notice.

### **Tax Consequences to Non-U.S. Holders**

You are a “Non-U.S. Holder” for purposes of this discussion if you are a beneficial owner of notes for U.S. federal income tax purposes that is:

- a nonresident alien individual;
- a foreign corporation; or
- a foreign estate or trust.

You are not a Non-U.S. Holder if you are an individual present in the United States for 183 days or more in the taxable year of disposition. In this case, you should consult your tax adviser regarding the U.S. federal income tax consequences of the sale, exchange or other disposition of a note (including redemption of the notes at maturity).

If you are a Non-U.S. Holder of the notes and if the characterization of the notes as open transactions is respected, any payments on the notes should not be subject to U.S. federal income or withholding tax, except that gain from the sale or exchange of a note (including redemption of a note at maturity) will be subject to U.S. federal income tax if this gain is effectively connected with your conduct of a U.S. trade or business. However, among the issues addressed in the notice described above in “Certain U.S. Federal Income Tax Consequences — Tax Consequences to U.S. Holders — Possible Alternative Tax Treatments of an Investment in the Notes” is the degree, if any, to which income with respect to instruments such as the notes should be subject to U.S. withholding tax. It is possible that any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the withholding tax consequences of an investment in the notes, possibly with retroactive effect.

If the notes were recharacterized as indebtedness, any payments or accruals on the notes nonetheless would not be subject to U.S. withholding tax, provided generally that the certification requirement described below has been fulfilled and none of the payments on the notes and any gain realized on a sale, exchange or other disposition of notes (including redemption of the notes at maturity) is effectively connected with your conduct of a U.S. trade or business. Because the characterization of the notes is unclear, payments made to you with respect to the notes may be withheld upon at a rate of 30% unless you certify on IRS Form W-8BEN, under penalties of perjury, that you are not a United States person and provide your name and address or otherwise satisfy applicable documentation requirements.

If you are engaged in a U.S. trade or business, and if payments on the notes are effectively connected with your conduct of that trade or business, although exempt from the withholding tax discussed above, you will generally be taxed in the same manner as a U.S. Holder, except that you will be required to provide a properly executed IRS Form W-8ECI in order to claim an exemption from withholding. If this paragraph applies to you, you should consult your tax adviser with respect to other U.S. tax consequences of the ownership and disposition of the notes, including the possible imposition of a 30% branch profits tax if you are a corporation.

### ***Federal Estate Tax***

Individual Non-U.S. Holders, and entities the property of which is potentially includible in those individuals' gross estates for U.S. federal estate tax purposes (for example, a trust funded by such an individual and with respect to which the individual has retained certain interests or powers), should note that, absent an applicable treaty benefit, a note is likely to be treated as U.S. situs property, subject to U.S. federal estate tax. These individuals and entities should consult their tax advisers regarding the U.S. federal estate tax consequences of investing in a note.

### **Backup Withholding and Information Reporting**

You may be subject to information reporting, and may also be subject to backup withholding at the rates specified in the Code on the amounts paid to you, unless you provide proof of an applicable exemption or a correct taxpayer identification number and otherwise comply with applicable requirements of the backup withholding rules. If you are a Non-U.S. Holder, you will not be subject to backup withholding if you comply with the certification procedures described in the preceding section. Amounts withheld under the backup withholding rules are not additional taxes and may be refunded or credited against your U.S. federal income tax liability, provided the required information is furnished to the IRS.

THE TAX CONSEQUENCES TO YOU OF PURCHASING, OWNING AND DISPOSING OF THE NOTES ARE UNCLEAR. YOU SHOULD CONSULT YOUR TAX ADVISER REGARDING THE TAX CONSEQUENCES OF PURCHASING, OWNING AND DISPOSING OF THE NOTES, INCLUDING THE TAX CONSEQUENCES UNDER STATE, LOCAL, FOREIGN AND OTHER TAX LAWS AND THE POSSIBLE EFFECTS OF CHANGES IN U.S. FEDERAL OR OTHER TAX LAWS.

## UNDERWRITING

Under the terms and subject to the conditions contained in the Master Agency Agreement entered into between JPMorgan Chase & Co. and J.P. Morgan Securities Inc. as agent (an "Agent" or "JPMSI"), and certain other agents that may be party to the Master Agency Agreement, as amended or supplemented, from time to time (each an "Agent" and collectively with JPMSI, the "Agents"), each Agent participating in an offering of notes, acting as principal for its own account, has agreed to purchase, and we have agreed to sell, the principal amount of notes set forth on the cover page of the relevant terms supplement. Each such Agent proposes initially to offer the notes directly to the public at the public offering price set forth on the cover page of the relevant terms supplement. JPMSI will allow a concession to other dealers, or we may pay other fees, in the amount set forth on the cover page of the relevant terms supplement. After the initial offering of the notes, the Agents may vary the offering price and other selling terms from time to time.

We own, directly or indirectly, all of the outstanding equity securities of JPMSI. The underwriting arrangements for this offering comply with the requirements of NASD Rule 2720 regarding a FINRA member firm's underwriting of securities of an affiliate. In accordance with NASD Rule 2720, no underwriter may make sales in this offering to any discretionary account without the prior written approval of the customer.

JPMSI or another Agent may act as principal or agent in connection with offers and sales of the notes in the secondary market. Secondary market offers and sales will be made at prices related to market prices at the time of such offer or sale; accordingly, the Agents or a dealer may change the public offering price, concession and discount after the offering has been completed.

In order to facilitate the offering of the notes, JPMSI may engage in transactions that stabilize, maintain or otherwise affect the price of the notes. Specifically, JPMSI may sell more notes than it is obligated to purchase in connection with the offering, creating a naked short position in the notes for its own account. JPMSI must close out any naked short position by purchasing the notes in the open market. A naked short position is more likely to be created if JPMSI is concerned that there may be downward pressure on the price of the notes in the open market after pricing that could adversely affect investors who purchase in the offering. As an additional means of facilitating the offering, JPMSI may bid for, and purchase, notes in the open market to stabilize the price of the notes. Any of these activities may raise or maintain the market price of the notes above independent market levels or prevent or retard a decline in the market price of the notes. JPMSI is not required to engage in these activities, and may end any of these activities at any time.

No action has been or will be taken by us, JPMSI or any dealer that would permit a public offering of the notes or possession or distribution of this product supplement no. 154-I or the accompanying prospectus supplement, prospectus or terms supplement, other than in the United States, where action for that purpose is required. No offers, sales or deliveries of the notes, or distribution of this product supplement no. 154-I or the accompanying prospectus supplement, prospectus or terms supplement or any other offering material relating to the notes, may be made in or from any jurisdiction except in circumstances which will result in compliance with any applicable laws and regulations and will not impose any obligations on us, the Agents or any dealer.

Each Agent has represented and agreed, and each dealer through which we may offer the notes has represented and agreed, that it (i) will comply with all applicable laws and regulations in force in each non-U.S. jurisdiction in which it purchases, offers, sells or delivers the notes or possesses or distributes this product supplement no. 154-I and the accompanying prospectus supplement, prospectus and terms supplement and (ii) will obtain any consent, approval or permission required by it for the purchase, offer or sale by it of the notes under the laws and regulations in force in each non-U.S. jurisdiction to which it is subject or in which it makes purchases, offers or sales of the notes. We shall not have responsibility for any Agent's or any dealer's compliance with the applicable laws and regulations or obtaining any required consent, approval or permission. For additional information regarding selling restrictions, please see "Notice to Investors" in this product supplement.

Unless otherwise specified in the relevant terms supplement, the settlement date for the notes will be the third business day following the pricing date (which is referred to as a "T+3" settlement cycle).



## NOTICE TO INVESTORS

We are offering to sell, and are seeking offers to buy, the notes only in jurisdictions where offers and sales are permitted. Neither this product supplement no. 154-I nor the accompanying prospectus supplement, prospectus or terms supplement constitutes an offer to sell, or a solicitation of an offer to buy, any notes by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation. Neither the delivery of this product supplement no. 154-I nor the accompanying prospectus supplement, prospectus or terms supplement nor any sale made hereunder implies that there has been no change in our affairs or that the information in this product supplement no. 154-I and accompanying prospectus supplement, prospectus and terms supplement is correct as of any date after the date hereof.

You must (i) comply with all applicable laws and regulations in force in any jurisdiction in connection with the possession or distribution of this product supplement no. 154-I and the accompanying prospectus supplement, prospectus and terms supplement and the purchase, offer or sale of the notes and (ii) obtain any consent, approval or permission required to be obtained by you for the purchase, offer or sale by you of the notes under the laws and regulations applicable to you in force in any jurisdiction to which you are subject or in which you make such purchases, offers or sales; neither we nor the agents shall have any responsibility therefor.

### Argentina

The notes have not been and will not be authorized by the *Comisión Nacional de Valores* (the "CNV") for public offer in Argentina and therefore may not be offered or sold to the public at large or to sectors or specific groups thereof by any means, including but not limited to personal offerings, written materials, advertisements, the internet or the media, in circumstances which constitute a public offering of securities under Argentine Law No. 17,811, as amended (the "Argentine Public Offering Law").

The Argentine Public Offering Law does not expressly recognize the concept of private placement. Notwithstanding the foregoing, pursuant to the general rules on public offering and the few existing judicial and administrative precedents, the following private placement rules have been outlined:

- (i) target investors should be qualified or sophisticated investors, capable of understanding the risk of the proposed investment.
- (ii) investors should be contacted on an individual, direct and confidential basis, without using any type of massive means of communication.
- (iii) the number of contacted investors should be relatively small.
- (iv) investors should receive complete and precise information on the proposed investment.
- (v) any material, brochures, documents, etc, regarding the investment should be delivered in a personal and confidential manner, identifying the name of the recipient.
- (vi) the documents or information mentioned in item (v) should contain a legend or statement expressly stating that the offer is a private offer not subject to the approval or supervision of the CNV, or any other regulator in Argentina.
- (vii) the aforementioned documents or materials should also contain a statement prohibiting the re-sale or re-placement of the relevant securities within the Argentine territory or their sale through any type of transaction that may constitute a public offering of securities pursuant to Argentine law.

## **The Bahamas**

The notes have not been and shall not be offered or sold in or into The Bahamas except in circumstances that do not constitute a 'public offering' according to the Securities Industry Act, 1999.

The offer of the notes, directly or indirectly, in or from within The Bahamas may only be made by an entity or person who is licensed as a Broker Dealer by the Securities Commission of The Bahamas.

Persons deemed "resident" in The Bahamas pursuant to the Exchange Control Regulations, 1956 must receive the prior approval of the Central Bank of The Bahamas prior to accepting an offer to purchase any notes.

## **Bermuda**

This product supplement no. 154-I and the accompanying prospectus supplement, prospectus and terms supplement have not been registered or filed with any regulatory authority in Bermuda. The offering of the notes pursuant to this product supplement no.154-I and the accompanying prospectus supplement, prospectus and any terms supplement to persons resident in Bermuda is not prohibited, *provided* we are not thereby carrying on business in Bermuda.

## **Brazil**

The notes have not been and will not be registered with the "*Comissão de Valores Mobiliários*" – the Brazilian Securities and Exchange Commission ("CVM") and accordingly, the notes may not and will not be sold, promised to be sold, offered, solicited, advertised and/or marketed within the Federal Republic of Brazil, except in circumstances that cannot be construed as a public offering or unauthorized distribution of securities under Brazilian laws and regulations. The notes are not being offered into Brazil. Documents relating to an offering of the notes, as well as the information contained herein and therein, may not be supplied or distributed to the public in Brazil nor be used in connection with any offer for subscription or sale of the notes to the public in Brazil.

## **British Virgin Islands**

The notes may not be offered in the British Virgin Islands unless we or the person offering the notes on our behalf is licensed to carry on business in the British Virgin Islands. We are not licensed to carry on business in the British Virgin Islands. The notes may be offered to British Virgin Islands "business companies" (from outside the British Virgin Islands) without restriction. A British Virgin Islands "business company" is a company formed under or otherwise governed by the BVI Business Companies Act, 2004 (British Virgin Islands).

## **Cayman Islands**

This product supplement no. 154-I and the accompanying prospectus supplement, prospectus and terms supplement, and the notes offered hereby and thereby have not been, and will not be, registered under the laws and regulations of the Cayman Islands, nor has any regulatory authority in the Cayman Islands passed comment upon or approved the accuracy or adequacy of this product supplement no. 154-I and the accompanying prospectus supplement, prospectus and terms supplement. The notes have not been, and will not be, offered or sold, directly or indirectly, in the Cayman Islands.

## Chile

None of the Agents, we or the notes have been registered with the *Superintendencia de Valores y Seguros de Chile* (Chilean Securities and Insurance Commission) pursuant to *Ley No. 18,045 de Mercado de Valores* (the "Chilean Securities Act"), as amended, of the Republic of Chile and, accordingly, the notes have not been and will not be offered or sold within Chile or to, or for the account or benefit of persons in Chile except in circumstances which have not resulted and will not result in a public offering and/or securities intermediation in Chile within the meaning of the Chilean Securities Act.

None of the Agents is a bank or a licensed broker in Chile, and therefore each Agent has not and will not conduct transactions or any business operations in any of such qualities, including the marketing, offer and sale of the notes, except in circumstances which have not resulted and will not result in a "public offering" as such term is defined in Article 4 of the Chilean Securities Act, and/or have not resulted and will not result in the intermediation of securities in Chile within the meaning of Article 24 of the Chilean Securities Act and/or the breach of the brokerage restrictions set forth in Article 39 of Decree with Force of Law No. 3 of 1997.

The notes will only be sold to specific buyers, each of which will be deemed upon purchase:

- (i) to be a financial institution and/or an institutional investor or a qualified investor with such knowledge and experience in financial and business matters as to be capable of evaluating the risks and merits of an investment in the notes;
- (ii) to agree that it will only resell the notes in the Republic of Chile in compliance with all applicable laws and regulations; and that it will deliver to each person to whom the notes are transferred a notice substantially to the effect of this selling restriction;
- (iii) to acknowledge receipt of sufficient information required to make an informed decision whether or not to invest in the notes; and
- (iv) to acknowledge that it has not relied upon advice from any Agent and/or us, or its or our respective affiliates, regarding the determination of the convenience or suitability of notes as an investment for the buyer or any other person; and has taken and relied upon independent legal, regulatory, tax and accounting advice.

## Colombia

The notes have not been and will not be registered in the National Securities Registry of Colombia (*Registro Nacional de Valores y Emisores*) kept by the Colombian Financial Superintendency (*Superintendencia Financiera de Colombia*) or in the Colombian Stock Exchange (*Bolsa de Valores de Colombia*).

Therefore, the notes shall not be marketed, offered, sold or distributed in Colombia or to Colombian residents in any manner that would be characterized as a public offering, as such is defined in article 1.2.1.1 of Resolution 400, issued on May 22, 1995 by the Securities Superintendency General Commission (*Sala General de la Superintendencia de Valores*), as amended from time to time.

If the notes are to be marketed within Colombian territory or to Colombian residents, regardless of the number of persons to which said marketing is addressed to, any such promotion or advertisement of the notes must be made through a local financial entity, a representative's office, or a local correspondent, in accordance with Decree 2558, issued on June 6, 2007 by the Ministry of Finance and Public Credit of Colombia, as amended from time to time.

Therefore, the notes should not be marketed within Colombian territory or to Colombian residents, by any given means, that may be considered as being addressed to an indeterminate number of persons or to more than ninety-nine (99) persons, including but not limited to: (i) any written material or other means of communication, such as subscription lists, bulletins, pamphlets or advertisements; (ii) any offer or sale of the notes at offices or branches open to the public; (iii) use of any oral or written advertisements, letters, announcements, notices or any other means of communication that may be perceived to be addressed to an indeterminate number of persons for the purpose of marketing and/or offering the notes; or (iv) use (a) non-solicited emails or (b) email distributions lists to market the notes.

## El Salvador

The notes may not be offered to the general public in El Salvador, and according to Article 2 of the *Ley de Mercado de Valores* (Securities Market Law) of the Republic of El Salvador, Legislative Decree number 809 dated 16 February 1994, published on the *Diario Oficial* (Official Gazette) number 73-BIS, Number 323, dated 21 April 1994, and in compliance with the aforementioned regulation, each Agent has represented and agreed that it will not make an invitation for subscription or purchase of the notes to indeterminate individuals, nor will it make known this product supplement no. 154-I and the accompanying prospectus supplement, prospectus and terms supplement in the territory of El Salvador through any mass media communication such as television, radio, press, or any similar medium, other than publications of an international nature that are received in El Salvador, such as internet access or foreign cable advertisements, which are not directed to the Salvadoran public. The offering of the notes has not been registered with an authorized stock exchange in the Republic of El Salvador. Any negotiation for the purchase or sale of notes in the Republic of El Salvador shall only be negotiated on an individual basis with determinate individuals or entities in strict compliance with the aforementioned Article 2 of the Salvadoran Securities Market Law, and shall in any event be effected in accordance with all securities, tax and exchange control of the Dominican Republic, Central America, and United States Free Trade Agreements, and other applicable laws or regulations of the Republic of El Salvador.

## European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State"), each Agent has represented and agreed that with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the "Relevant Implementation Date") it has not made and will not make an offer of notes which are the subject of the offering contemplated by this product supplement no. 154-I and the accompanying prospectus supplement to the public in that Relevant Member State prior to the publication of a prospectus in relation to the notes which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive except that it may, with effect from and including the Relevant Implementation Date, make an offer of such notes to the public in that Relevant Member State:

- (a) at any time to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- (b) at any time to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000; and (3) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts;
- (c) to fewer than 100 natural or legal persons (other than qualified investors as defined in the Prospectus Directive) subject to obtaining the prior consent of the Agent; or
- (d) at any time in any other circumstances which do not require the publication by us of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer of notes to the public" in relation to any notes in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the notes to be offered so as to enable an investor to decide to purchase or subscribe the notes, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State and the expression "Prospectus Directive" means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

This European Economic Area selling restriction is in addition to any other selling restrictions set out herein.

