

# JPMORGAN CHASE & CO.

## Principal Protected Notes Linked to the J.P. Morgan Alternative Index Multi-Strategy 5 (USD)

### General

- JPMorgan Chase & Co. may offer and sell principal protected notes linked to the J.P. Morgan Alternative Index Multi-Strategy 5 (USD) from time to time. This product supplement no. 186-A-I describes terms that will apply generally to the principal protected 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. Any payment on the notes is subject to the credit risk of JPMorgan Chase & Co.
- Payment is linked to the J.P. Morgan Alternative Index Multi-Strategy 5 (USD) as described below.
- Unless otherwise specified in the relevant terms supplement, full principal protection if the notes are held to maturity.
- Unless otherwise specified in the relevant terms supplement, cash payment at maturity of principal (or a portion of principal if the relevant terms supplement specifies a Partial Principal Protection Percentage) plus the Additional Amount\*.
- The Additional Amount will depend on the Index Return, the Index Strike Return, the Knock-Out Rate or the Fixed Payment, as applicable, and the specific terms of the notes as set forth in the relevant terms supplement. Unless otherwise specified, the Additional Amount\* per \$1,000 principal amount note will equal (A) \$1,000 x [(the Index Return or Index Strike Return, as applicable, x the Participation Rate) – the Threshold Percentage, if applicable], but will not be less than zero (or the Minimum Return, if applicable) or greater than the Maximum Return, if applicable, or (B) an amount calculated according to the formula in clause (A), unless the Index closing value exceeds a specified level (which we refer to as the Knock-Out Level) on one of the trading days specified in the relevant terms supplement, in which case the Additional Amount\* will equal \$1,000 x the Knock-Out Rate, or (C) if the Ending Index Value is greater than or equal to the Initial Index Value (or Strike Value, if applicable), a fixed amount specified in the relevant terms supplement (which amount we refer to as the Fixed Payment) and otherwise zero (or the Minimum Return, if applicable).
- In addition to a cash payment at maturity of the applicable principal amount plus the Additional Amount\*, if any, the notes may pay interest prior to maturity, as specified in the relevant terms supplement.
- For important information about tax consequences, see "Certain U.S. Federal Income Tax Consequences" beginning on page PS-148.
- 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 Index, any of the Strategies or any of the assets underlying the Strategies, which we refer to as the Underlying Constituents.
- The notes will not be listed on any securities exchange unless otherwise specified in the relevant terms supplement.

### Key Terms

#### Index:

The J.P. Morgan Alternative Index Multi-Strategy 5 (USD), which we refer to as the "Multi-Strategy Index" or the "Index."

The Index was developed and is maintained and calculated by J.P. Morgan Securities Ltd (which we refer to as "JPMSL"). The Index is a notional rules-based proprietary index that tracks the return of twenty-six alternative investment strategies (each of which we refer to as a "Strategy").

The Index is based on the theory that returns may be generated from capturing inefficiencies or trends in market prices of multiple asset classes. The Index is not intended to track a single asset class or outperform any particular asset class, benchmark or investment strategy. Instead, the Index employs several alternative investment strategies covering different styles and asset classes, in order to seek to generate positive performance with a low correlation to traditional asset classes. The Index also seeks to cap its volatility to a target volatility of 5% or less.

Each of the Strategies can be categorized based on the underlying investment strategy employed and the asset class covered. The Strategies cover four asset classes: equity, interest rates, currencies and commodities. The three main underlying investment strategies employed by the Index are momentum, carry and satellite. Each momentum strategy seeks to capitalize on the observed tendency of many markets to trend either up or down for sustained time periods. Each carry strategy seeks to capitalize on the value differential between certain assets and is typically implemented by notionally investing in an asset that is on a relative basis lower priced or higher yielding and selling an asset that on a relative basis is higher priced or lower yielding. Each satellite strategy consists of one of two types of strategies that fall outside of the momentum and carry styles, namely, mean reversion and short volatility strategies. The mean reversion strategies seek to capitalize on the view that over certain periods of time, markets are cyclical – meaning that an upward trend in the level of certain assets is usually followed by a downward trend and vice versa. The short volatility strategy aims to exploit the observed tendency of the implied volatility of an equity index to be higher than the volatility experienced by the index.

The Index rebalances monthly a synthetic portfolio composed of the Strategies. The Index rebalancing is based on a "risk-budgeting" approach to asset allocation in which each Strategy is assigned a fixed percentage of the target volatility of 5%. The Index assigns a preliminary weight to each Strategy based upon the constituent's daily maximum one-year volatility measured over the previous five years. The higher the volatility has been for a Strategy, the lower the preliminary weight assigned; conversely, the lower the volatility has been, the higher the preliminary weight. If the maximum one-year volatility of the synthetic portfolio (based on these preliminary weights) measured over the previous five years is greater than the target volatility of 5%, all the preliminary weights are scaled down accordingly. However, if the portfolio volatility is lower than the target volatility, all the preliminary weights are scaled up, subject to a maximum total weight of 200%. As the maximum total weight is 200%, no individual weight can exceed 200%.

The value of the Multi-Strategy Index is published each trading day under the Bloomberg ticker symbol "AIJPM5UE."

*(continued on next page)*

**Investing in the Principal Protected Notes involves a number of risks. See "Risk Factors" beginning on page PS-8.**

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. 186-A-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 or guaranteed by the Federal Deposit Insurance Corporation or any other governmental agency, nor are they obligations of, or guaranteed by, a bank.***