## Hong Kong

The notes may not be offered or sold in Hong Kong, by means of any document, other than to persons whose ordinary business it is to buy or sell shares or debentures, whether as principal or agent, or in circumstances that do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap. 32) of Hong Kong. Each Agent has not issued and will not issue any advertisement, invitation or document relating to the notes, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to notes which are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made thereunder.

## Jersey

Each Agent has represented to and agreed with us that it will not circulate in Jersey any offer for subscription, sale or exchange of any notes which would constitute an offer to the public for the purposes of Article 8 of the Control of Borrowing (Jersey) Order 1958.

## Mexico

The notes have not been, and will not be, registered with the Mexican National Registry of Securities maintained by the Mexican National Banking and Securities Commission nor with the Mexican Stock Exchange and therefore, may not be offered or sold publicly in the United Mexican States. This product supplement no. 154-I and the accompanying prospectus supplement, prospectus and terms supplement may not be publicly distributed in the United Mexican States. The notes may be privately placed in Mexico among institutional and qualified investors, pursuant to the private placement exemption set forth in Article 8 of the Mexican Securities Market Law.

## The Netherlands

An offer to the public of any notes which are the subject of the offering and placement contemplated by this product supplement no. 154-I and the accompanying prospectus supplement, prospectus and terms supplement may not be made in The Netherlands and each Agent has represented and agreed that it has not made and will not make an offer of such notes to the public in The Netherlands, unless such an offer is made exclusively to one or more of the following categories of investors in accordance with the Dutch Financial Markets Supervision Act (*Wet op het financieel toezicht*, the "FMSA"):

1. Regulated Entities: (a) any person or entity who or which is subject to supervision by a regulatory authority in any country in order to lawfully operate in the financial markets (which includes: credit institutions, investment firms, financial institutions, insurance companies, collective investment schemes and their management companies, pension funds and their management companies, commodity dealers) ("Supervised Entities"); and (b) any person or entity who or which engages in a regulated activity on the financial markets but who or which is not subject to supervision by a regulatory authority because it benefits from an exemption or dispensation ("Exempt Entities");
2. Investment Funds and Entities: any entity whose corporate purpose is solely to invest in securities (which includes, without limitation, hedge funds);
3. Governmental institutions: the Dutch State, the Dutch Central Bank, Dutch regional, local or other decentralized governmental institutions, international treaty organizations and supranational organizations;
4. Self-certified Small and Medium-Sized Enterprises ("SMEs"): any company having its registered office in The Netherlands which does not meet at least two of the three criteria mentioned in (6) below and which has (a) expressly requested the Netherlands Authority for the Financial Markets (the "AFM") to be considered as a qualified investor, and (b) been entered on the register of qualified investors maintained by the AFM;

5. Self-certified Natural Persons: any natural person who is resident in The Netherlands if this person meets at least two (2) of the following criteria:

- (i) the investor has carried out transactions of a significant size on securities markets at an average frequency of, at least, ten (10) per quarter over the previous four (4) quarters;
- (ii) the size of the investor's securities portfolio exceeds €500,000;
- (iii) the investor works or has worked for at least one (1) year in the financial sector in a professional position which requires knowledge of investment in securities,

*provided* this person has:

- (a) expressly requested the AFM to be considered as a qualified investor; and
- (b) been entered on the register of qualified investors maintained by the AFM;

6. Large Enterprises: any company or legal entity which meets at least two of the following three criteria according to its most recent consolidated or non-consolidated annual accounts:

- (a) an average number of employees during the financial year of at least 250;
- (b) total assets of at least €43,000,000; or
- (c) an annual net turnover of at least €50,000,000.

7. Discretionary individual portfolio managers: any portfolio manager in The Netherlands who or which purchases the notes for the account of clients who are not Qualified Investors on the basis of a contract of agency that allows for making investment decisions on the client's behalf without specific instructions of or consultation with any such client;

8. Minimum consideration: any person or entity for a minimum consideration of €50,000 or more (or equivalent in foreign currency) for each offer of notes; or

9. Fewer than 100 Offerees: fewer than 100 natural or legal persons (other than Qualified Investors).

For the purposes of this provision, the expression:

- (a) an "offer to the public" in relation to any notes means making a sufficiently determined offer as meant in Section 217(1) of Book 6 of the Dutch Civil Code (*Burgerlijk Wetboek*) addressed to more than one person to conclude a contract to purchase or otherwise acquire notes, or inviting persons to make an offer in respect of such notes;
- (b) "Qualified Investors" means the categories of investors listed under (1) up to and including (6) above.

Zero Coupon Notes may not, directly or indirectly, as part of their initial distribution (or immediately thereafter) or as part of any re-offering be offered, sold, transferred or delivered in The Netherlands. For purposes of this paragraph "Zero Coupon Notes" are notes (whether in definitive or in global form) that are in bearer form and that constitute a claim for a fixed sum against us and on which interest does not become due prior to maturity or on which no interest is due whatsoever.

## **Panama**

The notes have not been and will not be registered with the National Securities Commission of the Republic of Panama under Decree Law No. 1 of July 8, 1999 (the "Panamanian Securities Law") and may not be publicly offered or sold within Panama, except in certain limited transactions exempt from the registration requirements of the Panamanian Securities Law. The notes do not benefit from the tax incentives provided by the Panamanian Securities Law and are not subject to regulation or supervision by the National Securities Commission of the Republic of Panama.

## **Peru**

The notes have been and will be offered only to institutional investors (as defined by the Peruvian Securities Market Law – “*Ley de Mercado de Valores*” enacted by Legislative Decree No. 861 – Unified Text of the Law approved by Supreme Decree No. 093-2002-EF) and not to the public in general or a segment of it. The placement of the notes shall comply with article 5 of the Peruvian Securities Market Law.

## **Singapore**

Neither this product supplement no.154-I nor the accompanying prospectus supplement, prospectus or terms supplement has been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this product supplement no. 154-I, the accompanying prospectus supplement, prospectus or terms supplement, and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the notes may not be circulated or distributed, nor may the notes be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the “SFA”), (ii) to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

## **Switzerland**

The notes have not been and will not be offered or sold, directly or indirectly, to the public in Switzerland, and this product supplement no. 154-I and the accompanying prospectus supplement, prospectus and terms supplement do not constitute a public offering prospectus as that term is understood pursuant to article 652a or article 1156 of the Swiss Federal Code of Obligations.

We have not applied for a listing of the notes on the SWX Swiss Exchange or on any other regulated securities market and, consequently, the information presented in this product supplement no. 154-I and the accompanying prospectus supplement, prospectus and terms supplement does not necessarily comply with the information standards set out in the relevant listing rules.

The notes do not constitute a participation in a collective investment scheme in the meaning of the Swiss Federal Act on Collective Investment Schemes and are not licensed by the Swiss Federal Banking Commission. Accordingly, neither the notes nor holders of the notes benefit from protection under the Swiss Federal Act on Collective Investment Schemes or supervision by the Swiss Federal Banking Commission.

## **United Kingdom**

Each Agent has represented and agreed that:

- (a) it is a person whose ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of its business and (ii) it has not offered or sold and will not offer or sell the notes other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or as agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage or dispose of investments (as principal or agent) for the purposes of their businesses where the issue of the notes would otherwise constitute a contravention of Section 19 of the Financial Services and Markets Act 2000 (the “FSMA”) by the Issuer;
- (b) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of the notes in circumstances in which Section 21(1) of the FSMA does not apply to us; and
- (c) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the notes in, from or otherwise involving the United Kingdom.

## **Uruguay**

The offering of notes in Uruguay constitutes a private offering and each Agent has agreed that the notes and us will not be registered with the Central Bank of Uruguay pursuant to section 2 of Uruguayan law 16.749.

## **Venezuela**

The notes comprising this offering have not been registered with the Venezuelan National Securities Commission (*Comisión Nacional de Valores*) and are not being publicly offered in Venezuela. No document related to the offering of the notes shall be interpreted to constitute a public offer of securities in Venezuela. This document has been sent exclusively to clients of the Agents and the information contained herein is private, confidential and for the exclusive use of the addressee. Investors wishing to acquire the notes may use only funds located outside of Venezuela, which are not of mandatory sale to the Central Bank of Venezuela (*Banco Central de Venezuela*) or are not otherwise subject to restrictions or limitations under the exchange control regulation currently in force in Venezuela.



## BENEFIT PLAN INVESTOR CONSIDERATIONS

A fiduciary of a pension, profit-sharing or other employee benefit plan subject to the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), including entities such as collective investment funds, partnerships and separate accounts whose underlying assets include the assets of such plans (collectively, "ERISA Plans") should consider the fiduciary standards of ERISA in the context of the ERISA Plan's particular circumstances before authorizing an investment in the notes. Among other factors, the fiduciary should consider whether the investment would satisfy the prudence and diversification requirements of ERISA and would be consistent with the documents and instruments governing the ERISA Plan.

Section 406 of ERISA and Section 4975 of the Internal Revenue Code of 1986, as amended, (the "Code") prohibit ERISA Plans, as well as plans (including individual retirement accounts and Keogh plans) subject to Section 4975 of the Code (together with ERISA Plans, "Plans"), from engaging in certain transactions involving the "plan assets" with persons who are "parties in interest" under ERISA or "disqualified persons" under the Code (in either case, "Parties in Interest") with respect to such Plans. As a result of our business, we may be a Party in Interest with respect to many Plans. Where we are a Party in Interest with respect to a Plan (either directly or by reason of our ownership interests in our directly or indirectly owned subsidiaries), the purchase and holding of the notes by or on behalf of the Plan could be a prohibited transaction under Section 406 of ERISA and/or Section 4975 of the Code, unless exemptive relief were available under an applicable exemption (as described below).

Certain prohibited transaction class exemptions ("PTCEs") issued by the U.S. Department of Labor may provide exemptive relief for direct or indirect prohibited transactions resulting from the purchase or holding of the notes. Those class exemptions are PTCE 96-23 (for certain transactions determined by in-house asset managers), PTCE 95-60 (for certain transactions involving insurance company general accounts), PTCE 91-38 (for certain transactions involving bank collective investment funds), PTCE 90-1 (for certain transactions involving insurance company separate accounts), and PTCE 84-14 (for certain transactions determined by independent qualified asset managers). In addition, ERISA Section 408(b)(17) and Section 4975(d)(20) of the Code provide a limited exemption for the purchase and sale of the notes and related lending transactions, provided that neither the issuer of the notes nor any of its affiliates have or exercise any discretionary authority or control or render any investment advice with respect to the assets of any Plan involved in the transaction and provided further that the Plan pays no more than adequate consideration in connection with the transaction (the so-called "service provider exemption").

Accordingly, the notes may not be purchased or held by any Plan, any entity whose underlying assets include "plan assets" by reason of any Plan's investment in the entity (a "Plan Asset Entity") or any person investing "plan assets" of any Plan, unless such purchaser or holder is eligible for the exemptive relief available under PTCE 96-23, 95-60, 91-38, 90-1 or 84-14 or the service-provider exemption or there is some other basis on which the purchase and holding of the notes will not constitute a non-exempt prohibited transaction under ERISA or Section 4975 of the Code. Each purchaser or holder of the notes or any interest therein will be deemed to have represented by its purchase or holding of the notes that (a) its purchase and holding of the notes is not made on behalf of or with "plan assets" of any Plan or (b) its purchase and holding of the notes will not result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code.

Employee benefit plans that are governmental plans (as defined in Section 3(32) of ERISA), certain church plans (as defined in Section 3(33) of ERISA) and non-U.S. plans (as described in Section 4(b)(4) of ERISA) are not subject to these "prohibited transaction" rules of ERISA or Section 4975 of the Code, but may be subject to similar rules under other applicable laws or regulations ("Similar Laws"). Accordingly, each such purchaser or holder of the notes shall be required to represent (and deemed to have represented by its purchase of the notes) that such purchase and holding is not prohibited under applicable Similar Laws.

Due to the complexity of these rules, it is particularly important that fiduciaries or other persons considering purchasing the notes on behalf of or with “plan assets” of any Plan consult with their counsel regarding the relevant provisions of ERISA, the Code or any Similar Laws and the availability of exemptive relief under PTCE 96-23, 95-60, 91-38, 90-1, 84-14 or some other basis on which the acquisition and holding will not constitute a non-exempt prohibited transaction under ERISA or Section 4975 of the Code or a violation of any applicable Similar Laws.

Each purchaser and holder of the notes has exclusive responsibility for ensuring that its purchase and holding of the notes does not violate the fiduciary or prohibited transaction rules of ERISA, the Code or any applicable Similar Laws. The sale of any notes to any Plan is in no respect a representation by us or any of our affiliates or representatives that such an investment meets all relevant legal requirements with respect to investments by Plans generally or any particular Plan, or that such an investment is appropriate for Plans generally or any particular Plan.



# **JPMorgan Commodity Curve Index Rules**

J.P. Morgan Securities Ltd.

London, November 2007  
(amended June 2008)

**\*\* Important Notice \*\***

This description sets out the rules for the JPMorgan Commodity Curve Index ("the JPMCCI Index Rules" or the "Index Rules") and reflects the methodology for determining the composition and calculation of the JPMorgan Commodity Curve Index ("JPMCCI"). This document is published by, and is the exclusive property of, J.P. Morgan Securities Ltd. ("JPMSL") of 125 London Wall, EC2Y 5AJ.

**ALL PERSONS READING THIS DOCUMENT SHOULD REFER TO THE DISCLAIMERS SET OUT IN THE INDEX RULES AND CONSIDER THE INFORMATION CONTAINED HEREIN IN THE LIGHT OF SUCH DISCLAIMERS.**

**NOTHING HEREIN CONSTITUTES AN OFFER TO BUY OR SELL ANY SECURITIES, PARTICIPATE IN ANY TRANSACTION OR ADOPT ANY INVESTMENT STRATEGY OR LEGAL, TAX, REGULATORY OR ACCOUNTING ADVICE.**

Each of JPMSL and its affiliates may have positions or engage in transactions in securities or other financial instruments based on or indexed or otherwise related to the JPMCCI.

**Disclaimer**

JPMSL shall have no liability, contingent or otherwise, to any person or entity for the quality, accuracy, timeliness or completeness of the information or data contained in Index Rules or the JPMCCI, or for delays, omissions or interruptions in the delivery of the JPMCCI or related data. JPMSL makes no warranty, express or implied, as to the results to be obtained by any person or entity in connection with any use of the JPMCCI, including but not limited to the trading of or investments in products based on or indexed or otherwise related to the JPMCCI, any data related thereto or any components thereof. JPMSL makes no express or implied warranties, and hereby expressly disclaims all warranties of merchantability or fitness for a particular purpose or use with respect to the Index Rules, the JPMCCI or any data related thereto. Without limitation any of the foregoing, in no event shall JPMSL have any liability for any special, punitive, indirect or consequential damages (including lost profits), in connection with any use by any person of the JPMCCI or any products based on or indexed or otherwise related thereto, even if notified of the possibility of such damages.

**Notice**

These Index Rules reflect the methodology that will be utilized with respect to the determination and calculation of the JPMCCI. In November of each calendar year, the Index Calculation Agent will review the current Potential JPMCCI Exchange Commodities, and on the Exchange Commodity Publication Date, the Index Calculation Agent, subject to the review of the JPMCCI Supervisory Committee, will determine and publish the JPMCCI Exchange Commodities based on the Index Rules set forth herein. The "**Exchange Commodity Publication Date**," will be a date determined by the Index Calculation Agent that occurs on or before the last Scheduled Valuation Day in November of each calendar year.

The Index Calculation Agent will begin calculating JPMCCI with the new JPMCCI Exchange Commodities for the given calendar year on the first Scheduled Index Valuation Day in any such calendar year, which we refer to as the "**JPMCCI Annual Inception Date**"; *provided, however* that the Index Calculation Agent may postpone or reschedule such date in the event of certain market disruption events.

The Index Calculation Agent may amend or supplement these Index Rules in the future and will publish such amendment or supplement no later than thirty (30) calendar days following such amendment or supplement. Moreover, on each Exchange Commodity Publication Date, the Index Calculation Agent will supplement Sections G, H, I, J and K set forth herein in order to detail the new JPMCCI Exchange Commodities to be included in the JPMCCI Indices on the JPMCCI Annual Inception Date.

**J.P. Morgan Securities Ltd.**

London, November 2007 and amended June 2008

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## A. Introduction

### A.1 About the JPMCCI

The JPMorgan Commodity Curve Index (“**JPMCCI**”) is a family of indices which aim to provide a systematic and neutral way to gain diversified exposure to commodity futures. JPMCCI is structured as a representative family of indices, reflecting the available market opportunities throughout each commodity futures curve as well as across the commodities asset class.

Used generically the “**JPMCCI Index**” refers to any or all of the “**JPMCCI Indices**” (as the context requires). “**JPMCCI**” used generically refers to characteristics of any and all the family of JPMCCI Indices.

JPMCCI consists of an open interest weighted basket of futures contracts across each futures curve to capture the available investment opportunities in the respective commodity futures markets. Monthly Contract compositions for each commodity are guided by the historical distribution of open interest of contracts across the futures curve in the same calendar month of the preceding three calendar years. You should note, however, that Section L below describes certain historical limitations on the gathering of data, which are necessarily reflected in the 2008 version of JPMCCI.

JPMCCI seeks to mitigate the front-end bias associated with commodity indices and attempts to offer substantial diversification benefits. Investing in multiple contracts per commodity should generally reduce return volatility and increase risk-adjusted returns. Moreover, the stable inter-month composition will limit the impact of monthly synthetic roll on the excess return.

It should be noted that JPMCCI is a “notional” basket of commodity futures contracts because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. JPMCCI merely identifies certain assets in the market, the performance of which will be used as a reference point for the purposes of calculating the value of JPMCCI.

### A.2 JPMCCI Index Types

1. The Index Calculation Agent will calculate and publish three types of aggregate JPMCCI Indices that include each of the JPMCCI Eligible Commodities (such indices, the “**JPMCCI Aggregate Indices**”). The JPMCCI Price Index measures the aggregate price levels of futures contracts included in the aggregate JPMCCI Index. The JPMCCI Excess Return Index captures the return from investing in commodity futures in the JPMCCI, taking into account the effect of monthly composition changes during the roll periods. Finally, the JPMCCI Total Return Index measures a fully collateralized investment in JPMCCI commodity futures, taking into account the monthly rolling of contracts. In addition to the JPMCCI Aggregate Indices, the Index Calculation Agent will calculate and publish three versions of JPMCCI Energy Light Indices (*i.e.*, a price, excess and total return version). The JPMCCI Energy Light Indices are variations on the JPMCCI Aggregate Indices, where the target dollar market weight of the JPMCCI Energy Sector Index is set to a maximum weight of 33% of such JPMCCI Energy Light Index after each Rebalancing Period. For more information on the calculation of the JPMCCI Energy Light Indices, see Section F.7.

2. The Index Calculation Agent will also calculate and publish several types of JPMCCI Sector Indices. As of the date set forth above, the JPMCCI Sector Indices are Energy, Non-Energy, Precious Metals, Industrial Metals, All Metals, Livestock and Agriculture; however, the Index Calculation Agent may introduce additional JPMCCI Sector Indices on an interim basis, and such new JPMCCI Sector Index will be reviewed by the JPMCCI Supervisory Committee on or before the following Exchange Commodity Publication Date. As with the JPMCCI Aggregate Indices, Price Return, Excess Return and Total Return Indices are calculated in respect of each JPMCCI Sector Index. On each Exchange Commodity Publication Date, the Index Calculation Agent, subject to the review of the JPMCCI Supervisory Committee, will determine the JPMCCI Exchange Commodities to be included in each JPMCCI Sector Index for the following calendar year.

3. The Index Calculation Agent will also calculate and publish JPMCCI Single Commodity Indices, in relation to each JPMCCI Exchange Commodity. As described herein, Price Return, Excess Return and Total Return Indices are calculated in respect of each JPMCCI Single Commodity Index.

**The JPMCCI Indices and their respective Bloomberg Pages are set forth in Section K herein. The Index Levels for each of the JPMCCI Indices are published on their applicable Bloomberg Pages on each Scheduled Index Valuation Day; *provided, however* that the Index Calculation Agent will not be obliged to publish any Index Levels upon the occurrence or continuation of a Force Majeure Event.**

### **A.3 JPMCCI Supervisory Committee**

In order to maintain objectivity in the administration and execution of the JPMCCI and pursuant to the Index Rules set forth below, JPMSL has formed the “**JPMCCI Supervisory Committee**” (whose composition will be published from time to time). The JPMCCI Supervisory Committee shall meet annually in November to review and approve the composition of the JPMCCI for the following calendar year and any proposed modifications to the Index Rules.

The JPMCCI Supervisory Committee shall be composed of at most seven (7) voting members and at least one (1) voting member and at most seven (7) non-voting members and at least one (1) non-voting member, each of whom will be appointed by JPMSL. Each voting member serving on the JPMCCI Supervisory Committee shall be independent. For the purposes of determining whether a particular member of the JPMCCI Supervisory Committee is independent, “independent” means that the individual in question is not an employee, director, officer, agent or affiliate of JPMorgan Chase & Co. or any of its affiliates and does not have a personal direct financial interest in JPMCCI or any financial product linked to JPMCCI while serving as a voting member of the JPMCCI Supervisory Committee. All voting members of the JPMCCI Supervisory Committee shall be sufficiently knowledgeable about commodity futures contracts and the commodities markets in general, as determined by JPMSL in a good faith and commercially reasonable manner. JPMSL may from time to time add or remove voting members of the JPMCCI Supervisory Committee; provided that such addition or removal does not coincide with a meeting of the committee or is a result of a particular vote of a specific committee member.

Additionally, upon the occurrence of a Disrupted Day, or any other extraordinary or unanticipated market events, JPMorgan may seek the advice of the JPMCCI Supervisory Committee on the necessary adjustments, methodological amendments or data corrections that may need to be implemented to the JPMCCI.

Notwithstanding anything to the contrary, if all of the voting members of the Supervisory Committee have resigned or are otherwise unavailable at the time and date of any meeting duly called by the Index Calculation Agent, the non-voting members, who are not directly involved in the marketing, sale or hedging of any JPMCCI product, may make any and all determinations on behalf of the Supervisory Committee and such decisions shall have the same force and effect as decisions made by the voting members of the committee.

The Index Calculation Agent will from time to time (and in any event within one month of any change in the membership of the JPMCCI Supervisory Committee) publish the names, titles and company affiliation of the individuals forming the JPMCCI Supervisory Committee.

In the event that JPMSL ceases to act as Index Calculation Agent, the composition and role of the JPMCCI Supervisory Committee may be reviewed and amended by JPMSL.

#### **A.4 The Index Calculation Agent and the Index Rules**

The methodology employed in determining the composition and calculation of JPMCCI is set out in the calculations and procedures described in these Index Rules. JPMSL acts as “Index Calculation Agent” in respect of the JPMCCI as of the date of these Index Rules but may be replaced by a substitute index calculation agent at some future date (who shall be regarded for all purposes as the Index Calculation Agent). For the avoidance of doubt, the substitution of any Index Calculation Agent shall not be deemed to terminate the JPMCCI or any instruments referencing the JPMCCI. Additionally, as referred to in Section A3 above, in the event that JPMSL ceases to act as Index Calculation Agent, the composition and role of the JPMCCI Supervisory Committee may be reviewed, amended or supplemented. JPMSL may from time to time revise, amend and/or supplement these Index Rules, and if such rules are amended or supplemented, JPMSL shall publish such Index Rules no later than one calendar month following such amendment or supplement.



## A.5 Definitions

Capitalized terms not otherwise defined herein shall have the following meanings:

<b>Aggregate Commodity Units</b>	means, in relation to the JPMCCI Aggregate Indices, JPMCCI Energy Light Indices, and JPMCCI Sector Indices, average monthly units of each JPMCCI Exchange Commodity over a three year period ending on a given calendar year corresponding to contracts outstanding, whose calculation is set out in "Calculation of Aggregate Commodity Units" in Section C below;
<b>Composition</b>	means in relation to each JPMCCI Exchange Commodity and each month, the portfolio of Monthly Contracts and associated Monthly Contract Weights;
<b>Daily Contract Open Interest</b>	means, on any Scheduled Index Valuation Day, in relation to any Monthly Contract and any JPMCCI Exchange Commodity, the number of contracts expiring $n$ months after month $m$ outstanding on such day, as published by the Exchange as defined mathematically in Section D2 below;
<b>Disrupted Day</b>	has the meaning set out in Section D6 below;
<b>Estimated Market Size</b>	means, in respect of a JPMCCI Exchange Commodity, the average of the open interest figures published monthly by the Futures Industry Association during the Observation Period, multiplied by the Settlement Price of such JPMCCI Exchange Commodity's Front Month Contract prevailing on the last Scheduled Index Valuation Day of October in the year of calculation, expressed in U.S. Dollars;
<b>Excess Return Index</b>	means each Index which measures the return earned from investing in the Monthly Contracts and their relevant Monthly Contract Weights of the JPMCCI, taking into account the effect of monthly composition changes during Roll Days, the calculations of whose Index Levels are set out in Section F below;
<b>First Notice Day</b>	means the first day that a notice of intent to deliver a JPMCCI Exchange Commodity can be made by a clearinghouse to a buyer in fulfillment of a given month's futures contract;

<b>Force Majeure Event</b>	any event beyond the control of the Index Calculation Agent, including any act of God, act of governmental authority, or act of public enemy, or due to war, the outbreak or escalation of hostilities, fire, flood, civil commotion, insurrection, labour difficulty including, without limitation, any strike, other work stoppage, or slow-down, severe or adverse weather conditions, power failure, communications line or other technological failure;
<b>Futures Industry Association (or FIA)</b>	means the association of futures commission merchants and other parties interested in the U.S. and international futures exchanges, whose current webpage is <a href="http://www.futuresindustry.org/">http://www.futuresindustry.org/</a> , provided that in the event that (i) such organization ceases to exist or (ii) the Index Calculation Agent shall determine that such organization is no longer representative of the U.S. and international futures industry, such successor organization (if any) or other representative association as the Index Calculation Agent shall determine to be properly representative of the U.S. and international futures industry;
<b>Historical Monthly Contract Open Interest Percentage</b>	means, in respect of the Monthly Contract for a given JPMCCI Exchange Commodity, the arithmetic average of the Monthly Contract Open Interest Percentage for that Monthly Contract 12, 24 and 36 months prior to the Monthly Contract in consideration, as more specifically set out mathematically in Section D4 below;
<b>Inception Date</b>	means 29 December 1989;
<b>Index or JPMCCI Index</b>	means each of all JPMCCI Single Commodity Indices, JPMCCI Sector Indices, JPMCCI Aggregate Indices and JPMCCI Energy Light Indices;
<b>Index Calculation Agent</b>	means JPMSL or any successor appointed by JPMSL or third party appointed by JPMSL.
<b>Index Level</b>	means the level on any Scheduled Index Valuation Day of a relevant Index, whose calculation is set out in Section F below.
<b>JPMCCI</b>	means the JPMorgan Commodity Curve Index being a family of commodity futures index calculated and owned by J.P. Morgan Securities Ltd. with the Inception Date set forth herein.

<b>Price Return Index</b>	means each JPMCCI Index that measures the current aggregate Settlement Prices of JPMCCI Exchange Commodities included in the JPMCCI, the calculations of whose Index Levels are set out in Section F below;
<b>JPMCCI Exchange Commodity</b>	has the meaning set out in Section B1 below;
<b>JPMCCI Sector Index</b>	means each Index in relation to a given Sector (as set out in Table 2 in Section G below);
<b>JPMCCI Single Commodity Index</b>	means each Index referencing only a single JPMCCI Exchange Commodity;
<b>JPMCCI Total Return Index</b>	means each Index measuring a fully collateralized investment in a JPMCCI Single Commodity Index, a JPMCCI Sector Index, the JPMCCI Aggregate Index or the JPMCCI Energy Light Index (taking into account the Excess Return and the U.S. Treasury Bill Return), the calculation of such Index Levels is set out in Section F below;
<b>Last Trading Day</b>	means the final day on which a given Monthly Contract may trade or be closed out before delivery of the relevant JPMCCI Exchange Commodity must occur;
<b>Limit Day</b>	means, with respect to a JPMCCI Exchange Commodity and its Relevant Exchange, any day on which there is a limitation on, or suspension of, the trading of options or futures contracts imposed by the Relevant Exchange by reason of movements exceeding "limit up" or "limit down" levels permitted by such Relevant Exchange and which has a material adverse effect on trading volumes and liquidity as compared to other Scheduled Trading Days, as determined by the Index Calculation Agent in its commercially reasonable discretion;
<b>Limit Price</b>	means a Settlement Price on any day which is a Limit Day;
<b>Monthly Contract</b>	means, in respect of a JPMCCI Exchange Commodity and a given month <i>m</i> , the contract considered most associated to that given month as determined by the Index Calculation Agent based (a) in the case of all JPMCCI Exchange Commodities other than JPMCCI Exchange Commodities which are LME industrial metals, on the contract so designated by the Relevant Exchange (being typically the contract which will expire, or in respect of which delivery or settlement will occur immediately following such given month <i>m</i> ) or (b) in respect of a JPMCCI Exchange Commodity whose Relevant Exchange is the London Metals

	Exchange the Monthly Contract shall be the relevant contract expiring on the third Wednesday of the given month;
<b>Monthly Contract Open Interest</b>	has the meaning set out mathematically in "Calculation of Monthly Contract Open Interest" in Section D2 below;
<b>Monthly Contract Open Interest Percentage</b>	has the meaning set out in Section D3 below;
<b>Monthly Contract Weight</b>	means, with respect to any Exchange Commodity, the weighting attached in the relevant Composition to a given Monthly Contract as calculated in Section D5;
<b>Observation Period</b>	means, with respect to any given year and any JPMCCI Exchange Commodity, the thirty six (36) month period ending on the date for which the latest set of complete historical Monthly Contract Open Interest figures are made available for international and U.S. commodity futures exchanges by the Futures Industry Association as of November of such year, provided that the Observation Period may be shorter in respect of JPMCCI Exchange Commodities that have a shorter trading history or as data limitations necessitate, as determined by the Index Calculation Agent in a good faith and commercially reasonable manner;
<b>Permitted Exchange</b>	has the meaning set out in Section B1 below;
<b>Portfolio Continuity Factor</b>	means, with respect to JPMCCI Aggregate Indices and JPMCCI Sector Indices, the factor employed to prevent discontinuities in the relevant Index when rebalancing from one set of Aggregate Commodity Units to another, as set out in Section E2 below;
<b>Potential JPMCCI Exchange Commodity</b>	has the meaning set out in Section B1 below;
<b>Rebalancing Day</b>	means each Roll Day in January of each year on which the composition of JPMCCI Exchange Commodities in the JPMCCI Aggregate Indices, the JPMCCI Energy Light Indices and the JPMCCI Sector Indices are adjusted by progressively phasing out the Aggregate Commodity Units of the previous year and phasing in the Aggregate Commodity Units of the current year;
<b>Relevant Exchange</b>	means, with respect to each Potential JPMCCI Exchange Commodity and each JPMCCI Exchange Commodity, the primary futures exchange on which futures contracts of that Potential JPMCCI Exchange Commodity or JPMCCI Exchange Commodity, as applicable, are traded;

<b>Roll Day</b>	means the first ten Scheduled Index Valuation Days of each calendar month, subject to the provisions of Section D7 below. On each such day and over all such days for that month, the progressive rolling of compositions from those of the previous month to those of the current month for all JPMCCI Exchange Commodities based on Roll Weights will be effected as more specifically described in mathematical terms in Section D7 below;
<b>Roll Weight</b>	means, with respect to each Roll Day, and a JPMCCI Exchange Commodity the proportion of the pre-roll monthly Composition attributable to a particular Monthly Contract and retained on that Roll Day, as more exactly and mathematically described in Section D7 below;
<b>Scheduled Index Valuation Day</b>	means, with respect to any JPMCCI Index, each Scheduled Trading Day in respect of at least 50% of Exchange Commodities in the JPMCCI;
<b>Scheduled Trading Day</b>	means, with respect to a JPMCCI Exchange Commodity a day on which the Relevant Exchange for such JPMCCI Exchange Commodity is scheduled to be open for trading for its regular trading sessions and to publish a Settlement Price. For indicative purposes only, the table set out in Section K2 sets out days (other than Saturday and Sunday) currently anticipated not to be Scheduled Trading Days in respect of particular Relevant Exchanges;
<b>Settlement Price</b>	means, with respect to each JPMCCI Exchange Commodity and a Scheduled Trading Day, the settlement price in respect of a Monthly Contract as published by the Relevant Exchange for such JPMCCI Exchange Commodity;
<b>Sufficient Estimated Market Size</b>	means, with respect to a Potential JPMCCI Exchange Commodity, that its Estimated Market Size is no less than USD 250,000,000 (" <b>Threshold Test</b> "); <i>provided, however</i> that if a Potential JPMCCI Exchange Commodity has met the Threshold Test, in the event of a decline in its Estimated Market Size it shall not cease to be a Potential JPMCCI Exchange Commodity or a JPMCCI Exchange Commodity, if applicable, until the first Exchange Commodity Publication Date on which its Estimated Market Size shall be less than USD 150,000,000;

**United States Dollars**

means the lawful currency of the United States of America;

**U.S. Treasury Bill Return**

means, with respect to a Total Return Index, the return on U.S. treasury bills as calculated by the Index Calculation Agent as set out in Section F3 below.

## B. Exchange Commodity Inclusion

### B.1 Overview and Operation of Exchange Commodity Inclusion Process

JPMCCI is intended to serve as a benchmark to measure the performance of the broader futures market, as well as a practical investment vehicle through which market participants can take a view on the commodities market. As such, a balance is struck between the need to reflect the general price movements of commodity futures broadly in the various energy, metal, agriculture and livestock markets on the one hand, and on the other to ensure that the JPMCCI includes only a practical number and types of futures contracts that are accessible to the investor community.

A two-stage process is followed by the Index Calculation Agent under the supervision of the JPMCCI Supervisory Committee to select futures contracts to be included in the JPMCCI in any given year. First, the Index Calculation Agent identifies "Potential JPMCCI Exchange Commodities" and, second, the Index Calculation Agent selects "JPMCCI Exchange Commodities" for inclusion in JPMCCI.

**"Potential JPMCCI Exchange Commodity"** means each physical commodity futures contract (but in respect of which physical delivery is not a requirement for inclusion in this definition) which:

- (a) (i) is traded on a Permitted Exchange (ii) is denominated in U.S. Dollars, (iii) is of Sufficient Estimated Market Size (iv) is of Adequate Liquidity; and
- (b) is not a commodity futures contract which (i) is an Ineligible Commodity or (ii) lacks Sufficient Trading History (unless the Index Calculation Agent determines that a Sufficient Trading History Waiver is appropriate) or (c) lacks Sufficient Data.

as determined by the Index Calculation Agent, in a good faith and commercially reasonable manner, and subject to the review of the JPMCCI Supervisory Committee.