J.P.Morgan

## Key Terms (continued)

Payment at Maturity:	Unless otherwise specified in the relevant terms supplement, at maturity you will receive a cash payment for each \$1,000 principal amount note of \$1,000 (or, \$1,000 x Partial Principal Protection Percentage, if the relevant terms supplement specifies a Partial Principal Protection Percentage) plus the Additional Amount*, which may be zero (or may equal the Minimum Return, if applicable).
Additional Amount* (Notes with neither a Knock-Out Level nor a Fixed Payment):	<p>For notes with neither a Knock-Out Level nor a Fixed Payment, the Additional Amount* per \$1,000 principal amount note payable at maturity will equal, unless otherwise specified in the relevant terms supplement, <math>\\$1,000 \times [( \text{the Index Return or Index Strike Return, as applicable,} \times \text{the Participation Rate} ) - \text{the Threshold Percentage, if applicable}]</math>; <i>provided</i> that the Additional Amount* will not be less than zero (or the Minimum Return, if applicable) or greater than the Maximum Return, if applicable.</p> <p><i>For notes with a Threshold Percentage, even if the Index Return or Index Strike Return is positive, the Additional Amount will be zero if the Index has not appreciated sufficiently to offset the negative effect of the Threshold Percentage.</i></p>
Additional Amount* (Notes with a Knock-Out Level):	<p>For notes with a Knock-Out Level, the Additional Amount* per \$1,000 principal amount note payable at maturity will equal, unless otherwise specified in the relevant terms supplement:</p> <ol style="list-style-type: none"><li>(1) If the Index closing value is less than the Knock-Out Level on each of the trading days specified in the relevant terms supplement, <math>\\$1,000 \times [( \text{the Index Return or Index Strike Return, as applicable,} \times \text{the Participation Rate} ) - \text{the Threshold Percentage, if applicable}]</math>; <i>provided</i> that the Additional Amount* will not be less than zero (or the Minimum Return, if applicable) or greater than the Maximum Return, if applicable; or</li><li>(2) If the Index closing value is greater than or equal to the Knock-Out Level on any of the trading days specified in the relevant terms supplement, which we refer to as a Knock-Out Event, <math>\\$1,000 \times \text{the Knock-Out Rate}</math>.</li></ol> <p><i>For notes with a Threshold Percentage, even if the Index Return or Index Strike Return is positive, the Additional Amount will be zero if the Index has not appreciated sufficiently to offset the negative effect of the Threshold Percentage.</i></p>
Additional Amount* (Notes with a Fixed Payment):	<p>For notes with a Fixed Payment, the Additional Amount* per \$1,000 principal amount note payable at maturity will equal:</p> <ol style="list-style-type: none"><li>(1) If the Ending Index Value is greater than or equal to the Initial Index Value (or Strike Value, if applicable), an amount specified in the relevant terms supplement, which we refer to as the Fixed Payment; or</li><li>(2) If the Ending Index Value is less than the Initial Index Value (or Strike Value, if applicable), zero (or the Minimum Return, if applicable).</li></ol>
Minimum Return:	If applicable, then the Additional Amount* will equal at least the amount specified as the Minimum Return in the relevant terms supplement.
Maximum Return:	<p>If applicable, then the Additional Amount* will equal no more than the amount specified as the Maximum Return in the relevant terms supplement.</p> <p><b>* Subject to the impact of a commodity hedging disruption event as described under "General Terms of Notes—Market Disruption Events" and "General Terms of Notes—Consequences of a Commodity Hedging Disruption Event." In the event of a commodity hedging disruption event, we have the right, but not the obligation, to cause the note calculation agent to determine the value of the Additional Amount payable upon maturity prior to, and without regard to the value of the Index on, the Observation Date or any of the Ending Averaging Dates, as the case may be.</b></p>
Other Terms:	In each case if applicable, the Participation Rate, Threshold Percentage, Knock-Out Level, Knock-Out Rate, Fixed Payment, Interest Rate, Partial Principal Protection Percentage, Interest Determination Dates and/or Interest Payment Date(s) will be set forth in the relevant terms supplement.
Index Return:	If applicable, unless otherwise specified in the relevant terms supplement:
	$\frac{\text{Ending Index Value} - \text{Initial Index Value (or Strike Value, if applicable)}}{\text{Initial Index Value (or Strike Value, if applicable)}}$
Index Strike Return:	If applicable, unless otherwise specified in the relevant terms supplement:
	$\frac{\text{Ending Index Value} - \text{Strike Value}}{\text{Initial Index Value}}$
Initial Index Value:	Unless otherwise specified in the relevant terms supplement, the Index closing value on the pricing date or such other date as specified in the relevant terms supplement, or the arithmetic average of the Index closing values on each of the Initial Averaging Dates, if so specified in the relevant terms supplement.
Ending Index Value:	The Index closing value on the Observation Date or such other date as specified in the relevant terms supplement, or the arithmetic average of the Index closing values on each of the Ending Averaging Dates, if so specified in the relevant terms supplement.
Strike Value:	The relevant terms supplement may specify an Index value other than the Initial Index Value to be used for calculating the Index Return or Index Strike Return, as applicable, and the amount payable at maturity. The Strike Value may be based on and/or expressed as a percentage of the Index closing value as of a specified date, or may be determined without regard to the Index closing value as of a particular date. For example, the relevant terms supplement may specify that a Strike Value equal to 105% of the Initial Index Value will be used to calculate the Index Strike Return.
Initial Averaging Dates:	As specified, if applicable, in the relevant terms supplement. Any Initial Averaging Date is subject to postponement in the event of certain market disruption events and as described under "Description of Notes – Postponement of a Determination Date."
Index Valuation Date(s):	The Ending Index Value will be calculated on a single date, which we refer to as the 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 Index Valuation Dates in this product supplement. Any Index Valuation Date is subject to postponement in the event of certain market disruption events and as described under "Description of Notes — Postponement of a Determination Date."
Knock-Out Event:	For notes with a Knock-Out Level, the relevant terms supplement may specify any trading day(s) during the term of the notes as the day(s) on which a Knock-Out Event can occur.
Maturity Date:	As specified in the relevant terms supplement. The maturity date of the notes is subject to postponement in the event of certain market disruption events as described under "Description of Notes — Payment at Maturity."

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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. 186-A-I, the accompanying prospectus supplement and prospectus with respect to the notes offered by the relevant terms supplement and this product supplement no. 186-A-I and with respect to JPMorgan Chase & Co. This product supplement no. 186-A-I, together with the relevant terms supplement, and the accompanying prospectus and prospectus supplement, contains the terms of the notes and supersedes 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. 186-A-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. 186-A-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. 186-A-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. 186-A-I, the relevant terms supplement 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. 186-A-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 our Principal Protected Notes Linked to the J.P. Morgan Alternative Index Multi-Strategy 5 (USD).*

### General

The Principal Protected Notes are senior unsecured obligations of JPMorgan Chase & Co. that are linked to the J.P. Morgan Alternative Index Multi-Strategy 5 (USD), which we refer to as the "Multi-Strategy Index" or the "Index." 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.

Unless otherwise specified in the relevant terms supplement, the notes will not pay interest or a fixed amount at maturity. Instead, at maturity you will receive a payment in cash, the amount of which will vary depending on the performance of the Index over the term of the notes, calculated in accordance with the applicable formula as set out below. Unless otherwise specified in the relevant terms supplement, we will pay you at maturity at least the principal amount of \$1,000 (or a portion of the principal amount if the relevant terms supplement specifies a Partial Principal Protection Percentage) for each \$1,000 principal amount note and, if specified in the relevant terms supplement, accrued and unpaid interest and/or a Minimum Return.