**"Permitted Exchange"** means, with respect of a Potential JPMCCI Exchange Commodity, the Relevant Exchange which meets the geographical or other criteria published by the Index Calculation Agent from time to time;

**"Sufficient Estimated Market Size"** means, with respect to a Potential JPMCCI Exchange Commodity, its Estimated Market Size is no less than USD 250,000,000 ("**Threshold Test**"); *provided, however* that if a Potential JPMCCI Exchange Commodity has met the Threshold Test, in the event of a decline in its Estimated Market Size it shall not cease to be a Potential JPMCCI Exchange Commodity or a JPMCCI Exchange Commodity, if applicable, until the first Exchange Commodity Publication Date on which its Estimated Market Size shall be less than USD 150,000,000;

**"Adequate Liquidity"** means, with respect to a Potential JPMCCI Exchange Commodity, that such commodities futures contract is sufficiently liquid for general trading, as determined by the Index Calculation Agent, in a good faith and commercially reasonable manner, and subject to the review of the JPMCCI Supervisory Committee.

**"Ineligible Commodity"** means a commodity futures contract which, in the determination of the Index Calculation Agent is a "mini contract" (as defined by the Relevant Exchange), a swap contract, a basis contract, a spread contract or a weather contract.

**"Sufficient Trading History"** means, with respect to a Potential JPMCCI Exchange Commodity, a futures contract which has traded on the Relevant Exchange for no less than one year from the year of its inclusion; *provided, however* that the Index Calculation Agent may determine in its sole discretion that a **"Sufficient Trading History Waiver"** shall be applicable in respect of a commodity futures contract which has not so traded but is determined by the Index Calculation Agent to be a suitable futures contracts for inclusion in the relevant JPMCCI Index by reason that its significance in terms of investor interest is so great that omission would in the good faith and commercially reasonable determination of the Index Calculation Agent significantly undermine the representativeness of the JPMCCI; *provided, further* that such waiver would be subject to the review of the JPMCCI Supervisory Committee.

**"Sufficient Data"** means in respect of a futures contract, the existence, in the determination of the Index Calculation Agent of a sufficient body of data to enable the Index Calculation Agent to determine appropriately its historical performance and analyze performance; the determination of sufficient historical data will be determined on the basis of the existence of independent historical data available to the Index Calculation Agent, but the Index Calculation Agent may determine that historical performance in respect of a futures contract may be reasonably calculated by the Index Calculation Agent in the absence of such available data (*i.e.*, see Section L herein).

**"JPMCCI Exchange Commodity"** means, with respect to the version of JPMCCI established in a particular calendar year (*e.g.*, the 2008 version of JPMCCI established in November 2007), each Potential JPMCCI Exchange Commodity chosen for inclusion in JPMCCI in that calendar year. The Index Calculation Agent shall select for inclusion in JPMCCI, subject to the review of the JPMCCI Supervisory Committee, each Potential JPMCCI Exchange Commodity which (a) is not related to Milk, Electricity or Coal, (b) is not Sugar #14 (traded on the NYBOT) and (b) with respect to Aluminum (*e.g.*, High Grade Primary Aluminum, Aluminum Alloy and North American Special Aluminum Alloy), the Aluminum futures contract with the highest open interest.

On each Exchange Commodity Publication Date, the Index Calculation Agent shall publish the JPMCCI Exchange Commodities for inclusion in the JPMCCI for the following calendar year. Additionally, the JPMCCI Sector Indices will consist initially of seven commodity sectors: Energy, Non-Energy, Precious Metals, Industrial Metals, All Metals, Livestock and Agriculture. The constituents of the JPMCCI Sector Indices are determined by the Index Calculation Agent on each Exchange Commodity Publication Date, subject to the review and approval of the JPMCCI Supervisory Committee. The Index Calculation Agent may introduce additional JPMCCI Sector Indices on any future date.

## **B.2 Rules for Substitution of Exchange Commodity**

In certain exceptional cases, the Index Calculation Agent may substitute a JPMCCI Exchange Commodity with a physical commodity futures contract not then selected as a JPMCCI Exchange Commodity, such as when a JPMCCI Exchange Commodity is known to cease trading in the future and a new physical commodity futures contract has emerged as a natural substitute, as determined by the Index Calculation Agent in a good faith and commercially reasonable manner, subject to the review of the JPMCCI Supervisory Committee. For example, the replacement contract proposed by the Relevant Exchange for a discontinued JPMCCI Exchange Commodity shall generally constitute a "natural substitute." In making the calculation of Aggregate Commodity Units and Monthly Contract Weights upon such substitution, the Index Calculation shall rely on a combination of data based on the affected JPMCCI Exchange Commodity being removed and the Potential JPMCCI Exchange Commodity that will be introduced as a result of the Index Calculation Agent's determination. The methodology by which this substitution will be effected shall be announced by the Index Calculation Agent as soon as reasonably practicable in the circumstances then prevailing. The Index Calculation Agent shall obtain the approval of the JPMCCI Supervisory Committee prior to making any substitutions or other changes pursuant to this Rule.



### **B.3 Representation of Exchange Commodities and Monthly Contract Open Interest**

When there is more than one Potential JPMCCI Exchange Commodity relating to a particular underlying physical commodity, the Index Calculation Agent may, where deemed appropriate and subject to the approval of the JPMCCI Supervisory Committee, aggregate the Monthly Contract Open Interest of similar non-selected Potential JPMCCI Exchange Commodities with those of the relevant JPMCCI Exchange Commodity. This combination will effectively increase the number of Aggregate Commodity Units for the relevant JPMCCI Exchange Commodity, thereby more accurately reflecting the significance of the relevant JPMCCI Exchange Commodity. As at the date of these Index Rules, the Monthly Contracts affected by such combinations are set out in Table 2 in Section G. The Index Calculation Agent shall publish any changes to or additions to the combinations set forth in Table 2 in Section G on or before the effective date of any changes and/or additions.

### **B.4 Final Inclusion Determination and Rebalancing Announcement**

The Index Calculation Agent will present to the JPMCCI Supervisory Committee for review the JPMCCI Exchange Commodities for any given year after the completion of the procedures set forth above.

The Index Calculation Agent shall publish the determination of the JPMCCI Exchange Commodities for a given year no later than the relevant Exchange Commodity Publication Date.

## C. Aggregate Commodity Units

### C.1 Open Interest Commodity Weighting Scheme

JPMCCI is designed to be a representative index synthetically reflecting the available market opportunities in a given commodities asset class. The amount of investment opportunity available in each JPMCCI Exchange Commodity can be estimated from historical open interest, which is analogous to face amount outstanding in bond markets or shares outstanding in equity markets. Therefore JPMCCI uses historical open interest as the basis for determining the nominal weights for JPMCCI Exchange Commodities in the JPMCCI Aggregate Index and JPMCCI Sector Index.

### C.2 Annual Calculation of Aggregate Commodity Units: JPMCCI Aggregate and JPMCCI Sector Indices only

The number of **Aggregate Commodity Units**  $ACU_y^c$  for JPMCCI Exchange Commodity  $c$  for year  $y$ , denominated in physical units, is:

$$ACU_y^c = \frac{F^c \times \sum_{m \in M_y} COI_m^c}{|M_y|}$$

where:

$COI_m^c$	is the Monthly Contract Open Interest reported by the Futures Industry Association for JPMCCI Exchange Commodity $c$ in month $m$ .
$F^c$	is number of physical units underlying JPMCCI Exchange Commodity $c$ represented by one contract, given the contract specification ( <i>e.g.</i> number of barrels represented by one crude oil contract)
$M_y$	is the set of all months in the Observation Period
$ M_y $	is the number of months in the Observation Period

### C.3 Annual Calculation of Aggregate Commodity Units: JPMCCI Energy Light Indices

The JPMCCI Energy Light Indices are variations on the JPMCCI Aggregate Indices where the target dollar market weight of the JPMCCI Energy Sector Index is set to a maximum weight of 33% on the last Rebalancing Day.

First, the Index Calculation Agent will calculate the Estimated Post-Rebalance Market Capitalization  $EPRMC_y^{c_e}$  for each of the JPMCCI Exchange Commodities in the JPMCCI Energy Sector Index  $c_e$ , denominated in USD, calculated on the first Rebalancing Day:

$$EPRMC_y^{c_e} = \sum_{c_e} ACU_y^{c_e} \times \sum_n CW_{m_{y-1},n}^{c_e} \times CP_{d_{y-1},m_{y-1},n}^{c_e}$$

where

$ACU_y^{c_e}$  is the ACU of JPMCCI Exchange Commodity  $c$  in JPMCCI Energy Sector Index  $e$

Second, the Index Calculation Agent will determine if the  $ACU_y^{c_e}$  adjustment is necessary and is calculated as follows:

- If  $\frac{\sum_{c_e} EPRMC_y^{c_e}}{\sum_c EPRMC_y^c} \leq 33\%$ , then the  $ACU_y^{c_e}$  will remain unchanged;

- If  $\frac{\sum_{c_e} EPRMC_y^{c_e}}{\sum_c EPRMC_y^c} > 33\%$ , then the  $ACU_y^{c_e}$  will be adjusted to a new  $ACU_y^{c_{el}}$ , such that

$$\frac{\sum_{c_{el}} EPRMC_y^{c_{el}}}{\sum_c EPRMC_y^c} = 33\%, \text{ while maintaining their original } ACU_y^{c_e} \text{ proportion.}$$

Once  $ACU_y^{c_{el}}$  are calculated, they will be set for the remainder of the year, consistent with the methodology of the JPMCCI Aggregate Index. The levels of the JPMCCI Energy Light Index will float according to the market price of the underlying monthly contracts, with the possibility that the market weight of the JPMCCI Energy Sector Index may exceed 33%.

Appendix G, Table 4 and Appendix I.3 outlines the target market weights, as well as the ACUs and PCFs, of the JPMCCI Energy Light Index.

## D. Monthly calculation of Monthly Contract Weights

### D.1 Open Interest Monthly Contract Weighting: calculated in respect of each JPMCCI Exchange Commodity and each JPMCCI Single Commodity Index

Just as historical open interest guides the allocation of weights among different JPMCCI Exchange Commodities through the Aggregate Commodity Units, the Composition and Monthly Contract Weights each month for each JPMCCI Exchange Commodity are guided by the historical distribution of open interest across the commodity's futures curve.

Each JPMCCI Single Commodity Index and each JPMCCI Exchange Commodity in relation to a JPMCCI Sector Index or JPMCCI Aggregate Index (as the case may be) includes one or more Monthly Contracts of the same JPMCCI Exchange Commodity (except in circumstances of substitution of contracts, where the Monthly Contracts may be of different Exchange Commodities).

The Composition for a particular month is derived by averaging the distribution of Monthly Contract Open Interest in the same calendar month of the previous three years, in order to capture shifts of open interest along the curve as set out in greater detail and mathematically in Section D2-D5 below. (As an example only, the composition for the month of January 2007 is based on the average of the distribution of open interest of contracts along the curve in January 2006, January 2005 and January 2004).

### D.2 Calculation of the Monthly Contract Open Interest

**Monthly Contract Open Interest**  $MCOI_{m,n}^c$  in month  $m$ , denominated in physical units, for the JPMCCI Exchange Commodity  $c$  Monthly Contract expiring  $n$  months after month  $m$ , is:

$$MCOI_{m,n}^c = F^c \times \sum_{d \in D_m^c} DCOI_{d,m,n}^c$$

where:

$DCOI_{d,m,n}^c$  is the Daily Contract Open Interest on day  $d$  on month  $m$ , denominated in number of contracts, for JPMCCI Exchange Commodity  $c$  Monthly Contract expiring  $n$  months after the month  $m$

$D_m^c$  is the set of all days in month  $m$  for which open interest data for one or more Monthly Contracts of JPMCCI Exchange Commodity  $c$  is obtainable by the Index Calculation Agent from the relevant information source (as set out in Table X of Appendix Y)

(As an example only, if  $m$  corresponds to March 2000 and  $n = 14$ , the Monthly Contract being referred to is the May 2001 contract.)

### D.3 Calculation of the Monthly Contract Open Interest Percentage

"Monthly Contract Open Interest Percentage"  $MCOIP_{m,n}^c$  in month  $m$ , for JPMCCI Exchange Commodity  $c$  Monthly Contract expiring  $n$  months after month  $m$ , is:

$$MCOIP_{m,n}^c = \frac{MCOI_{m,n}^c}{\sum_i MCOI_{m,i}^c}$$

### D.4 Monthly Calculation of the Historical Monthly Contract Open Interest Percentage

The "Historical Monthly Contract Open Interest Percentage"  $HMCOIP_{m,n}^c$  in month  $m$ , for the JPMCCI Exchange Commodity  $c$  Monthly Contract expiring  $n$  months after month  $m$ , is:

$$HMCOIP_{m,n}^c = \text{average}_{i=12,24,36}(MCOIP_{m-i,n}^c)$$

(As an example, the HMCOIP for the NYMEX Crude Oil May-2000 contract in January 2000 is the arithmetic average of:

- (a) the MCOIP for the NYMEX Crude Oil May-1997 contract in January 1997;
- (b) the MCOIP for the NYMEX Crude Oil May-1998 contract in January 1998;
- (c) the MCOIP for the NYMEX Crude Oil May-1999 contract in January 1999.)

### D.5 Monthly Contract Weight

In the determination of the Monthly Contract Weights and Composition for each JPMCCI Exchange Commodity and each JPMCCI Single Commodity Index of any commodity and any month in which Composition is reviewed, the following Monthly Contracts are excluded:

- (a) Monthly Contracts with a Historical Monthly Contract Open Interest Percentage of less than 3%;
- (b) Monthly Contracts due to expire, in respect of which there will be a Last Trading Day or First Notice Day prior to the last anticipated Roll Date or, in the case of Monthly Contracts whose Relevant Exchange is the London Metals Exchange, Monthly Contracts in respect of which there will be a Last Trading Day in the month in which the last anticipated Roll Date falls;

(As an example, for the January 2007 composition of NYMEX Brent Crude, only the Apr-2007 and longer dated Monthly Contracts are eligible for inclusion. The Mar-2007 contract has a last trade date of February 13, 2007; the contract ceases to trade before it can be completely phased out during the February roll, and therefore cannot be included in the January 2007 composition.)

The “**Monthly Contract Weight**”  $CW_{m,n}^c$  in month  $m$  for JPMCCI Exchange Commodity  $c$  Monthly Contract expiring  $n$  months after month  $m$  is:

$$CW_{m,n}^c = \frac{HMC OIP_{m,n}^c}{\sum_{i \in N_m^c} HMC OIP_{m,i}^c}$$

where:

$N_m^c$  is the set of all Monthly Contracts for JPMCCI Exchange Commodity  $c$  in month  $m$

For Monthly Contracts which are excluded by the exclusion rules above,  $CW_{m,n}^c = 0$ .

## D.6 Disruptions

A “**Disrupted Day**” means in respect of a JPMCCI Exchange Commodity a Scheduled Trading Day on which:

- (a) the Settlement Price for any Monthly Contract in respect of the relevant JPMCCI Exchange Commodity is not obtainable;
- (b) the Settlement Price for any Monthly Contract in respect of the relevant JPMCCI Exchange Commodity is a Limit Price (a Limit Day);

(thus, for the avoidance of doubt, in respect of a JPMCCI Single Commodity Index, only disruption as set out in (a) and (b) in respect of the JPMCCI Exchange Commodity, constituting such JPMCCI Single Commodity Index shall be relevant in the determination of a Disrupted Day)

## Disruption and Calculation and Publication of Indices

Index Levels will be published on each Scheduled Index Valuation Day even if such day is a Limit Day for a given JPMCCI Exchange Commodity; *provided, however* that the Index Calculation Agent will not be obliged to publish any Index Level upon the occurrence or continuation of a Force Majeure Event. If for any reason a Settlement Price is not obtainable in respect of a given JPMCCI Exchange Commodity and Monthly Contract, then the Settlement Price last previously obtainable (which shall usually be the Settlement Price in respect of the previous Scheduled Index Valuation Day) will be used for calculation of the relevant Index Level. If the Settlement Price is a Limit Price, the Limit Price will be used in the calculation of the relevant Index Level.

## Disruption and Roll Days

If any Roll Day is a Disrupted Day, then the roll for the affected Exchange Commodity is postponed as set out below.

## D.7 Roll Weights

In respect of each JPMCCI Exchange Commodity, on each Roll Day of the relevant month, the Composition will be amended by the phased removal from the Composition of one tenth of the Composition of the previous month and the replacement of it by one tenth of the current month; provided that if in respect of the relevant JPMCCI Exchange Commodity that scheduled Roll Day is a Disrupted Day, then (i) the Composition shall not be amended on that day and (ii) the portion of the Composition which would have been amended on that day shall be amended on the next following Index Valuation Day which is not a Disrupted Day.

The “Roll Weight”  $RW_d^c$  of the pre-roll Composition of JPMCCI Exchange Commodity  $c$  at the close of Index Valuation Day  $d$  is:

A. If  $d$  is the first anticipated Roll Date but is a Disrupted Day, then

$$RW_d^c = 1$$

B. If  $d$  is an anticipated Roll Date other than the first anticipated Roll Date but is a Disrupted Day;

$$RW_d^c = RW_{d-1}^c$$

C. If  $d$  is any anticipated Roll Date which is not a Disrupted Day;

$$RW_d^c = 1 - \frac{\text{Min}(10, IVD_d)}{10}$$

where:  $IVD_d$  is the number of Index Valuation Days since the beginning of the month, as of Index Valuation Day  $d$ .