The notes are not bank deposits and are not insured or guaranteed 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. 186-A-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 Index Valuation Date is postponed as described below. We will specify, in each case if applicable, the Participation Rate, Partial Principal Protection Percentage, Threshold Percentage, Minimum Return, Maximum Return, Knock-Out Level, Knock-Out Rate, Knock-Out Event and Fixed Payment and the applicable terms of any such payment terms in the relevant terms supplement. In addition, the notes are subject to the impact of a commodity hedging disruption event. See "General Terms of Notes — Consequences of a Commodity Hedging Disruption Event."

Your return on the notes will be linked to the performance of the Index during the life of the notes.

Unless otherwise specified in the relevant terms supplement, at maturity you will receive a cash payment for each \$1,000 principal amount note of \$1,000 (or \$1,000 x Partial Principal Protection Percentage, if the relevant terms supplement specifies a Partial Principal Protection Percentage) plus the Additional Amount as described below, which amount may be zero unless a Minimum Return applies. **The Additional Amount will be subject to the impact of a commodity hedging disruption event as described under "General Terms of Notes—Market Disruption Events" and "General Terms of Notes—Consequences of a Commodity Hedging Disruption Event."** Unless otherwise specified in the relevant terms supplement, you will not receive less than \$1,000 (or \$1,000 x Partial Principal Protection Percentage, if the relevant terms supplement specifies a Partial Principal Protection Percentage) for each \$1,000 principal amount note if you hold the notes to maturity.

Subject to the impact of a commodity hedging disruption event, for notes with neither a Knock-Out Level nor a Fixed Payment, the "Additional Amount" per \$1,000 principal amount note paid at maturity will equal, unless otherwise specified in the relevant terms supplement,  $\$1,000 \times [( \text{the Index Return or Index Strike Return, as applicable,} \times \text{the Participation Rate}) - \text{the Threshold Percentage, if applicable}]$ ; *provided* that the Additional Amount will not be less than zero (or the Minimum Return, if applicable) or greater than the Maximum Return, if applicable.

The "Partial Principal Protection Percentage" will be a percentage less than 100%, as specified in the relevant terms supplement.

The "Participation Rate" will be a percentage, which may be more or less than 100%, as specified in the relevant terms supplement.

The "Threshold Percentage," if applicable, will be a percentage specified in the relevant terms supplement.

*For notes with a Threshold Percentage, even if the Index Return or Index Strike Return is positive, the Additional Amount will be zero if the Index has not appreciated sufficiently to offset the negative effect of the Threshold Percentage.*

The "Minimum Return" will be a fixed dollar amount per \$1,000 principal amount note as specified in the relevant terms supplement.

The "Maximum Return" will be a fixed dollar amount per \$1,000 principal amount note as specified in the relevant terms supplement.

Subject to the impact of a commodity hedging disruption event, for notes with a Knock-Out Level, the "Additional Amount" per \$1,000 principal amount note paid at maturity will equal, unless otherwise specified in the relevant terms supplement:

- (1) if the Index closing value is less than the Knock-Out Level on each of the trading days specified in the relevant terms supplement,  $\$1,000 \times [( \text{the Index Return or Index Strike Return, as applicable,} \times \text{the Participation Rate}) - \text{the Threshold Percentage, if applicable}]$ ; *provided that* the Additional Amount will not be less than zero (or the Minimum Return, if applicable) or greater than the Maximum Return, if applicable; or
- (2) if the Index closing value is greater than or equal to the Knock-Out Level on any of the trading days specified in the relevant terms supplement,  $\$1,000 \times \text{the Knock-Out Rate}$ .

*For notes with a Threshold Percentage, even if the Index Return or Index Strike Return is positive, the Additional Amount will be zero if the Index has not appreciated sufficiently to offset the negative effect of the Threshold Percentage.*

The “Knock-Out Level” will be a percentage of the Initial Index Value (or Strike Value, if applicable) or a fixed level of the Index as specified in the relevant terms supplement.

The “Knock-Out Rate” will be a percentage as specified in the relevant terms supplement.

A “Knock-Out Event” occurs when the Index closing value is greater than or equal to the Knock-Out Level on any of the trading days specified in the relevant terms supplement. For example, the terms supplement may specify a single trading day as the only day on which a Knock-Out Event can occur, or the terms supplement may specify that a Knock-Out Event can occur on any trading day during the term of the notes.

Subject to the impact of a commodity hedging disruption event, for notes with a Fixed Payment, the “Additional Amount” per \$1,000 principal amount note paid at maturity will equal:

- (1) if the Ending Index Value is greater than or equal to the Initial Index Value (or Strike Value, if applicable), the Fixed Payment; or
- (2) if the Ending Index Value is less than the Initial Index Value (or Strike Value, if applicable), zero (or the Minimum Return, if applicable).

The “Fixed Payment” is a fixed dollar amount per \$1,000 principal amount note as specified in the relevant terms supplement.

The determination of the Additional Amount may be modified in the event of a commodity hedging disruption event as described under “General Terms of Notes—Market Disruption Events” and “General Terms of Notes—Consequences of a Commodity Hedging Disruption Event.”

*For more information about the impact of a commodity hedging disruption event, please see “General Terms of Notes – Consequences of a Commodity Hedging Disruption Event.”*

If applicable, the “Index Return,” as calculated by the note calculation agent, is the percentage change in the Index closing value, calculated by comparing the Ending Index Value to the Initial Index Value (or Strike Value, if applicable), unless otherwise specified in the relevant terms supplement. The relevant terms supplement will specify the manner in which the Initial Index Value (or Strike Value, if applicable) and the Ending Index Value is determined. The Index Return, unless otherwise specified in the relevant terms supplement, is calculated as follows:

$$\text{Index Return} = \frac{\text{Ending Index Value} - \text{Initial Index Value (or Strike Value, if applicable)}}{\text{Initial Index Value (or Strike Value, if applicable)}}$$

If applicable, the “Index Strike Return,” as calculated by the calculation agent, is the percentage change in the Index closing value, calculated by comparing the Ending Index Value to the Strike Value, expressed as a percentage of the Initial Index Value, unless otherwise specified in the relevant terms supplement. The relevant terms supplement will specify the manner in which the Initial Index Value, the Strike Value and the Ending Index Value will be determined. The Index Strike Return, unless otherwise specified in the relevant terms supplement, is calculated as follows:

$$\text{Index Strike Return} = \frac{\text{Ending Index Value} - \text{Strike Value}}{\text{Initial Index Value}}$$

The relevant terms supplement will specify whether an Index Return or an Index Strike Return is applicable.

Unless otherwise specified in the relevant terms supplement, the “Initial Index Value” is the Index closing value on the pricing date or such other date as specified in the relevant terms supplement, or the arithmetic average of the Index closing values on each of the Initial Averaging Dates, if so specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, the “Ending Index Value” is the Index closing value on the Observation Date or such other date as specified in the relevant terms supplement, or the arithmetic average of the Index closing values on each of the Ending Averaging Dates, if so specified in the relevant terms supplement.

The relevant terms supplement may specify a starting value, which we refer to as the “Strike Value” other than the Initial Index Value to be used for calculating the Index Return or Index Strike Return, as applicable, and the amount payable at maturity. For example, the relevant terms supplement may specify that a Strike Value, equal to 95% of the Initial Index Value, will be used to calculate the Index Strike Return.

The “Index closing value” on any trading day will equal the value of the Index or any Successor Index (as defined below) or alternative calculation of the Index described under “General Terms of Notes — Discontinuation of the Index; Alteration of Method of Calculation” at the time of daily final publication for the Index or such Successor Index, as applicable.

A “trading day” is, unless otherwise specified in the relevant terms supplement, a day (other than a Saturday or Sunday), as determined by the note calculation agent, on which (1) trading is generally conducted on the relevant exchange for each Strategy (other than the J.P. Morgan Alternative Index EURUSD FX Momentum Strategy, the J.P. Morgan Alternative Index USDJPY FX Momentum Strategy, the J.P. Morgan Alternative Index EURJPY FX Momentum Strategy, the J.P. Morgan Alternative Index USDCAD FX Momentum Strategy, the J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy, the J.P. Morgan Alternative Index EURGBP FX Momentum Strategy, the J.P. Morgan Alternative Index G10 FX Carry Strategy (we refer to the seven foregoing Strategies collectively as the “FX Strategies”), the J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy, the J.P. Morgan Alternative Index Bond 2Y Long-Short Carry Strategy, the J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy and the J.P. Morgan Alternative Index Bond 10Y Long-Short Carry Strategy (we refer to the last four Strategies listed above collectively as the “Rates Carry Strategies”)) (including any relevant successor Strategy) composing the Index and the principal options and futures exchanges relating to such Strategy, other than a day on which trading on such relevant exchange or exchange on which such futures or options contracts are traded is scheduled to close prior to its regular weekday closing time, (2) (a) dealings in foreign currency in accordance with the practice of the foreign exchange market occur in the principal financial centers for U.S. dollars and the relevant currencies included in the FX Strategies (including any relevant successor Strategy), and (b) banking institutions in the cities in which such principal financial centers are located are not otherwise authorized or required by law, regulation or executive order to close, and (3) (a) commercial banks in London, New York and Tokyo are open generally for business (including for dealings in foreign exchange and foreign currency deposits), and (b) the Trans-European Automated Real-time Gross Settlement Express Transfer System (“TARGET2”) is open.

“Relevant exchange” means, with respect to each Strategy (other than the FX Strategies and the Rates Carry Strategies) (including any relevant successor Strategy), the primary organized exchange or market of trading for any security (or any combination thereof) or futures contract (or any combination thereof) included in the Underlying Constituent(s) for such Strategy.

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.

The Index Valuation Date(s), which will be either 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.

The maturity date will be specified in the relevant terms supplement and is subject to adjustment as described below. 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 Index 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 Index 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 or dates funds sufficient to make payments of the amount payable at maturity and on the Interest Payment Dates, if any, 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.

## **Postponement of a Determination Date**

### ***Notes with a maturity of more than one year***

If an Initial Averaging Date or an Index Valuation Date, each of which we refer to as a “Determination Date,” is not a trading day or if there is a market disruption event on such Determination Date, the applicable Determination Date will be postponed to the immediately succeeding trading day during which no market disruption event shall have occurred or be continuing. In no event, however, will any Determination Date be postponed more than ten business days following the date originally scheduled to be such Determination Date. If the tenth business day following the date originally scheduled to be the applicable Determination Date is not a trading day, or if there is a market disruption event on such tenth business day, the note calculation agent will determine the Index closing value for such Determination Date on such tenth business day in accordance with the formula for and method of calculating such Index closing value last in effect prior to commencement of the market disruption event (or prior to the non-trading day), using the closing price, official settlement price, fixing level or any other relevant published trading price or level (or, if trading in the relevant securities or futures contracts has been materially suspended or materially limited, the note calculation agent’s good faith estimate of the closing price, settlement price, fixing level or trading price or level that would have prevailed but for such suspension or limitation or non-trading day) on such tenth business day of each security or futures contract most recently constituting the Underlying Constituents for the Strategies (other than the FX Strategies and the Rates Carry Strategies) included in the Index (including any relevant successor Strategy) and the currency exchange rates and/or interest or swap rates underlying the FX Strategies and the Rates Carry Strategies (including any relevant successor Strategy) (or, if such rates are not published on such day, the note calculation agent’s good faith estimate of such rates) on such tenth business day.



***Notes with a maturity of not more than one year***

If a Determination Date is not a trading day or if there is a market disruption event on such day, the applicable Determination Date will be postponed to the immediately succeeding trading day during which no market disruption event shall have occurred or be continuing. In no event, however, will any Determination Date be postponed more than ten business days following the date originally scheduled to be such Determination Date; *provided* that no Determination Date, as postponed, will produce a maturity date more than one year (counting for this purpose either the issue date or the maturity date, but not both) after the issue date (the last date that could serve as the final Determination Date without causing the maturity date to be more than one year after the issue date, the "Final Disrupted Valuation Date"). If the tenth business day following the date originally scheduled to be the applicable Determination Date is not a trading day, or if there is a market disruption event on such day, the note calculation agent will determine the Index closing value for such Determination Date on such date in accordance with the formula for and method of calculating such Index closing value last in effect prior to commencement of the market disruption event (or prior to the non-trading day), using the closing price, official settlement price, fixing level or any other relevant published trading price or level (or, if trading in the relevant securities or futures contracts has been materially suspended or materially limited, the note calculation agent's good faith estimate of the closing price, settlement price, fixing level or trading price or level that would have prevailed but for such suspension or limitation or non-trading day) on such tenth business day of each security or futures contract most recently constituting the Underlying Constituents for the Strategies (other than the FX Strategies and the Rates Carry Strategies) included in the Index (including any relevant successor Strategy) and the currency exchange rates and/or interest or swap rates underlying the FX Strategies and the Rates Carry Strategies (including any relevant successor Strategy) (or, if such rates are not published on such day, the note calculation agent's good faith estimate of such rates) on such tenth business day.