## E. Annual Calculation and Use of the Portfolio Continuity Factor

### E.1 Purpose of the Portfolio Continuity Factor

Portfolio Continuity Factors are introduced to prevent discontinuities in the JPMCCI Aggregate Indices, JPMCCI Energy Light Indices, and the JPMCCI Sector Indices when rebalancing from one set of Aggregate Commodity Units, which are denominated in physical units, to the next set of Aggregate Commodity Units.

## E.2 Calculation of Portfolio Continuity Factor for the JPMCCI Aggregate Index

The “Portfolio Continuity Factor”  $PCF_y$  for year  $y$  is:

$$PCF_y = PCF_{y-1} \times \frac{\sum_c ACU_y^c \times \sum_n CW_{m_{y-1}^*, n}^c \times CP_{d_{y-1}^*, m_{y-1}^*, n}^c}{\sum_c ACU_{y-1}^c \times \sum_n CW_{m_{y-1}^*, n}^c \times CP_{d_{y-1}^*, m_{y-1}^*, n}^c}$$

where:

$m_{y-1}^*$  means December in year  $y-1$

$d_{y-1}^*$  means the last Index Valuation Day in year  $y-1$

$CP_{d, m, n}^c$  means the Settlement Price denominated in U.S. dollars per physical unit of the commodity underlying the JPMCCI Exchange Commodity as of day  $d$ , for the JPMCCI Exchange Commodity  $c$  Monthly Contract expiring  $n$  months after month  $m$

At inception  $PCF_{inception}$  is set so that  $JPMCCIPR_d$  (see below) is equal to 100.



### E.3 Portfolio Continuity Factors for the JPMCCI Sector Indices

Portfolio Continuity Factors for JPMCCI Sector Indices are calculated in the same manner as for the JPMCCI Aggregate Index, except that only the Aggregate Commodity Units of the JPMCCI Exchange Commodities relevant to the JPMCCI Sector Index in question will be used in the calculations.

## F. Index Calculations

All Index Levels calculated (Price Index, Excess Return Index, and Total Return Index) are rounded to the nearest fifth decimal.

### F.1 JPMCCI Single Commodity Price Index

The JPMCCI Single Commodity Price Index Level  $JPMCCIPR_d^c$  for JPMCCI Exchange Commodity  $c$  on Index Valuation Day  $d$  is:

$$JPMCCIPR_d^c = RW_d^c \times \sum_n CW_{m_d-1,n}^c \times CP_{d,m_d-1,n}^c + (1 - RW_d^c) \times \sum_n CW_{m_d,n}^c \times CP_{d,m_d,n}^c$$

where:

$m_d$  is the month on which Index Valuation Day  $d$  falls

### F.2 JPMCCI Single Commodity Excess Return Index

The JPMCCI Single Commodity Excess Return Index Level  $JPMCCIER_d^c$  for JPMCCI Exchange Commodity  $c$  on Index Valuation Day  $d$  is:

$$JPMCCIER_d^c = JPMCCIER_{d-1}^c \times (1 + CDER_d^c)$$

where

$CDER_d^c$  for JPMCCI Exchange Commodity  $c$  on Index Valuation Day  $d$  means the following:

$$CDER_d^c = \frac{RW_{d-1}^c \times \sum_n CW_{m_{d-1}-1,n}^c \times CP_{d,m_{d-1}-1,n}^c + (1 - RW_{d-1}^c) \times \sum_n CW_{m_{d-1},n}^c \times CP_{d,m_{d-1},n}^c}{RW_{d-1}^c \times \sum_n CW_{m_{d-1}-1,n}^c \times CP_{d-1,m_{d-1}-1,n}^c + (1 - RW_{d-1}^c) \times \sum_n CW_{m_{d-1},n}^c \times CP_{d-1,m_{d-1},n}^c} - 1$$

On the **Inception Date**, each JPMCCI Single Commodity Excess Return Index Level or  $JPMCCIER_{inception}^c = 100$ .

### F.3 JPMCCI Single Commodity Total Return Index

The JPMCCI Single Commodity Total Return Index Level or  $JPMCCITR_d^c$  for JPMCCI Exchange Commodity  $c$  on Index Valuation Day  $d$  is:

$$JPMACCITR_d^c = JPMACCITR_{d-1}^c \times (1 + CDER_d^c + TBR_d) \times \prod_{a \in A} (1 + TBR_a)$$

where:

$TBR_d$  is the "U.S. Treasury Bill Return" on calendar day  $d$ , calculated as follows:

$$TBR_d = \left( \frac{1}{1 - 91/360 \times TBRATE_{d-1}} \right)^{1/91} - 1$$

$TBRATE_{d-1}$  is the 91-day auction high rate for U.S. Treasury Bills on the most recent weekly auction date available on the calendar day immediately preceding the calendar day  $d$

$A$  is the set of calendar days in between the immediately preceding Index Valuation Day and the Index Valuation Day  $d$  (exclusive)

On the **Inception Date**, JPMCCI Single Commodity Total Return Index Level or  $JPMCCITR_{inception}^c = 100$ .

### F.4 JPMCCI Aggregate Price Index

The JPMCCI Aggregate Price Index Level or  $JPMACCIPR_d$  on Index Valuation Day  $d$  is:

$$JPMACCIPR_d = \frac{1}{PCF_{y_{m_d}-1}} \times \sum_c ACU_{y_{m_d}-1}^c \times RW_d^c \times \sum_n CW_{m_d-1,n}^c \times CP_{d,m_d-1,n}^c$$

$$+ \frac{1}{PCF_{y_{m_d}}} \times \sum_c ACU_{y_{m_d}}^c \times (1 - RW_d^c) \times \sum_n CW_{m_d,n}^c \times CP_{d,m_d,n}^c$$

where:

$y_{m_d}$  is the year in which month  $m_d$  falls

On the Inception Date, the JPMCCI Aggregate Price Index Level or  $JPMCCIPR_{inception} = 100$

## F.5 JPMCCI Aggregate Excess Return Index

The JPMCCI Aggregate Excess Return Index Level or  $JPMACCIE R_d$  on Index Valuation Day  $d$ , is:

$$JPMACCIE R_d = JPMACCIE R_{d-1} \times (1 + ADE R_d)$$

where the “Aggregate Daily Excess Return”  $ADE R_d$  for Index Valuation Day  $d$  is:

$$ADE R_d = \frac{A}{B} - 1$$

where:

$$A = \left\{ \frac{1}{PCF_{y_{m_{d-1}-1}}} \times \sum_c ACU_{y_{m_{d-1}-1}}^c \times RW_{d-1}^c \times \sum_n CW_{m_{d-1}-1,n}^c \times CP_{d,m_{d-1}-1,n}^c \right. \\ \left. + \frac{1}{PCF_{y_{m_{d-1}}}} \times \sum_c ACU_{y_{m_{d-1}}}^c \times (1 - RW_{d-1}^c) \times \sum_n CW_{m_{d-1},n}^c \times CP_{d,m_{d-1},n}^c \right\}$$

$$B = \left\{ \frac{1}{PCF_{y_{m_{d-1}-1}}} \times \sum_c ACU_{y_{m_{d-1}-1}}^c \times RW_{d-1}^c \times \sum_n CW_{m_{d-1}-1,n}^c \times CP_{d-1,m_{d-1}-1,n}^c \right. \\ \left. + \frac{1}{PCF_{y_{m_{d-1}}}} \times \sum_c ACU_{y_{m_{d-1}}}^c \times (1 - RW_{d-1}^c) \times \sum_n CW_{m_{d-1},n}^c \times CP_{d-1,m_{d-1},n}^c \right\}$$

On the Inception Date, the JPMCCI Aggregate Excess Return Index Level  $JPMACCIE R_{inception} = 100$ .

## F.6 JPMCCI Aggregate Total Return Index

The JPMCCI Aggregate Total Return Index Level or  $JPMACCITR_d$  on Index Valuation Day  $d$ , is:

$$JPMACCITR_d = JPMACCITR_{d-1} \times (1 + ADE R_d + TBR_d) \times \prod_{a \in A} (1 + TBR_a)$$

On the Inception Date, JPMCCI Aggregate Total Return Index Level or  $JPMACCITR_{inception} = 100$ .

## F.7 JPMCCI Sector Index Calculations

JPMCCI Sector Price Indices, JPMCCI Excess Return Sector Indices and JPMCCI Total Return Sector Indices are calculated in the same manner as for the JPMCCI Aggregate Indices, except that only the Aggregate Commodity Units of those JPMCCI Exchange Commodities included in the relevant JPMCCI Sector Index are used in the calculations.

## **F.8 JPMCCI Energy Light Index Calculations**

JPMCCI Energy Light Price Indices, JPMCCI Energy Light Excess Return Indices and JPMCCI Energy Light Total Return Indices are calculated in the same manner as for the JPMCCI Aggregate Indices, except that the Aggregate Commodity Units of the JPMCCI Energy Sector Exchange Commodities used in the calculations are adjusted as described in Section C.3.

## **F.9 Publication of corrected Index Levels**

In the event that a Settlement Price used to calculate any Index Level is subsequently corrected and the correction is published by the Relevant Exchange before the next following Rebalancing Day, or any other element used in the calculation of any index level is determined by the Index Calculation Agent prior to the next following Rebalancing Day to have been incorrect, then the Index Calculation Agent may, if practicable and the correction is deemed material by the Index Calculation Agent, adjust or correct the relevant Index Level published on any relevant Scheduled Index Valuation Day and publish such corrected Index Level as soon as it is reasonably practicable.

**G. JPMCCI Exchange Commodities included in the JPMCCI Aggregate Indices, JPMCCI Energy Light Indices and JPMCCI Sector Indices in 2008**

**Table 1**

Table 1 below shows the JPMCCI Sector Indices created in 2008 and the JPMCCI Exchange Commodities included in each. The JPMCCI Aggregate Indices and the JPMCCI Energy Light Indices each include all 35 JPMCCI Exchange Commodities set out below.

The 2008 composition included two new commodities, LME Tin and CBOT Rough Rice. During our annual commodity inclusion review process, we have identified these two commodities as meeting the criteria required for inclusion (including being U.S.\$ denominated, traded on U.S./UK exchanges, and having Estimated Market Size in excess of \$250 million based on their open interest and price), and confirmed that they are sufficiently liquid for index inclusion.

<b>Energy</b>		<b>Agriculture</b>	
NYMEX	Crude Oil	CBOT	Corn
NYMEX	Gasoline	CBOT	Soybean
NYMEX	Heating Oil	CBOT	Soybean Meal
NYMEX	Natural Gas	CBOT	Soybean Oil
ICE	Brent Crude	CBOT	Rough Rice
ICE	Gas Oil	CBOT	Wheat
		KCBOT	Winter Wheat
		MGE	Spring Wheat
<b>Precious Metals</b>		NYBOT	Cocoa
COMEX	Gold	NYBOT	Coffee
COMEX	Silver	NYBOT	Cotton
NYMEX	Palladium	NYBOT	Orange Juice
NYMEX	Platinum	NYBOT	Sugar
		LIFFE	Robusta Coffee
		LIFFE	White Sugar
<b>Industrial Metals</b>			
LME	Aluminum		
LME	Copper		
LME	Lead		
LME	Nickel		
LME	Tin		
LME	Zinc		
COMEX	Copper		
		<b>Livestock</b>	
		CME	Feeder Cattle
		CME	Lean Hogs
		CME	Live Cattle

**Table 2**

*Table 2* sets out a chart below detailing the combined exchanges of the relevant JPMCCI Single Commodity Indices.

For WTI Crude Oil and Heating Oil, the open interest for the NYMEX and ICE contracts were combined starting with the February 2006 contract, for WTI Crude Oil, and the April 2006, for Heating Oil. For Gold and Silver, the open interest for the COMEX and CBOT contracts were combined starting with the October 2004 contract, for Gold, and the October 2004, for Silver. For Gasoline, the open interest for the phased out NYMEX Unleaded Gasoline and successor NYMEX RBOB Gasoline contracts were combined, when the NYMEX Unleaded Gasoline contracts were phased out in July 2006.

Open Interest for:	Combined for Exchange Commodity	since
ICE Crude Oil	NYMEX Crude Oil	Feb-2006
ICE Heating Oil	NYMEX Heating Oil	Apr-2006
CBOT Gold	COMEX Gold	Oct-2004
CBOT Silver	COMEX Silver	Oct-2004

**Table 3**

Table 3 shows the 2008 estimated post-rebalancing weights for the JPMCCI Aggregate Index and JPMCCI Sector Indices calculated using 2008 Aggregate Commodity Units and average prices for the commodities based on the compositions and prices of the JPMCCI on 28-Nov-2007.

<b>Energy</b>	<b>51.42%</b>	<b>Agriculture</b>	<b>19.17%</b>
NYMEX Crude Oil	22.33%	CBOT Corn	4.28%
NYMEX Gasoline	2.94%	CBOT Soybean	3.94%
NYMEX Heating Oil	4.09%	CBOT Soybean Meal	1.04%
NYMEX Natural Gas	9.86%	CBOT Soybean Oil	1.23%
ICE Brent Crude	8.20%	CBOT Rough Rice	0.06%
ICE Gas Oil	4.00%	CBOT Wheat	2.91%
		KCBOT Winter	0.99%
		Wheat	
<b>Precious Metals</b>	<b>7.67%</b>	MGE Spring Wheat	0.39%
COMEX Gold	5.67%	NYBOT Cocoa	0.53%
COMEX Silver	1.75%	NYBOT Coffee	1.12%
NYMEX Palladium	0.10%	NYBOT Cotton	0.99%
NYMEX Platinum	0.15%	NYBOT Orange Juice	0.13%
		NYBOT Sugar	1.15%
<b>Industrial Metals</b>	<b>19.14%</b>	LIFFE Robusta Coffee	0.26%
LME Aluminum	6.25%	LIFFE White Sugar	0.17%
LME Copper	7.12%		
LME Lead	0.87%	<b>Livestock</b>	<b>2.60%</b>
LME Nickel	1.56%	CME Feeder Cattle	0.30%
LME Tin	0.26%	CME Lean Hogs	0.74%
LME Zinc	1.73%	CME Live Cattle	1.56%
COMEX Copper	1.34%		

**Table 4**

Table 4 shows the 2008 estimated post-rebalancing weights for the JPMCCI Energy Light Index calculated using 2008 Aggregate Commodity Units and average prices for the commodities based on the compositions and prices of the JPMCCI Energy Light Index on 31-Dec-2007.

<b>Energy</b>	<b>33.0%</b>	<b>Agriculture</b>	<b>27.9%</b>
NYMEX Crude Oil	14.4%	CBOT Corn	6.5%
NYMEX Gasoline	2.0%	CBOT Rough Rice	0.1%
NYMEX Heating Oil	2.6%	CBOT Soybean	5.8%
NYMEX Natural Gas	6.3%	CBOT Soybean Meal	1.6%
ICE Brent Crude	5.2%	CBOT Soybean Oil	1.8%
ICE Gas Oil	2.5%	CBOT Wheat	4.0%
		KCBOT Winter Wheat	1.4%
<b>Industrial metals</b>	<b>25.0%</b>	MGE Spring Wheat	0.6%
LME Aluminum	8.1%	NYBOT Cocoa	0.8%
LME Copper	9.5%	NYBOT Coffee	1.6%
LME Lead	1.0%	NYBOT Cotton	1.4%
		NYBOT Orange Juice	0.2%
LME Nickel	2.0%	NYBOT Sugar	1.7%
LME Zinc	2.2%	LIFFE Robusta Coffee	0.4%
		LIFFE White Sugar	0.3%
LME Tin	0.3%		
COMEX Copper	1.8%		
<b>Precious metals</b>	<b>10.7%</b>	<b>Livestock</b>	<b>3.4%</b>
COMEX Gold	7.9%	CME Feeder Cattle	0.4%
COMEX Silver	2.4%	CME Lean Hogs	0.9%
NYMEX Palladium	0.1%	CME Live Cattle	2.1%
NYMEX Platinum	0.2%		



**H. Commodity Inclusion Process in 2008****Table 5**

Table 5 below shows the list of futures markets which were reviewed for inclusion in JPMCCI for 2008. If the Estimated Market Size is below \$250 million, those futures contracts were not considered. The final inclusion decision is indicated in the last column. Estimated Market Sizes are computed using Settlement Prices as of October 31, 2007.