Notwithstanding the foregoing, if any Determination Date has been postponed to the Final Disrupted Valuation Date (treating any such Determination Date that is not the final Determination Date as if it were the final Determination Date), and such Final Disrupted Valuation Date is not a trading day, or if there is a market disruption event on such Final Disrupted Valuation Date, the note calculation agent will determine the Index closing value for such Determination Date on such Final Disrupted Valuation Date in accordance with the formula for and method of calculating such Index closing value last in effect prior to commencement of the market disruption event (or prior to the non-trading day), using the closing price, official settlement price, fixing level or any other relevant published trading price or level (or, if trading in the relevant securities or futures contracts has been materially suspended or materially limited, the note calculation agent's good faith estimate of the closing price, settlement price, fixing level or trading price or level that would have prevailed but for such suspension or limitation or non-trading day) on such tenth business day of each security or futures contract most recently constituting the Underlying Constituents for the Strategies (other than the FX Strategies and the Rates Carry Strategies) included in the Index (including any relevant successor Strategy) and the currency exchange rates and/or interest or swap rates underlying the FX Strategies and the Rates Carry Strategies (including any relevant successor Strategy) (or, if such rates are not published on such day, the note calculation agent's good faith estimate of such rates)) on the business day immediately preceding such Final Disrupted Valuation Date of each security most recently constituting the Index. **For the avoidance of doubt, in no event will any Determination Date occur after the Final Disrupted Valuation Date.**

## Interest Payments

If the relevant terms supplement specifies that the notes will bear interest, the notes will bear interest at the rate per annum, or such other rate or rates (the "Interest Rate"), as specified in such terms supplement. Under these circumstances, interest will accrue from the issuance date of the notes to but excluding the maturity date. Interest will be paid in arrears on each date specified in the relevant terms supplement (each such date an "Interest Payment Date") to and including the maturity date, to the holders of record at the close of business on the date 15 calendar days prior to that Interest Payment Date, whether or not such fifteenth calendar day is a business day, unless otherwise specified in the relevant terms supplement. Interest on the notes will be calculated based on a 360-day year of twelve 30-day months, unless otherwise specified in the relevant terms supplement. If any day on which a payment of interest or principal is due is not a business day, the payment will be made with the same force and effect on the next succeeding business day, but no additional interest will accrue as a result of the delayed payment, and the next interest period will commence as if the payment had not been delayed. If the maturity date is adjusted as the result of a market disruption event, the payment of interest due on the maturity date will be made on the maturity date as adjusted, with the same force and effect as if the maturity date had not been adjusted, but no additional interest will accrue or be payable as a result of the delayed payment.

An "interest period" is the period beginning on and including the issue date of the notes and ending on but excluding the first Interest Payment Date, and each successive period beginning on and including an Interest Payment Date and ending on but excluding the next succeeding Interest Payment Date, or as specified in the relevant terms supplement.

## RISK FACTORS

*Your investment in the notes will involve certain risks. The notes may not pay interest or guarantee any return of principal prior to maturity, unless otherwise specified in the relevant terms supplement. Investing in the notes is not equivalent to investing directly in the Index, the Strategies or any of the Underlying Constituents of the Strategies, any securities, futures contracts, currencies or other assets underlying the Strategies, or any futures contracts or exchange-traded or over-the-counter instruments based on, or other instruments linked to any of the foregoing. In addition, your investment in the notes entails other risks not associated with an investment in conventional debt securities. You should consider carefully the following discussion of risks before you decide that an investment in the notes is suitable for you.*

### Risks Relating to the Notes Generally

#### The notes differ from conventional debt securities.

The notes combine features of equity and debt. The terms of the notes differ from those of conventional debt securities in that we may not pay interest on the notes or, if we do pay interest, a significant portion of your total payment at maturity may be based on the performance of the Index rather than the interest rate we will pay you. Where the relevant terms supplement does not provide for interest payments, if the Ending Index Value does not exceed, or in certain cases, equal, the Initial Index Value (or Strike Value, if applicable), and if the Index closing value is less than the Knock-Out Level, if any, on each of the trading days specified in the relevant terms supplement, at maturity you will receive only \$1,000 (plus the Minimum Return, if any) for each \$1,000 principal amount note, unless otherwise specified in the relevant terms supplement. Therefore, the return on your investment in the notes may be less than the amount that would be paid on an ordinary debt security. The return at maturity of only the applicable principal amount of each note (plus the Minimum Return, if any) will not compensate you for any loss in value due to inflation and other factors relating to the value of money over time.

#### The notes are subject to the credit risk of JPMorgan Chase & Co.

The notes are subject to the credit risk of JPMorgan Chase & Co. and our credit ratings and credit spreads may adversely affect the market value of the notes. Investors are dependent on JPMorgan Chase & Co.'s ability to pay all amounts due on the notes at maturity or on any other relevant payment dates, and therefore investors are subject to our credit risk and to changes in the market's view of our creditworthiness. Any decline in our credit ratings or increase in the credit spreads charged by the market for taking our credit risk is likely to adversely affect the value of the notes.

**Potential conflicts of interest exist because we are the issuer of the notes, our affiliate, JPMSI is the note calculation agent and our affiliate, JPMSL, is the index calculation agent and sponsor of the Index, the Strategies and most of the Underlying Constituents.**

J.P. Morgan Chase & Co. is the issuer of the notes and, one of our affiliates, J.P. Morgan Securities Inc. ("JPMSI") is the calculation agent for the notes (the "note calculation agent") and will determine the index closing values to be used to determine your payment at maturity and, and another of our affiliates, JPMSL is the index calculation agent and sponsor of the Index, the Strategies and most of the Underlying Constituents. JPMSL, as index calculation agent, will determine whether there has been a market disruption event with respect to the Index, any Strategy or any relevant Underlying Constituent. In the event of any such market disruption event, JPMSL may use an alternate method to calculate the Index, including any closing level for any Strategy or relevant Underlying Constituent. As the index sponsor, JPMSL will carry out calculations necessary to promulgate the Index and all of the Strategies and these Underlying Constituents, and

it maintains some discretion as to how such calculations are made. In particular, JPMSL has discretion in selecting among methods of how to calculate the Index, any Strategy or any of these Underlying Constituents in the event the regular means of determining the Index, any Strategy or any of these Underlying Constituents is unavailable at the time such determination is scheduled to take place. While we and our affiliates will act in good faith in making all determinations with respect to the notes, the Index, the Strategies and these Underlying Constituents, there can be no assurance that any determinations made by J.P. Morgan Chase & Co., JPMSI and JPMSL in these various capacities will not affect the value of the notes, the Index, the Strategies or these Underlying Constituents. Because determinations made by JPMSI as the note calculation agent and JPMSL as the index calculation agent and sponsor of the Index, the Strategies and these Underlying Constituents may affect the amount you receive at maturity, potential conflicts of interest may exist between J.P. Morgan Chase & Co., JPMSI, JPMSL and you, as a holder of the notes.

**Our affiliate, JPMSL is the index calculation agent and may adjust the Index, the Strategies, and most of the Underlying Constituents in a way that affects their levels.**

JPMSL, one of our affiliates, acts as the index calculation agent and sponsor of the Index, the Strategies and most of the Underlying Constituents and is responsible for calculating and maintaining the Index, the Strategies and these Underlying Constituents and developing the guidelines and policies governing its composition and calculation. The rules governing the Index, the Strategies and these Underlying Constituents may be amended at any time by JPMSL, in its sole discretion, and the rules also permit the use of discretion by JPMSL in specific instances, such as the right to substitute another index or asset as an Underlying Constituent or the right to remove a Strategy or an Underlying Constituent. Unlike other indices, the maintenance of the Index, the Strategies and these Underlying Constituents are not governed by an independent committee. Although judgments, policies and determinations concerning the Index, the Strategies and these Underlying Constituents are made by JPMSL, JPMorgan Chase & Co., as the parent company of JPMSL, ultimately controls JPMSL.

In addition, the policies and judgments for which JPMSL is responsible could have an impact, positive or negative, on the level of the Index and the value of your notes. JPMSL is under no obligation to consider your interests as an investor in the notes. Furthermore, the inclusion of the Strategies (and indirectly, these Underlying Constituents) in the Index is not an investment recommendation by us or JPMSL of the Strategies or these Underlying Constituents, or any of the securities, futures contracts or other assets underlying the Strategies or these Underlying Constituents.

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

JPMSI and other affiliates of ours trade the securities, futures contracts and currencies underlying the Strategies or the Underlying Constituents 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 the Index, the Strategies, the Underlying Constituents, or the securities, futures contracts or currencies underlying the Strategies or the Underlying Constituents. 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 price of commodity futures contracts underlying the sub-indices that compose the Index or the Strategies and, accordingly, could affect the value of the notes and the amount payable to you at maturity, if any.

We or our affiliates may currently or from time to time engage in business with issuers the securities of which are included in some of the Underlying Constituents (or the indices or trackers underlying the Underlying Constituents), including extending loans to, or making equity investments in, or providing advisory services to them, including merger and acquisition advisory services. We or our affiliates may also engage in trading activities related to the commodities on which futures contracts included in some of the Underlying Constituents (or the indices or trackers underlying the Underlying Constituents) are based, the currencies included in some of the Strategies, or the related futures contracts or options. In the course of this business, we or our affiliates may acquire non-public information about the issuers of such securities, or movements in the price levels of such futures contracts or the exchanges rates for such currencies, and we will not disclose any such information to you. In addition, one or more of our affiliates may publish research reports or otherwise express views about the issuers of such securities or with respect to investments in such futures contracts or currencies or regarding expected movements in levels of the Strategies or the Underlying Constituents. Any prospective purchaser of notes should undertake an independent investigation of each Strategy (and Underlying Constituent) included in the Index as in its judgment is appropriate to make an informed decision with respect to an investment in the notes.

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 Index, the Strategies, the Underlying Constituents or the securities, futures contracts or currencies underlying the Strategies or Underlying Constituents. 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 have hedged our obligations under the notes through certain affiliates or unaffiliated counterparties 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 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 note calculation agent. The note calculation agent will determine, among other things, the Initial Index Value, the Strike Value, if applicable, the Ending Index Value, the Index closing value on each Index Valuation Date and each Initial Averaging Date, if applicable, the Index Return or Index Strike Return, as applicable, and the Additional Amount, if any, that we will pay you at maturity as well as whether the Index closing value is greater than or equal to the Knock-Out Level (for notes with a Knock-Out Level), whether the Ending Index Value is equal to or greater than the Initial Index Value (or Strike Value, if applicable) and the amount of interest payable, if any, on any Interest Payment Date. The note calculation agent will also be responsible for determining whether a market disruption event has occurred, whether the Index has been discontinued, whether there has been a material change in the method of calculating the Index value and, if the notes bear interest, whether a day is an Interest Payment Date. 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 note calculation agent, is entitled to exercise discretion.

**JPMSI and its affiliates may have published research, expressed opinions or provided recommendations that are inconsistent with investing in or holding the notes. Any such research, opinions or recommendations could affect the market value of the notes.**

JPMSI and its affiliates publish research from time to time on financial markets and other matters that may influence the value of the notes, or express opinions or provide recommendations that are inconsistent with purchasing or holding the notes. JPMSI and its affiliates may have published research or other opinions that call into question the investment view implicit in an investment in the notes. Any research, opinions or recommendations expressed by JPMSI or its affiliates may not be consistent with each other and may be modified from time to time without notice. Investors should make their own independent investigation of the merits of investing in the notes and the Strategies and the Underlying Constituents and the securities and futures contracts underlying the Strategies and the Underlying Constituents to which the notes are linked.

**Owning the notes is not the same as owning the Strategies, the Underlying Constituents (including the constituent sub-indices) or the securities, futures contracts or currencies underlying the Strategies or Underlying Constituents.**

The return on your notes will not reflect the return you would realize if you actually held the Strategies, the Underlying Constituents, the securities, futures contracts or currencies underlying the Strategies or the Underlying Constituents. The Multi-Strategy Index synthetic portfolio 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 Strategies, the Underlying Constituents, the securities, futures contracts or currencies underlying the Strategies or the Underlying Constituents, including any voting rights or right to any dividend or other distribution. Furthermore, the Multi-Strategy Index synthetic portfolio is subject to rebalancing and the assessment of multiple adjustment factors that will reduce its value relative to the value of the Strategies or the Underlying Constituents.

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

- whether a Knock-Out Event (if applicable) has occurred;
- the expected volatility in the Strategies and the Underlying Constituents;
- the time to maturity of the notes;
- the dividend rate on the equity securities underlying some of the Underlying Constituents;
- the market price of the physical commodities upon which the futures contracts that compose the Underlying Constituents are based;
- interest and yield rates in the market generally as well as in the markets of the futures contracts underlying an Underlying Constituent;
- foreign currency exchange rates;
- economic, financial, political, regulatory, geographical, agricultural, meteorological or judicial events that affect the securities, futures contracts or currencies underlying the Strategies, the Underlying Constituents or markets generally which may affect the value of the securities, futures contracts or currencies, and thus the levels of the Strategies or the Underlying Constituents and therefore, the value of the Index; and
- our creditworthiness, including actual or anticipated downgrades in our credit ratings.

Some or all of these factors will influence the price you will receive if you choose to sell your notes prior to maturity. The impact of any of the factors set forth above may enhance or offset some or all of any change resulting from another factor or factors.

You cannot predict the future performance of the Index based on its historical performance. The Ending Index Value may be flat or negative as compared to the Initial Index Value (or Strike Value, if applicable), in which event you will only receive the applicable principal amount of your notes at maturity unless the relevant terms supplement provides for interest payments, a Minimum Return or includes a Knock-Out feature.