Country	Exchange	Exchange Commodity	Avg monthly OI in obs period	Units per contract		\$ per unit	Estimated market size, U.S.\$m	Considered for 2008?	Included for 2008?
U.S.	CBOT	Wheat	344,690	5,000	BUSHEL	8.08	13,925	Yes	Yes
U.S.	CBOT	Corn	1,032,437	5,000	BUSHEL	3.76	19,384	Yes	Yes
U.S.	CBOT	Oats	11,659	5,000	BUSHEL	2.88	168	No	-
U.S.	CBOT	Soybeans	357,457	5,000	BUSHEL	10.10	18,052	Yes	Yes
U.S.	CBOT	Soybean Oil	217,104	60,000	LBS	0.42	5,511	Yes	Yes
U.S.	CBOT	Soybean Meal	174,315	100	SHORT TONS	279.60	4,874	Yes	Yes
U.S.	CBOT	South American Soybeans	37	5,000	BUSHEL	9.95	2	No	-
U.S.	CBOT	Rough Rice	11,198	2,000	CWT	11.85	265	Yes	Yes
U.S.	CBOT	Ethanol	529	29,000	LBS	1.79	27	No	-
U.S.	CBOT	5,000 oz Silver	4,686	5,000	FINE TROY OZ	14.47	339	Yes	No, OI allocated to COMEX Silver
U.S.	CBOT	Silver (1,000 oz)						No	-
U.S.	CBOT	Gold (kilo)						No	-
U.S.	CBOT	100 oz Gold	18,242	100	FINE TROY OZ	795.80	1,452	Yes	No, OI allocated to COMEX Gold
U.S.	CME	Lean Hogs	142,219	40,000	LBS	0.54	3,065	Yes	Yes
U.S.	CME	Pork Bellies, Frozen	1,734	40,000	LBS	0.84	58	No	-
U.S.	CME	Nonfat Dry Milk	174	44,000	X WAP PER LB	205.50	1,569	Yes	No
U.S.	CME	Class III Milk	29,040	200,000	LBS	0.19	1,082	Yes	No
U.S.	CME	Class IV Milk	58	200,000	LBS	0.21	2	No	-
U.S.	CME	Butter	583	40,000	LBS	1.30	30	No	-
U.S.	CME	Cash Butter	2,407	20,000	LBS	1.30	63	No	-
U.S.	CME	Dry Whey	267					No	-
U.S.	CME	Live Cattle	201,282	40,000	LBS	0.95	7,633	Yes	Yes
U.S.	CME	Feeder Cattle	27,028	50,000	LBS	1.08	1,466	Yes	Yes
U.S.	CME	Random Length Lumber	5,735	110,000	BOARD FEET	0.23	144	No	-
U.S.	CME	Diammonium Phosphate	2	100	GALLONS	0.00	-	No	-

U.S.	CME	Urea Ammonium Nitrate	8	100	TONS	0.00	-	No	-
U.S.	CME	Urea	13	100	TONS	0.00	-	No	-
U.S.	KCBOT	Winter Wheat	115,535	5,000	BUSHELS	8.32	4,806	Yes	Yes
U.S.	MIDAM	Wheat (1,000 bu)						No	-
U.S.	MIDAM	Corn (1,000 bu)						No	-
U.S.	MIDAM	Oats (1,000 bu)						No	-
U.S.	MIDAM	Soybeans (1,000 bu)						No	-
U.S.	MIDAM	Soybean Meal New						No	-
U.S.	MIDAM	Soybean Oil						No	-
U.S.	MIDAM	Live Cattle (20,000#)						No	-
U.S.	MIDAM	Live Hogs (15,000#)						No	-
U.S.	MIDAM	Lean Hogs (20,000#)						No	-
U.S.	MIDAM	New York Silver (1000 oz)						No	-
U.S.	MIDAM	New York Gold						No	-
U.S.	MIDAM	Platinum						No	-
U.S.	MGE	Spring Wheat	43,939	5,000	BUSHELS	8.34	1,832	Yes	Yes
U.S.	MGE	White Wheat						No	-
U.S.	MGE	Durum Wheat						No	-
U.S.	MGE	Wheat (5,000 bu)						No	-
U.S.	MGE	Barley						No	-
U.S.	MGE	Black Tiger Shrimp						No	-
U.S.	NYBOT	Coffee "C"	114,886	37,500	LBS	1.21	5,228	Yes	Yes
U.S.	NYBOT	Sugar #11	502,462	112,000	LBS	0.10	5,616	Yes	Yes
U.S.	NYBOT	Sugar #14	11,137	112,000	LBS	0.21	257	Yes	No
U.S.	NYBOT	White Sugar						No	-
U.S.	NYBOT	Cocoa	136,319	10	METRIC TONS	1,945.00	2,651	Yes	Yes
U.S.	NYBOT	Cotton	148,158	50,000	LBS	0.64	4,747	Yes	Yes
U.S.	NYBOT	Pulp	1,325	20	METRIC TONS	757.50	20	No	-
U.S.	NYBOT	Ethanol	0	7,750	U.S. GALLONS	0.00	-	No	-
U.S.	NYBOT	Orange Juice, Fzn. Conc.	30,319	15,000	LBS	1.40	634	Yes	Yes
U.S.	NYBOT	Orange Juice, Fzn. Conc. - 2		15,000	LBS	0.00		No	-
U.S.	NYBOT	Not From Concentrate Orange Juice	34					No	-

U.S.	COMEX	Copper	88,104	25,000	LBS	3.47	7,639	Yes	Yes
U.S.	COMEX	Aluminum	2,712	44,000	LBS	1.13	135	No	-
U.S.	COMEX	Silver (5,000 oz)	114,748	5,000	TROY OZ	14.44	8,284	Yes	Yes
U.S.	COMEX	Gold (100 oz)	329,721	100	TROY OZ	795.30	26,223	Yes	Yes
U.S.	NYMEX	Palladium	14,310	100	TROY OZ	374.25	536	Yes	Yes
U.S.	NYMEX	Platinum	10,492	50	TROY OZ	1,447.60	759	Yes	Yes
U.S.	NYMEX	No. 2 Heating Oil, NY	188,157	42,000	U.S. GALLONS	2.51	19,818	Yes	Yes
U.S.	NYMEX	Unleaded Gasoline, NY	85,963	42,000	U.S. GALLONS	0.00	-	No	-
U.S.	NYMEX	New York Harbor RBOB Gasoline	64,255	42,000	U.S. GALLONS	2.34	6,315	Yes	Yes
U.S.	NYMEX	Gulf Coast Gasoline	13					No	-
U.S.	NYMEX	Crude Oil	1,038,752	1,000	INDEX POINTS	94.53	98,193	Yes	Yes
U.S.	NYMEX	Propane	174	42,000	U.S. GALLONS	1.56	11	No	-
U.S.	NYMEX	Natural Gas	657,591	10,000	MMBTU	8.33	54,777	Yes	Yes
U.S.	NYMEX	Permian Basin						No	-
U.S.	NYMEX	Alberta Natural Gas						No	-
U.S.	NYMEX	Palo Verde Electricity						No	-
U.S.	NYMEX	Mid-Columbia Electricity						No	-
U.S.	NYMEX	Cinergy						No	-
U.S.	NYMEX	PJM Financially Settled Monthly Futures	48,208	40	MW * PK DAYS	67.25	130	No	-
U.S.	NYMEX	Northern Illinois Hub Monthly	9,719	40	MW * PK DAYS	56.48	22	No	-
U.S.	NYMEX	AER Dayton Hub Peak Monthly Electricity	3,182	40	MW * PK DAYS	57.50	7	No	-
U.S.	NYMEX	PJM Financially Settled Monthly Futures Off-Peak	21,219					No	-
U.S.	NYMEX	Northern Illinois Hub Monthly Electricity Off-Peak	19,632	970	MWH	38.60	735	Yes	No

U.S.	NYMEX	AER Dayton Hub Monthly Electricity Off-Peak	3,505	920	MWH	39.98	129	No	-
U.S.	NYMEX	TD5 West Africa to USAC Freight Futures	32	1,000	METRIC TONS	0.00	-	No	-
U.S.	NYMEX	TC4 Singapore to Japan Freight Futures	5	1,000	METRIC TONS	0.00	-	No	-
U.S.	NYMEX	Tanker Route TD7 North Sea to Europe Freight Futures	3	1,000	METRIC TONS	0.00	-	No	-
U.S.	NYMEX	TD3 Middle Eastern Gulf to Japan Freight Futures	9	1,000	METRIC TONS	0.00	-	No	-
U.S.	NYMEX	Tanker Route TC5 Ras Tanura to Tokohama Freight Futures	2					No	-
U.S.	NYMEX	Tanker Route TD5 west Africa to USAC Freight Futures	4					No	-
U.S.	NYMEX	TC2 Europe to USAC Freight Futures	93	1,000	METRIC TONS	19.18	2	No	-
U.S.	NYMEX	Central Appalachian Coal	5,189	1,550	TONS	47.63	383	Yes	No
U.S.	NYMEX	Sulfur Dioxide (SO2) Emissions Futures	901	100	SHORT TONS	0.00	-	No	-
U.S.	NYMEX	Nitrogen Oxide (Nox) Emissions Futures	15	10	SHORT TONS	0.00	-	No	-
UK	LIFFE	Raw Sugar	13,486	112,000	LBS	0.10	147	No	-
UK	LIFFE	Robusta Coffee	140,865	5	METRIC TONS	2,275.00	1,602	Yes	Yes
UK	LIFFE	No. 5 White Sugar	58,426	50	METRIC TONS	283.60	828	Yes	Yes
UK	LIFFE	BIFFEX						No	-
UK	ICE	Brent Crude Oil	467,093	1,000	BARRELS	90.63	42,333	Yes	Yes
UK	ICE	Gas Oil	252,529	100	TONNES	787.00	19,874	Yes	Yes
UK	ICE	ICE WTI Crude (Monthly)	224,091	1,000	BARRELS	94.53	21,183	Yes	No, OI allocated to NYMEX Crude Oil
UK	ICE	ICE Gasoline (Monthly)	332	42,000	U.S. GALLONS	2.34	33	No	-

UK	ICE	ICE Heating Oil Crude (Monthly)	3,791	42,000	U.S. GALLONS	2.53	403	Yes	No, OI allocated to NYMEX Heating Oil
UK	ICE	ICE Rotterdam Coal (Monthly)	153	1,000	TONNES	126.00	19	No	-
UK	ICE	ICE Richards Bay Coal (Monthly)	24					No	-
UK	LME	High Grade Primary Aluminum	488,921	25	METRIC TONS	2,505.00	30,619	Yes	Yes
UK	LME	Aluminum Alloy	6,034	20	METRIC TONS	2,207.75	266	Yes	No
UK	LME	North American Special Aluminum Alloy	18,219	20	METRIC TONS	2,241.00	817	Yes	No
UK	LME	Copper - Grade A	213,319	25	METRIC TONS	7,736.00	41,256	Yes	Yes
UK	LME	Standard Lead	57,741	25	METRIC TONS	3,687.00	5,322	Yes	Yes
UK	LME	Primary Nickel	46,305	6	METRIC TONS	31,775.00	8,828	Yes	Yes
UK	LME	Tin	15,545	5	METRIC TONS	16,610.00	1,291	Yes	Yes
UK	LME	Silver						No	-
UK	LME	Special High Grade Zinc	139,402	25	METRIC TONS	2,815.50	9,812	Yes	Yes
UK	LME	Polypropylene	209	24	METRIC TONS	1,350.00	7	No	-
UK	LME	Linear Low	212	24	METRIC TONS	1,330.00	7	No	-

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**I. Aggregate Commodity Units and Portfolio Continuity Factors for JPMCCI from 1989 - 2008****I.1 Aggregate Commodity Units for JPMCCI Aggregate Index**

The following Aggregate Commodity Units were used for the implementation of the JPMCCI to create hypothetical back-tested results and the current version of the JPMCCI Aggregate Index. For years prior to 2003, the Aggregate Commodity Units were set to those of year 2003. This was done because open interest data was not obtainable from the Futures Industries Association for many commodity contracts prior to 1999, hence the first reliable Observation Period spanned from November 1999 to October 2002. Aggregate Commodity Units were set to 0 for commodities which were not traded historically, did not meet the estimated market size criterion of \$250 million, or for which prices were unobtainable.

For crude oil and heating oil, the open interest for the NYMEX and ICE contracts were combined. For gold and silver, the open interest for the COMEX and CBOT contracts were combined. For gasoline, the open interest for the phased out NYMEX Unleaded Gasoline and successor NYMEX RBOB Gasoline contracts were combined.

**Aggregate Commodity Units (Applicable Years 1989 – 1998)**

The following table sets forth the Aggregate Commodity Units for the applicable year as determined on the Exchange Commodity Publication Date in the immediately preceding calendar year.

Sector	Exchange	Commodity	Units	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Energy	NYMEX	Crude Oil	barrels	458,863,694	458,863,694	458,863,694	458,863,694	458,863,694	458,863,694	458,863,694	458,863,694	458,863,694	458,863,694
Energy	NYMEX	Gasoline	U.S. gallons	4,175,053,167	4,175,053,167	4,175,053,167	4,175,053,167	4,175,053,167	4,175,053,167	4,175,053,167	4,175,053,167	4,175,053,167	4,175,053,167
Energy	NYMEX	Heating Oil	U.S. gallons	5,900,030,500	5,900,030,500	5,900,030,500	5,900,030,500	5,900,030,500	5,900,030,500	5,900,030,500	5,900,030,500	5,900,030,500	5,900,030,500
Energy	NYMEX	Natural Gas	MMBtu	0	0	3,952,375,278	3,952,375,278	3,952,375,278	3,952,375,278	3,952,375,278	3,952,375,278	3,952,375,278	3,952,375,278
Energy	ICE	Brent Crude	barrels	258,535,278	258,535,278	258,535,278	258,535,278	258,535,278	258,535,278	258,535,278	258,535,278	258,535,278	258,535,278
Energy	ICE	Gas Oil	tonnes	14,219,414	14,219,414	14,219,414	14,219,414	14,219,414	14,219,414	14,219,414	14,219,414	14,219,414	14,219,414
Precious Metals	COMEX	Gold	troy oz	13,823,519	13,823,519	13,823,519	13,823,519	13,823,519	13,823,519	13,823,519	13,823,519	13,823,519	13,823,519
Precious Metals	COMEX	Silver	try oz	376,919,167	376,919,167	376,919,167	376,919,167	376,919,167	376,919,167	376,919,167	376,919,167	376,919,167	376,919,167
Precious Metals	NYMEX	Palladium	troy oz	0	0	0	0	0	0	0	0	0	0
Precious Metals	NYMEX	Platinum	troy oz	0	0	0	0	0	0	0	0	0	0
Industrial Metals	LME	Aluminum	metric tons	7,525,360	7,525,360	7,525,360	7,525,360	7,525,360	7,525,360	7,525,360	7,525,360	7,525,360	7,525,360
Industrial Metals	LME	Copper	metric tons	4,770,700	4,770,700	4,770,700	4,770,700	4,770,700	4,770,700	4,770,700	4,770,700	4,770,700	4,770,700
Industrial Metals	LME	Lead	metric tons	1,114,081	1,114,081	1,114,081	1,114,081	1,114,081	1,114,081	1,114,081	1,114,081	1,114,081	1,114,081
Industrial Metals	LME	Nickel	metric tons	273,253	273,253	273,253	273,253	273,253	273,253	273,253	273,253	273,253	273,253
Industrial Metals	LME	Tin	metric tons	0	0	0	0	0	0	0	0	0	0
Industrial Metals	LME	Zinc	metric tons	2,579,144	2,579,144	2,579,144	2,579,144	2,579,144	2,579,144	2,579,144	2,579,144	2,579,144	2,579,144
Industrial Metals	COMEX	Comex Copper	lbs	1,953,729,861	1,953,729,861	1,953,729,861	1,953,729,861	1,953,729,861	1,953,729,861	1,953,729,861	1,953,729,861	1,953,729,861	1,953,729,861
Agriculture	CBOT	Corn	bushels	2,167,260,694	2,167,260,694	2,167,260,694	2,167,260,694	2,167,260,694	2,167,260,694	2,167,260,694	2,167,260,694	2,167,260,694	2,167,260,694
Agriculture	CBOT	Soybeans	bushels	844,682,639	844,682,639	844,682,639	844,682,639	844,682,639	844,682,639	844,682,639	844,682,639	844,682,639	844,682,639
Agriculture	CBOT	Soybean Meal	short tons	12,516,456	12,516,456	12,516,456	12,516,456	12,516,456	12,516,456	12,516,456	12,516,456	12,516,456	12,516,456
Agriculture	CBOT	Soybean Oil	lbs	8,652,626,667	8,652,626,667	8,652,626,667	8,652,626,667	8,652,626,667	8,652,626,667	8,652,626,667	8,652,626,667	8,652,626,667	8,652,626,667
Agriculture	CBOT	Rough Rice	cwt	0	0	0	0	0	0	0	0	0	0
Agriculture	CBOT	Wheat	bushels	639,026,250	639,026,250	639,026,250	639,026,250	639,026,250	639,026,250	639,026,250	639,026,250	639,026,250	639,026,250
Agriculture	KCBOT	Winter Wheat	bushels	246,060,556	246,060,556	246,060,556	246,060,556	246,060,556	246,060,556	246,060,556	246,060,556	246,060,556	246,060,556
Agriculture	MGE	Spring Wheat	bushels	120,744,028	120,744,028	120,744,028	120,744,028	120,744,028	120,744,028	120,744,028	120,744,028	120,744,028	120,744,028
Agriculture	NYBOT	Cocoa	metric tons	1,077,964	1,077,964	1,077,964	1,077,964	1,077,964	1,077,964	1,077,964	1,077,964	1,077,964	1,077,964

## JPMorgan Commodity Curve Index: Reference Document



Sector	Exchange	Commodity	Units	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Agriculture	NYBOT	Coffee	lbs	2,078,839,583	2,078,839,583	2,078,839,583	2,078,839,583	2,078,839,583	2,078,839,583	2,078,839,583	2,078,839,583	2,078,839,583	2,078,839,583
Agriculture	NYBOT	Cotton	metric tons	3,256,636,111	3,256,636,111	3,256,636,111	3,256,636,111	3,256,636,111	3,256,636,111	3,256,636,111	3,256,636,111	3,256,636,111	3,256,636,111
Agriculture	NYBOT	Orange Juice	lbs	370,170,833	370,170,833	370,170,833	370,170,833	370,170,833	370,170,833	370,170,833	370,170,833	370,170,833	370,170,833
Agriculture	NYBOT	Sugar	lbs	18,698,499,556	18,698,499,556	18,698,499,556	18,698,499,556	18,698,499,556	18,698,499,556	18,698,499,556	18,698,499,556	18,698,499,556	18,698,499,556
Agriculture	LIFFE	Robusta Coffee	metric tons	0	0	0	426,137	426,137	426,137	426,137	426,137	426,137	426,137
Agriculture	LIFFE	White Sugar	metric tons	2,116,874	2,116,874	2,116,874	2,116,874	2,116,874	2,116,874	2,116,874	2,116,874	2,116,874	2,116,874
Livestock	CME	Feeder Cattle	lbs	893,311,111	893,311,111	893,311,111	893,311,111	893,311,111	893,311,111	893,311,111	893,311,111	893,311,111	893,311,111
Livestock	CME	Lean Hogs	lbs	1,671,363,333	1,671,363,333	1,671,363,333	1,671,363,333	1,671,363,333	1,671,363,333	1,671,363,333	1,671,363,333	1,671,363,333	1,671,363,333
Livestock	CME	Live Cattle	lbs	4,518,600,000	4,518,600,000	4,518,600,000	4,518,600,000	4,518,600,000	4,518,600,000	4,518,600,000	4,518,600,000	4,518,600,000	4,518,600,000



## Aggregate Commodity Units (Applicable Years 1999 – 2008)

The following table sets forth the Aggregate Commodity Units for the applicable year as determined on the Exchange Commodity Publication Date in the immediately preceding calendar year.

Sector	Exchange	Commodity	Units	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Energy	NYMEX	Crude Oil	barrels	458,863,694	458,863,694	458,863,694	458,863,694	458,863,694	479,080,000	558,192,222	664,877,028	888,011,472	1,262,843,028
Energy	NYMEX	Gasoline	U.S. gallons	4,175,053,167	4,175,053,167	4,175,053,167	4,175,053,167	4,175,053,167	4,330,824,167	4,786,703,833	5,270,708,333	5,913,329,333	6,309,154,833
Energy	NYMEX	Heating Oil	U.S. gallons	5,900,030,500	5,900,030,500	5,900,030,500	5,900,030,500	5,900,030,500	5,900,458,667	6,361,101,833	6,687,075,500	7,282,970,333	8,061,833,500
Energy	NYMEX	Natural Gas	MMBtu	3,952,375,278	3,952,375,278	3,952,375,278	3,952,375,278	3,952,375,278	4,112,828,889	3,897,673,333	3,895,447,222	5,187,450,556	6,575,908,611
Energy	ICE	Brent Crude	barrels	258,535,278	258,535,278	258,535,278	258,535,278	258,535,278	267,984,139	295,609,611	322,742,583	375,228,333	467,092,917
Energy	ICE	Gas Oil	tonnes	14,219,414	14,219,414	14,219,414	14,219,414	14,219,414	15,325,947	16,942,625	16,984,903	20,110,683	25,252,900
Precious Metals	COMEX	Gold	troy oz	13,823,519	13,823,519	13,823,519	13,823,519	13,823,519	16,088,439	20,834,558	25,990,381	30,430,822	34,796,314
Precious Metals	COMEX	Silver	try oz	376,919,167	376,919,167	376,919,167	376,919,167	376,919,167	399,084,583	450,574,861	510,735,000	563,612,500	597,169,861
Precious Metals	NYMEX	Palladium	troy oz	0	0	0	0	0	0	0	0	1,210,064	1,431,033
Precious Metals	NYMEX	Platinum	troy oz	0	0	0	0	0	346,861	351,578	415,453	449,244	524,601
Industrial Metals	LME	Aluminum	metric tons	7,525,360	7,525,360	7,525,360	7,525,360	7,525,360	7,795,439	8,576,411	9,417,062	10,754,121	12,223,036
Industrial Metals	LME	Copper	metric tons	4,770,700	4,770,700	4,770,700	4,770,700	4,770,700	4,984,793	4,922,739	4,790,953	4,913,909	5,332,982
Industrial Metals	LME	Lead	metric tons	1,114,081	1,114,081	1,114,081	1,114,081	1,114,081	1,304,189	1,413,126	1,443,145	1,394,535	1,443,530
Industrial Metals	LME	Nickel	metric tons	273,253	273,253	273,253	273,253	273,253	260,158	258,048	251,650	260,931	277,831
Industrial Metals	LME	Tin	metric tons	0	0	0	0	0	0	0	0	0	77,727
Industrial Metals	LME	Zinc	metric tons	2,579,144	2,579,144	2,579,144	2,579,144	2,579,144	2,886,352	3,365,368	3,448,255	3,507,189	3,485,055
Industrial Metals	COMEX	Comex Copper	lbs	1,953,729,861	1,953,729,861	1,953,729,861	1,953,729,861	1,953,729,861	2,064,997,917	2,038,850,000	2,233,322,222	2,226,227,778	2,202,595,139
Agriculture	CBOT	Corn	bushels	2,167,260,694	2,167,260,694	2,167,260,694	2,167,260,694	2,167,260,694	2,158,812,500	2,432,131,667	2,825,118,194	4,062,362,500	5,162,183,333
Agriculture	CBOT	Soybeans	bushels	844,682,639	844,682,639	844,682,639	844,682,639	844,682,639	943,817,361	1,045,282,222	1,185,002,222	1,392,916,667	1,787,284,861
Agriculture	CBOT	Soybean Meal	short tons	12,516,456	12,516,456	12,516,456	12,516,456	12,516,456	14,032,797	15,232,622	15,170,464	15,866,594	17,431,519
Agriculture	CBOT	Soybean Oil	lbs	8,652,626,667	8,652,626,667	8,652,626,667	8,652,626,667	8,652,626,667	8,852,228,333	9,172,546,667	9,274,993,333	10,757,793,333	13,026,258,333
Agriculture	CBOT	Rough Rice	cwt	0	0	0	0	0	0	0	0	0	22,395,556
Agriculture	CBOT	Wheat	bushels	639,026,250	639,026,250	639,026,250	639,026,250	639,026,250	583,116,667	588,545,139	787,761,528	1,312,355,833	1,723,452,222
Agriculture	KCBOT	Winter Wheat	bushels	246,060,556	246,060,556	246,060,556	246,060,556	246,060,556	223,316,111	274,106,111	336,978,611	476,580,972	577,673,611
Agriculture	MGE	Spring Wheat	bushels	120,744,028	120,744,028	120,744,028	120,744,028	120,744,028	124,267,917	139,473,472	149,737,500	188,919,444	219,692,917
Agriculture	NYBOT	Cocoa	metric tons	1,077,964	1,077,964	1,077,964	1,077,964	1,077,964	1,002,946	970,827	1,058,009	1,210,815	1,363,189

Sector	Exchange	Commodity	Units	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Agriculture	NYBOT	Coffee	lbs	2,078,839,583	2,078,839,583	2,078,839,583	2,078,839,583	2,078,839,583	2,419,429,167	2,887,218,750	3,286,986,458	3,674,463,542	4,308,218,750
Agriculture	NYBOT	Cotton	metric tons	3,256,636,111	3,256,636,111	3,256,636,111	3,256,636,111	3,256,636,111	3,562,516,667	3,803,061,111	4,369,818,056	5,500,219,444	7,407,920,833
Agriculture	NYBOT	Orange Juice	lbs	370,170,833	370,170,833	370,170,833	370,170,833	370,170,833	365,758,750	424,466,667	458,152,083	490,503,333	454,785,000
Agriculture	NYBOT	Sugar	lbs	18,698,499,556	18,698,499,556	18,698,499,556	18,698,499,556	18,698,499,556	19,733,749,778	24,461,425,333	32,458,863,111	42,778,795,111	56,275,694,222
Agriculture	LIFFE	Robusta Coffee	metric tons	426,137	426,137	426,137	426,137	426,137	414,284	364,176	434,934	561,667	704,327
Agriculture	LIFFE	White Sugar	metric tons	2,116,874	2,116,874	2,116,874	2,116,874	2,116,874	1,639,464	1,127,731	1,074,203	1,960,901	2,921,276
Livestock	CME	Feeder Cattle	lbs	893,311,111	893,311,111	893,311,111	893,311,111	893,311,111	795,054,167	780,186,111	943,261,111	1,163,591,667	1,351,383,333
Livestock	CME	Lean Hogs	lbs	1,671,363,333	1,671,363,333	1,671,363,333	1,671,363,333	1,671,363,333	1,566,534,444	1,845,782,222	2,769,052,222	4,256,834,444	5,688,748,889
Livestock	CME	Live Cattle	lbs	4,518,600,000	4,518,600,000	4,518,600,000	4,518,600,000	4,518,600,000	4,414,354,444	4,305,682,222	4,892,566,667	6,327,788,889	8,051,275,556

**I.2 Portfolio Continuity Factors for the JPMCCI Aggregate Index from 1989 to 2007**

The following Portfolio Continuity Factors were used for the implementation of the JPMCCI Aggregate Index historically:

<b>Index Year</b>	<b>JPMCCI Aggregate Index Portfolio Continuity Factor</b>	<b>Index Year</b>	<b>JPMCCI Aggregate Index Portfolio Continuity Factor</b>
1989	962,142,883	2000	1,031,329,823
1990	962,142,883	2001	1,031,329,823
1991	1,026,532,199	2002	1,031,329,823
1992	1,031,329,823	2003	1,031,329,823
1993	1,031,329,823	2004	1,077,286,896
1994	1,031,329,823	2005	1,157,805,136
1995	1,031,329,823	2006	1,262,133,880
1996	1,031,329,823	2007	1,507,150,562
1997	1,031,329,823		
1998	1,031,329,823		
1999	1,031,329,823		

### I.3 Aggregate Commodity Units (ACU) and Portfolio Continuity Factors (PCF) for JPMCCI Energy Light Index

The following Aggregate Commodity Units (ACU) and Portfolio Continuity Factors (PCF) were used for the implementation of the JPMCCI Energy Light Index historically. All non-energy ACUs remain unchanged from Table I.1:

	Aggregate Commodity Units						
Sector	Energy	Energy	Energy	Energy	Energy	Energy	Portfolio Continuity Factor
Exchange	NYMEX	NYMEX	NYMEX	NYMEX	ICE	ICE	
Commodity	Crude Oil	NYMEX Gasoline	NYMEX Heating Oil	NYMEX Natural Gas	Brent Crude	Gas Oil	
Units	barrels	US Gallons	US Gallons	MMBtu	barrels	tonnes	
1989	458863694	4175053167	5900030500	0	258535278	14219414	962142883
1990	458863694	4175053167	5900030500	0	258535278	14219414	962142883
1991	424921940	3866228062	5463610301	3660021466	239411645	13167616	1000168151
1992	458863694	4175053167	5900030500	3952375278	258535278	14219414	1026888160
1993	458863694	4175053167	5900030500	3952375278	258535278	14219414	1026888160
1994	458863694	4175053167	5900030500	3952375278	258535278	14219414	1026888160
1995	458863694	4175053167	5900030500	3952375278	258535278	14219414	1026888160
1996	458863694	4175053167	5900030500	3952375278	258535278	14219414	1026888160
1997	443101165	4031634978	5697357228	3816606347	249654274	13730960	1014973229
1998	458863694	4175053167	5900030500	3952375278	258535278	14219414	1025384356
1999	458863694	4175053167	5900030500	3952375278	258535278	14219414	1025384356
2000	397751568	3619013584	5114255956	3425992256	224103178	12325652	975903597
2001	240843474	2191357304	3096744979	2074480513	135697235	7463334	803217437
2002	364755723	3318795003	4689998177	3141785936	205512494	11303166	904631392
2003	272226441	2476900826	3500264508	2344794473	153379183	8435839	813395713
2004	313998493	2838507689	3867277139	2695629279	175642097	10044928	878013782
2005	313135659	2685253569	3568462140	2186523670	165831602	9504504	895613010
2006	296793875	2352786885	2985037786	1738885280	144068780	7581876	902978498
2007	558930994	3721959848	4584037457	3265078198	236175716	12658039	1175039018
2008	570616141	2850794206	3642742782	2971327010	211056126	11410533	1267736367

**J. Estimated Market Sizes 1990-2008**

Estimated Market Sizes for various Potential JPMCCI Exchange Commodities were estimated historically to narrow down potential commodity contracts for inclusion. The Estimated Market Size for each year is calculated as the average of the Monthly Open Interest figures reported by the Futures Industry Association during the Observation Period, multiplied by the Settlement Price of the commodity's front month contract prevailing on the last Index Valuation Day on October in the prior year.

Note: For years prior to 2003, the Observation Period was set to that of the Observation Period of 2003 (spanning from November 1999 to October 2002) because open interest data was not obtainable from the Futures Industries Association for many commodity contracts before then.

The figures below are in U.S.\$ millions.

Ctry	Exch	Commodity	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
U.S.	CBOT	Wheat	2,521	1,674	2,323	2,265	2,144	2,458	3,181	2,372	2,304	1,880	1,634	1,628	1,874	2,570	2,155	1,863	2,497	6,339	13,925
U.S.	CBOT	Corn	5,147	4,968	5,440	4,492	5,586	4,677	7,206	5,765	6,063	4,746	4,324	4,465	4,454	5,364	5,338	4,925	5,544	13,030	19,384
U.S.	CBOT	Oats	95	80	88	89	87	83	131	105	104	76	74	72	132	136	72	61	59	109	168
U.S.	CBOT	Soybeans	4,718	5,001	4,713	4,639	5,235	4,580	5,704	5,640	5,835	4,718	3,974	3,883	3,619	4,775	7,496	5,514	6,692	8,779	18,052
U.S.	CBOT	Soybean Oil	1,657	1,885	1,678	1,676	2,028	2,220	2,302	1,955	2,182	2,144	1,410	1,265	1,342	1,890	2,310	1,972	2,120	2,886	5,511
U.S.	CBOT	Soybean Meal	2,286	2,230	2,306	2,283	2,412	2,013	2,607	2,747	2,792	1,797	1,855	2,123	2,013	2,124	3,538	2,344	2,574	3,008	4,874
U.S.	CBOT	South American Soybeans																	1	1	2
U.S.	CBOT	Rice	87	87	109	80	131	80	114	125	132	111	68	77	45	47	103	97	97	155	265
U.S.	CBOT	Ethanol																	3	17	27
U.S.	CBOT	Diammonium Phosphate																			
U.S.	CBOT	Anhydrous Ammonia																			
U.S.	CBOT	Eastern Catastrophic Insurance																			
U.S.	CBOT	Midwest Catastrophic Insurance																			
U.S.	CBOT	National Catastrophic Insurance																			
U.S.	CBOT	Com Ed Hub Electricity																			

Ctry	Exch	Commodity	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
U.S.	CBOT	TVA Hub Electricity																			
U.S.	CBOT	5,000 oz Silver																0	13	118	339
U.S.	CBOT	Silver (1,000 oz)																			
U.S.	CBOT	Gold (kilo)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
U.S.	CBOT	100 oz Gold																1	72	531	1,452
U.S.	CME	Boneless Beef																			
U.S.	CME	Boneless Beef Trimmings																			
U.S.	CME	Live Hogs (40,000#)																			
U.S.	CME	Lean Hogs	778	1,169	942	958	1,108	797	987	1,229	1,040	625	778	855	863	721	835	1,245	1,708	2,765	3,065
U.S.	CME	Pork Bellies																			
U.S.	CME	Pork Bellies, Frozen	69	77	52	51	76	54	77	85	81	58	77	77	88	98	87	193	182	180	58
U.S.	CME	Pork Bellies, Fresh																			
U.S.	CME	Fluid Milk																			
U.S.	CME	Nonfat Dry Milk													28		173	267	406	497	1,569
U.S.	CME	Class III Milk								126	111	137	105	86	125	92	335	622	734	667	1,082
U.S.	CME	Class IV Milk												35	39	31	29	21	4	2	2
U.S.	CME	Butter								20	23	38	23	23	30	24	34	51	55	36	30
U.S.	CME	Cheddar Cheese																			
U.S.	CME	Cash Butter																	0	31	63
U.S.	CME	Dry Whey																			
U.S.	CME	Live Cattle	3,364	3,500	3,321	3,334	3,346	3,163	3,088	3,013	3,051	2,937	3,264	3,276	2,992	3,091	4,492	3,783	4,330	5,720	7,633
U.S.	CME	Stocker Cattle																			
U.S.	CME	Pork Cutout																			
U.S.	CME	Feeder Cattle	743	784	761	747	768	677	579	558	696	635	723	793	773	737	805	852	1,093	1,210	1,466
U.S.	CME	Lumber																			
U.S.	CME	New Lumber																			
U.S.	CME	Random Length Lumber	59	59	65	75	119	106	82	138	97	85	105	68	73	73	88	110	128	124	144
U.S.	CME	OSB Lumber																			
U.S.	CME	Diammonium Phosphate																0	0	0	0
U.S.	CME	Urea Ammonium																0	0	0	0