**If the market value of the Strategies or the Underlying Constituents changes, the market value of your notes may not change in the same manner.**

Owning the notes is not the same as owning the Strategies, the Underlying Constituents, the securities, futures contracts or currencies underlying the Strategies or the Underlying Constituents based on, or other instruments linked to, the Strategies or the Underlying Constituents. Accordingly, changes in the market value of the Strategies or the Underlying Constituents may not result in a comparable change in the market value of the notes. If the Strategies close (in the case of daily monitoring) or trade (in the case of continuous monitoring) above the Initial Index Value (or Strike Value, if applicable), the value of the notes may not increase comparably, if at all. It is also possible for the value of the Strategies and the Underlying Constituents to increase or decrease, as applicable, moderately while, the value of the notes declines.

**The notes may not pay more than the applicable principal amount, and accrued and unpaid interest, if applicable, at maturity.**

If the Ending Index Value is less than, or, in certain cases, equal to the Initial Index Value (or Strike Value, if applicable), and the Index closing value is less than the Knock-Out Level, if any, on all of the trading days specified in the relevant terms supplement, you will receive only the applicable interest payments, if any, set forth in the terms supplement and, unless otherwise specified in the relevant terms supplement, \$1,000 (plus the Minimum Return, if any) for each \$1,000 principal amount note you hold at maturity. This will be true even if the value of the Index was higher than the Initial Index Value (or Strike Value, if applicable) at some time during the life of the notes but later falls below the Initial Index Value (or Strike Value, if applicable). Because the notes may accrue interest at an interest rate lower than that payable for other debt securities issued by us with a comparable maturity, the return on your investment in the notes may be less than the amount that would be paid on a conventional debt security of comparable maturity. This return may not fully compensate you for any loss in value due to inflation and other factors relating to the value of money over time.

**Your investment in the notes may result in a loss if a Partial Principal Protection Percentage is applicable.**

If the relevant terms supplement specifies that a Partial Principal Protection Percentage will apply to the notes, you may receive a payment at maturity in an amount that is less than \$1,000 for each \$1,000 principal amount note. For notes with partial principal protection, at maturity you will receive a cash payment for each \$1,000 principal amount note of \$1,000 x the Partial Principal Protection Percentage, plus the Additional Amount, which may be zero.

**For notes with a Threshold Percentage, the Threshold Percentage may reduce your payment at maturity.**

For notes with a Threshold Percentage, the Threshold Percentage will be a percentage which will be deducted in the calculation of the Additional Amount which you will receive at maturity, unless otherwise specified in the relevant terms supplement. Even if the Index Return or Index Strike Return is positive, the Additional Amount will be zero if the Index has not appreciated sufficiently to offset the negative effect of the Threshold Percentage. In addition, even if you receive a positive Additional Amount, the Additional Amount will be less than the amount you would have received if the Threshold Percentage were not applicable.

**The appreciation potential of the notes will be limited by the Knock-Out Level, if applicable.**

If the notes have a Knock-Out Level, the appreciation potential of the notes is limited by the Knock-Out Level and the corresponding Knock-Out Rate. For example, if the Knock-Out Level equals 125% of the Initial Index Value (or Strike Value, if applicable), the appreciation potential of the notes is limited to 24.99%. Once the Index closing value equals or exceeds the Knock-Out Level, the appreciation potential of the notes is limited to the Knock-Out Rate, even if the Index Return or Index Strike Return, as applicable, is greater than the Knock-Out Rate. For notes with a Knock-Out Level, if the Index closing value is greater than or equal to the Knock-Out Level on any trading day specified in the relevant terms supplement, the return on the notes will equal the Knock-Out Rate multiplied by the applicable principal amount of the notes and will not be determined by reference to the Index Return or Index Strike Return, as applicable. This return may not compensate you for any loss in value due to inflation and other factors relating to the value of money over time. Therefore your return may be less than the return you would have otherwise received if you had invested directly in the Index, any of the Strategies or any of the assets that ultimately underlie the Strategies for which there is an active secondary market. Under these circumstances, your return will not reflect any potential increase in the Ending Index Value, as compared to the Initial Index Value (or Strike Value, if applicable), greater than the Knock-Out Rate.

**The Ending Index Value may be less than the Index closing value at the maturity date of the notes or at other times during the term of the notes.**

Because the Ending Index Value will be calculated based on the Index closing value on one or more Index Valuation Dates near the end of the term of the notes, the Index closing value at the maturity date or at various other times during the term of the notes, including dates near the Index Valuation Date(s), could be higher than the Ending Index Value. This difference could be particularly large if there is a significant increase or decrease in the levels of the Strategies after the final Index Valuation Date but prior to the maturity date, or if there is a significant increase or decrease in the levels of the Strategies around the time of the Index Valuation Dates or if there is significant volatility in the Index closing value during the term of the notes (especially on dates near the Index Valuation Date(s)). For example, when the Index Valuation Date for the notes is near the end of the term of the notes, then if the Index values increase or remain relatively constant during the initial term of the notes and then decrease below the Initial Index Value (or Strike Value, if applicable), the Ending Index Value may be significantly less than if it were calculated on a date earlier than the Index Valuation Date. Under these circumstances, you may receive a lower payment at maturity than you would have received if you had invested directly in the Index, any of the Strategies or any of the assets that ultimately underlie the Strategies for which there is an active secondary market.

**The value of the Initial Index Value may be determined after the issue date of the notes.**

If so specified in the relevant terms supplement, the Initial Index Value may be determined based on the arithmetic average of the Index closing values 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 Initial Index Value for the Index may not be determined, and you may therefore not know the value of such Initial Index Value, until after the issue date. Similarly, the global note certificate representing 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 value of the Initial Index Value for the Index. If there are any increases in the Index closing values on the Initial Averaging Dates that occur after the issue date and such increases result in the Initial Index Value being higher than the Index closing value on the issue date, this may establish a higher value that the Index must achieve for you to receive at maturity more than the applicable principal amount of your notes and, if applicable, the Minimum Return.



**The appreciation potential of the notes will be limited by the Fixed Payment, if applicable.**

If the notes have a Fixed Payment, the appreciation potential of the notes is limited to the appreciation represented by such Fixed Payment, even if the appreciation in the Index would, but for the Fixed Payment, result in the payment of a greater Additional Amount at maturity. If the Ending Index Value is greater than or equal to the Initial Index Value (or Strike Value, if applicable), the return on the notes will equal the Fixed Payment and will not be determined by reference to the Index Return or Index Strike Return, as applicable. This return will be limited regardless of the appreciation of the Index, which may be significant. Therefore, under certain circumstances, your return may be less than the return you would have otherwise received if you had invested directly in the Index, any of the Strategies or any of the assets that ultimately underlie the Strategies for which there is an active secondary market.