Ctry	Exch	Commodity	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
		Nitrate																			
U.S.	CME	Urea																0	0	0	0
U.S.	KCBOT	Wheat	974	653	903	835	827	969	1,260	995	916	807	682	752	742	1,140	819	951	1,251	2,459	4,806
U.S.	KCBOT	Western Gas																			
U.S.	MIDAM	Wheat (1,000 bu)																			
U.S.	MIDAM	Corn (1,000 bu)																			
U.S.	MIDAM	Oats (1,000 bu)																			
U.S.	MIDAM	Soybeans (1,000 bu)																			
U.S.	MIDAM	Soybean Meal New																			
U.S.	MIDAM	Soybean Oil																			
U.S.	MIDAM	Live Cattle (20,000#)																			
U.S.	MIDAM	Live Hogs (15,000#)																			
U.S.	MIDAM	Lean Hogs (20,000#)																			
U.S.	MIDAM	New York Silver (1000 oz)																			
U.S.	MIDAM	New York Gold																			
U.S.	MIDAM	Platinum																			
U.S.	MGE	Spring Wheat	465	312	420	404	420	467	608	466	469	441	395	381	380	567	469	512	558	936	1,832
U.S.	MGE	White Wheat																			
U.S.	MGE	Durum Wheat																			
U.S.	MGE	Wheat (5,000 bu)																			
U.S.	MGE	Barley																			
U.S.	MGE	Cottonseed																			
U.S.	MGE	White Shrimp																			
U.S.	MGE	Black Tiger Shrimp																			
U.S.	MGE	Twin Section Cities Electricity - On Peak																			
U.S.	NYBOT	Coffee "C"	1,556	1,881	1,675	1,423	1,649	3,896	2,527	2,436	3,090	2,287	2,083	1,547	913	1,371	1,419	2,148	3,177	3,978	5,228
U.S.	NYBOT	Sugar #11	2,612	1,761	1,679	1,640	1,986	2,393	1,975	1,926	2,317	1,442	1,286	1,851	1,260	1,376	1,170	2,104	3,678	4,941	5,616
U.S.	NYBOT	Sugar #14	309	319	294	292	297	293	306	301	298	295	255	289	285	303	291	287	297	256	257

Ctry	Exch	Commodity	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
U.S.	NYBOT	White Sugar																			
U.S.	NYBOT	Cocoa	1,053	1,243	1,302	1,005	1,207	1,430	1,413	1,458	1,728	1,623	942	814	1,096	2,077	1,444	1,426	1,429	1,797	2,651
U.S.	NYBOT	Cheddar Cheese																			
U.S.	NYBOT	Milk																			
U.S.	NYBOT	Butter																			
U.S.	NYBOT	Non Fat Dry Milk																			
U.S.	NYBOT	BFP Large																			
U.S.	NYBOT	BFP Milk																			
U.S.	NYBOT	Cotton	2,450	2,443	1,996	1,684	1,865	2,353	2,765	2,346	2,355	2,207	1,702	2,051	974	1,506	2,734	1,711	2,267	2,711	4,747
U.S.	NYBOT	Pulp																	2	15	20
U.S.	NYBOT	Ethanol																20			0
U.S.	NYBOT	Orange Juice, Fzn. Conc.	483	427	611	356	395	392	436	395	249	428	341	245	336	365	247	328	535	978	634
U.S.	NYBOT	Orange Juice, Fzn. Conc. - 2																	0	0	
U.S.	NYBOT	Not From Concentrate Orange Juice																			
U.S.	NYBOT	Potato																			
U.S.	COMEX	Copper	2,265	2,291	2,079	1,971	1,426	2,421	2,514	1,807	1,772	1,410	1,569	1,654	1,215	1,395	1,935	2,747	4,234	7,427	7,639
U.S.	COMEX	Aluminum											87	86	74	79	148	269	311	311	135
U.S.	COMEX	Silver (5,000 oz)	1,967	1,576	1,548	1,418	1,646	1,983	2,020	1,812	1,785	1,901	1,952	1,801	1,592	1,698	2,021	3,291	3,859	6,797	8,284
U.S.	COMEX	Gold (100 oz)	5,220	5,271	4,970	4,701	5,109	5,321	5,312	5,240	4,314	4,060	4,151	3,683	3,877	4,401	6,188	8,945	12,063	17,935	26,223
U.S.	NYMEX	Palladium	28	20	18	19	26	33	28	24	42	56	80	159	64	63	45	99	189	390	536
U.S.	NYMEX	Platinum	188	167	139	135	142	159	156	146	154	128	153	220	157	218	259	293	392	488	759
U.S.	NYMEX	No. 2 Heating Oil, NY	3,460	5,283	4,046	3,470	3,016	2,890	2,974	3,914	3,408	2,290	3,387	5,552	3,528	4,388	4,637	9,199	11,835	11,498	19,818
U.S.	NYMEX	Unleaded Gasoline, NY	2,191	4,026	2,791	2,596	1,975	2,383	2,122	2,779	2,514	1,886	2,669	3,908	2,306	3,605	3,479	6,293	8,043	7,768	
U.S.	NYMEX	New York Harbor RBOB Gasoline																	0	881	6,315
U.S.	NYMEX	Gulf Coast Gasoline																			
U.S.	NYMEX	Crude Oil	9,150	16,166	10,724	9,462	7,764	8,347	8,094	10,714	9,673	6,617	9,980	15,005	9,719	12,490	13,946	28,892	39,733	48,625	98,193
U.S.	NYMEX	Middle East Sour Crude Oil																			
U.S.	NYMEX	Propane	7	17	16	12	10	12	11	19	14	9	15	21	14	17	12	27	29	19	11
U.S.	NYMEX	Natural Gas		9,328	8,087	9,071	9,359	7,707	7,375	10,782	14,039	8,992	11,703	17,746	13,007	16,426	20,124	34,007	47,544	39,082	54,777



Ctry	Exch	Commodity	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
U.S.	NYMEX	Permian Basin																			
U.S.	NYMEX	Alberta Natural Gas																			
U.S.	NYMEX	Palo Verde Electricity																			
U.S.	NYMEX	California Oregon Border Electricity																			
U.S.	NYMEX	Mid-Columbia Electricity																			
U.S.	NYMEX	Cinergy																			
U.S.	NYMEX	Entergy																			
U.S.	NYMEX	PJM Financially Settled Monthly Futures															2	21	110	103	130
U.S.	NYMEX	Northern Illinois Hub Monthly																	3	10	22
U.S.	NYMEX	AER Dayton Hub Peak Monthly Electricity																	1	4	7
U.S.	NYMEX	PJM Financially Settled Monthly Futures Off-Peak																			
U.S.	NYMEX	Northern Illinois Hub Monthly Electricity Off-Peak																	112	315	735
U.S.	NYMEX	AER Dayton Hub Monthly Electricity Off-Peak																	15	54	129
U.S.	NYMEX	TD5 West Africa to USAC Freight Futures																		0	0
U.S.	NYMEX	TC4 Singapore to Japan Freight Futures																	0		0
U.S.	NYMEX	Tanker Route TD7 North Sea to Europe Freight Futures																			0

Ctry	Exch	Commodity	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
U.S.	NYMEX	TD3 Middle Eastern Gulf to Japan Freight Futures																	0		0
U.S.	NYMEX	Tanker Route TCS Ras Tanura to Tokohama Freight Futures																			
U.S.	NYMEX	Tanker Route TD5 west Africa to USAC Freight Futures																			
U.S.	NYMEX	TC2 Europe to USAC Freight Futures																		2	2
U.S.	NYMEX	Central Appakachian Coal													10	8	22	57	97	166	383
U.S.	NYMEX	Sulfur Dioxide (SO2) Emissions Futures																		13	0
U.S.	NYMEX	Nitrogen Oxide (Nox) Emissions Futures																			0
UK	LIFFE	Raw Sugar																			147
UK	LIFFE	Robusta Coffee				390	509	1,456	997	623	609	759	513	297	162	297	273	197	394	848	1,602
UK	LIFFE	No. 5 White Sugar	804	629	602	547	602	752	745	654	658	469	379	529	483	441	286	270	303	784	828
UK	LIFFE	Barley																			
UK	LIFFE	BIFFEX																			
UK	LIFFE	Potato																			
UK	ICE	Brent Crude Oil	4,817	8,896	5,714	5,029	4,085	4,374	4,222	5,861	5,176	3,418	5,608	7,953	5,266	6,650	7,423	14,479	18,751	22,150	42,333
UK	ICE	Gas Oil	2,517	4,184	3,079	2,627	2,293	2,140	2,168	3,114	2,602	1,596	2,552	3,999	2,641	3,150	3,858	7,552	9,376	10,382	19,874
UK	ICE	Fuel Oil																			
UK	ICE	ICE WTI Crude (Monthly)																		3,528	21,183
UK	ICE	ICE Gasoline (Monthly)																		9	33
UK	ICE	ICE Heating Oil Crude (Monthly)																		62	403

Cty	Exch	Commodity	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
UK	ICE	ICE Rotterdam Coal (Monthly)																		1	19
UK	ICE	ICE Richards Bay Coal (Monthly)																			
UK	LME	High Grade Primary Aluminum									12,153	9,800	11,136	11,154	9,523	10,152	11,830	15,841	18,796	30,187	30,619
UK	LME	Aluminum Alloy									315	233	270	237	225	268	300	280	191	254	266
UK	LME	North American Special Aluminum Alloy														17	119	291	422	719	817
UK	LME	Copper - Grade A									9,614	7,610	8,346	8,803	6,473	7,433	10,294	14,635	19,494	36,302	41,256
UK	LME	Standard Lead									675	536	550	558	532	489	854	1,280	1,429	2,281	5,322
UK	LME	Primary Nickel									1,710	1,061	2,149	2,000	1,215	2,043	3,110	3,592	3,012	8,448	8,828
UK	LME	Tin									587	594	615	559	403	451	561	894	538	829	1,291
UK	LME	Silver																			
UK	LME	Special High Grade Zinc									3,230	2,406	2,960	2,785	1,950	2,028	2,755	3,543	5,297	14,902	9,812
UK	LME	Polypropylene																	1	4	7
UK	LME	Linear Low																	0	4	7

## K. JPMCCI Bloomberg Tickers

Bloomberg Tickers for JPMCCI sub-indices					
	Price Index	Excess Return Index	Total Return Index	Weight	Remaining Maturity
Aggregate	JMCXPI	JMCXER	JMCXTR		JMCXD
Energy Light	JMCXELPI	JMCXELER	JMCXELTR		JMCXELD
Energy	JMCXENPI	JMCXENER	JMCXENTR	JMCXENW	JMCXEND
Non-Energy	JMCXNEPI	JMCXNEER	JMCXNETR	JMCXNEW	JMCXNED
Industrial Metals	JMCXIMPI	JMCXIMER	JMCXIMTR	JMCXIMW	JMCXIMD
Precious Metals	JMCXPMPI	JMCXPMER	JMCXPMTR	JMCXPMW	JMCXPMD
All Metals	JMCXMEPI	JMCXMEER	JMCXMETR	JMCXMEW	JMCXMED
Agriculture	JMCXAGPI	JMCXAGER	JMCXAGTR	JMCXAGW	JMCXAGD
Livestock	JMCXLIPI	JMCXLIER	JMCXLITR	JMCXLIW	JMCXLID
NYMEX Crude Oil	JMCXCLPI	JMCXCLER	JMCXCLTR	JMCXCLW	JMCXCLD
NYMEX Gasoline	JMCXXBPI	JMCXXBER	JMCXXBTR	JMCXXBW	JMCXXBD
NYMEX Heating Oil	JMCXHOPI	JMCXHOER	JMCXHOTR	JMCXHOW	JMCXHOD
NYMEX Natural Gas	JMCXNGPI	JMCXNGER	JMCXNGTR	JMCXNGW	JMCXNGD
ICE Brent Crude	JMCXCOPI	JMCXCOER	JMCXCOTR	JMCXCOW	JMCXCOD
ICE Gas Oil	JMCXQSPI	JMCXQSER	JMCXQSTR	JMCXQSW	JMCXQSD
COMEX Gold	JMCXGCPI	JMCXGCER	JMCXGCTR	JMCXGCW	JMCXGCD
COMEX Silver	JMCXSIPI	JMCXSIER	JMCXSITR	JMCXSIW	JMCXSID
NYMEX Palladium	JMCXPAPI	JMCXPAER	JMCXPATR	JMCXPAW	JMCXPAD
NYMEX Platinum	JMCXPLPI	JMCXPLER	JMCXPLTR	JMCXPLW	JMCXPLD
LME Aluminum	JMCXLAPI	JMCXLAER	JMCXLATR	JMCXLAW	JMCXLAD
LME Copper	JMCXLPI	JMCXLPER	JMCXLPTR	JMCXLPW	JMCXLPD
LME Lead	JMCXLLPI	JMCXLLER	JMCXLLTR	JMCXLLW	JMCXLLD
LME Nickel	JMCXLNPI	JMCXLNER	JMCXLNTR	JMCXLNW	JMCXLND
LME Zinc	JMCXLXPI	JMCXLXER	JMCXLXTR	JMCXLXW	JMCXLXD
LME Tin	JMCXLTP	JMCXLTER	JMCXLTTR	JMCXLTW	JMCXLTD
COMEX Copper	JMCXHGP	JMCXHGER	JMCXHGTR	JMCXHGW	JMCXHGD
CBOT Corn	JMCXCPI	JMCXCER	JMCXCTR	JMCXCW	JMCXCD
CBOT Soybean	JMCXSPI	JMCXSER	JMCXSTR	JMCXSW	JMCXSD
CBOT Soybean Meal	JMCXSMP	JMCXSMER	JMCXSMTR	JMCXSMW	JMCXSMD
CBOT Soybean Oil	JMCXBOPI	JMCXBOER	JMCXBOTR	JMCXBOW	JMCXBOD
CBOT Wheat	JMCXWPI	JMCXWER	JMCXWTR	JMCXWW	JMCXWD
CBOT Rough Rice	JMCXRRPI	JMCXRRER	JMCXRRTR	JMCXRRW	JMCXRRD
KCBOT Winter Wheat	JMCXKWPI	JMCXKWER	JMCXKWTR	JMCXKWW	JMCXKWD
MGE Spring Wheat	JMCXMWPI	JMCXMWER	JMCXMWTR	JMCXMWW	JMCXMWD
NYBOT Cocoa	JMCXCCPI	JMCXCCER	JMCXCCTR	JMCXCCW	JMCXCCD
NYBOT Coffee	JMCXKCPI	JMCXKCER	JMCXKCTR	JMCXKCW	JMCXKCD
NYBOT Cotton	JMCXCTPI	JMCXCTER	JMCXCTTR	JMCXCTW	JMCXCTD
NYBOT Orange Juice	JMCXJOPI	JMCXJOER	JMCXJOTR	JMCXJOW	JMCXJOD
NYBOT Sugar	JMCXSBPI	JMCXSBER	JMCXSBTR	JMCXSBW	JMCXSBD
LIFFE Robusta Coffee	JMCXCFPI	JMCXCFER	JMCXCFTR	JMCXCFW	JMCXCFD
LIFFE White Sugar	JMCXQWPI	JMCXQWER	JMCXQWTR	JMCXQWW	JMCXQWD
CME Feeder Cattle	JMCXFCPI	JMCXFCER	JMCXFCTR	JMCXFCW	JMCXFCD
CME Lean Hogs	JMCXLHPI	JMCXLHER	JMCXLHTR	JMCXLHW	JMCXLHD
CME Live Cattle	JMCXLCPI	JMCXLCER	JMCXLCTR	JMCXLCW	JMCXLCD

**K2. Table (for indicative purposes only) of days anticipated not to be Scheduled Trading Days in respect of Relevant Exchanges**

	Number of exchange commodities included in the JPMCCI index									Number of JPMCCI Exchange Commodities in Holiday	JPMCCI Holiday
	9	6	5	3	1	1	6	2	2		
	COMEX NYMEX	CBOT	NYBOT	CME	KCBOT	MGE	LME	LIFFE	ICE		
01/01/2008	H	H	H	H	H	H	H	H	H	35	Holiday
21/01/2008	H	H	H	H	H	H				25	Holiday
18/02/2008	H	H	H	H	H	H				25	Holiday
21/03/2008	H	H	H	H	H	H	H	H		33	Holiday
24/03/2008							H	H		8	
05/05/2008							H	H		8	
26/05/2008	H	H	H	H	H	H	H	H		33	Holiday
04/07/2008	H	H	H	H	H	H				25	Holiday
25/08/2008							H	H		8	
01/09/2008	H	H	H	H	H	H				25	Holiday
13/10/2008		H		H						9	
11/11/2008		H		H						9	
27/11/2008	H	H	H	H	H					24	Holiday
24/12/2008			H							5	
25/12/2008	H	H	H	H	H	H	H	H	H	35	Holiday
26/12/2008							H	H		8	

Source: JPMorgan and Relevant Exchanges; "H" refers to such day being a holiday on the Relevant Exchange

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**L. Note on Hypothetical Back-tested Historical Calculations**

The hypothetical back-tested historical values of the JPMCCI Index (i.e. any values preceding November 9, 2007) should not be taken as an indication of future performance, and no assurance can be given as to the values of the JPMCCI Index on a future date. The hypothetical back-tested historical values of the JPMCCI Index were calculated on materially the same basis on which the JPMCCI Index is now calculated; however, certain historical information used in calculating the JPMCCI Index was not available to the Index Calculation Agent in determining hypothetical back-tested historical values. Below are the material variations and assumptions used in calculating the hypothetical back-tested historical values prior to initial published values of the JPMCCI Indices on November 9, 2007.

JPMSL expressly disclaims any responsibility for (i) any errors or omissions in calculating the back-tested information and (ii) any uses to which the back-tested information may be put by any person.

**Aggregate Commodity Units Prior to 2003**

Prior to 2003, certain open interest information was not published by the Futures Industries Association for periods prior to November 1999. The first reliable Observation Period spanned from November 1999 to October 2002. Therefore, the Aggregate Commodity Units were set to equal to the Aggregate Commodity Units based on figures calculated in 2003.

**Data unavailability with regard to Historical Monthly Contract Interest Percentages**

Historically, in any year during which any HMCPIP cannot be calculated due to missing MCOIP data, all the HMCPIPs of that year were set to the HMCPIPs of the following year for which complete MCOIP data was available. For example, if reliable open interest data was not available prior to 1997 (included), then all the HMCPIPs for 1998 to 2000, all of which rely on MCOIPs of 1997, would have been set to the HMCPIPs of 2001, assuming that MCOIPs for 1998, 1999 and 2000 were intact.