**The appreciation potential of the notes will be limited by the Maximum Return, if applicable.**

If the notes have a Maximum Return, the appreciation potential of the notes is limited to the fixed dollar amount per \$1,000 principal amount note specified in the relevant terms supplement as the Maximum Return. The Additional Amount will equal no more than the Maximum Return. Accordingly, the appreciation potential of the notes will be limited to the Maximum Return even if the Additional Amount calculated with reference to the Index Return or Index Strike Return, as applicable, and Participation Rate would be greater than the Maximum Return.

**If the Participation Rate is less than 100%, the Additional Amount will be limited by the Participation Rate.**

Except for notes with a Fixed Payment, if the Participation Rate is less than 100% and the Ending Index Value exceeds the Initial Index Value (or Strike Value, if applicable), the Additional Amount you receive at maturity will equal only a percentage, as specified in the relevant terms supplement, of the Index performance above the Initial Index Value (or Strike Value, if applicable). Under these circumstances, the Additional Amount you receive at maturity will not fully reflect the performance of the Index.

**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 Index 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.

**The inclusion in the original issue price of each agent's commission and the estimated cost of hedging our obligations under the notes 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. Such agent's commission includes 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.

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

The note calculation agent may, in its sole discretion, determine that the markets have been affected in a manner that prevents it from properly determining the Index closing value on any Index Valuation Date or any Initial Averaging Date, if applicable, or the Index Return or Index Strike Return, as applicable, and calculating the payment at maturity that we are required to pay you. 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 assets that ultimately underlie the Strategies or the Underlying Constituents. If the note 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 Index Valuation Dates or Initial Averaging Dates, if any, 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 due to a commodity hedging disruption event, we have the right, but not the obligation, to adjust your payment at maturity. In making such adjustment, we will determine the forward price of the embedded option representing the Additional Amount payable on the notes at maturity (the "Option Value") as of the date on which we declare a commodity hedging disruption event (such date, a "commodity hedging disruption date"). At maturity, we will pay you, instead of the amount specified under "Description of Notes — Payment at Maturity," the amount described under "General Terms of Notes — Consequences of a Commodity Hedging Disruption Event," which will not be less than \$1,000 for each \$1,000 principal amount note (unless the relevant terms supplement specifies a Partial Principal Protection Percentage, in which case the amount due and payable for each \$1,000 principal amount note will not be less than \$1,000 x Partial Principal Protection Percentage). If a commodity hedging disruption event occurs and we decide to exercise our right to adjust your payment at maturity and in doing so determine the Option Value of your notes, such Option Value will be determined by the note calculation agent on the commodity hedging disruption date in good faith and in a commercially reasonable manner; *however*, the amount due and payable per \$1,000 principal amount note will be due and payable only at maturity. The amount you receive at maturity will not reflect any further appreciation or depreciation of the Index after the Option Value is determined on the commodity hedging disruption date. Furthermore, you will not receive any amounts (related to the Option Value or otherwise), other than any accrued and unpaid interest on the Interest Payment Dates, if applicable, until maturity. Additionally, if a commodity hedging disruption event ceases to exist, the amounts determined on the commodity hedging disruption date will not be revised after such commodity hedging disruption date. See "General Terms of Notes—Consequences of a Commodity Hedging Disruption Event."

**Generally, if the term of the notes is not more than one year, we expect to treat the notes as short-term debt instruments for U.S. federal income tax purposes.**

Unless otherwise provided in the relevant terms supplement, if the term of the notes is not more than one year (including either the issue date or the last possible date that the notes could be outstanding, but not both), we expect to treat the notes as “short-term” debt instruments for U.S. federal income tax purposes. No statutory, judicial or administrative authority directly addresses the treatment of notes or instruments similar to the notes for U.S. federal income tax purposes, and no ruling is being requested from the Internal Revenue Service (the “IRS”) with respect to the notes. As a result, certain aspects of the tax treatment of an investment in the notes are uncertain. You should review carefully the section entitled “Certain U.S. Federal Income Tax Consequences” in this product supplement no. 186-A-I and consult your tax adviser regarding your particular circumstances.

**Generally, if the term of the notes is more than one year, we expect to treat the notes as contingent payment debt instruments for U.S. federal income tax purposes.**

Unless otherwise provided in the relevant terms supplement, if the term of the notes is more than one year (including either the issue date or the last possible date the notes could be outstanding, but not both), we expect to treat the notes as “contingent payment debt instruments” for U.S. federal income tax purposes. Assuming this treatment, subject to the occurrence of a commodity hedging disruption event or a Knock-Out Event, you generally will be required to recognize interest income in each year at the “comparable yield,” as determined by us, adjusted to take account of the difference between actual and projected payments in that year. Interest included in income will increase your basis in your notes and the projected amount of interest payments, if any, will reduce your basis in your notes. Special rules may apply if the Additional Amount is determined early as a result of a commodity hedging disruption event or in the event of the occurrence of a Knock-Out Event. Generally, amounts received at maturity or on earlier sale or exchange in excess of your basis will be treated as additional interest income while any loss will generally be treated as an ordinary loss to the extent of all previous inclusions with respect to your notes, which to that extent will be deductible against other income (*e.g.*, employment and interest income) with the balance treated as capital loss, which may be subject to limitations. Losses may be subject to special reporting requirements. You should review carefully the section entitled “Certain U.S. Federal Income Tax Consequences” in this product supplement no. 186-A-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.

### **Risks Relating to the Index**

**The Index may not be successful, and may not outperform any alternative strategy that might be employed in respect of the Strategies.**

The Index follows a notional rules-based proprietary strategy that operates on the basis of pre-determined rules. Accordingly, you should determine whether those rules as described under “The J.P. Morgan Alternative Index Multi-Strategy 5 (USD)” are appropriate in light of your individual circumstances and investment objectives. No assurance can be given that the investment strategy or combination of investment strategies on which the Index is based will be successful or that the Index will outperform any alternative strategy that might be employed in respect of the Strategies.

**The target volatility of the Multi-Strategy Index may not be achieved.**

The Multi-Strategy Index rebalances monthly by assigning weights to the Strategies that are intended to achieve a target volatility of up to 5%. However, because these weights are assigned based on historical volatility of the Strategies and are subject to a maximum aggregate and individual weight of 200%, the actual realized volatility of the Multi-Strategy Index may be greater than or less than 5%, which may adversely affect the value of the Multi-Strategy Index and the notes.

**The Index and the Strategies are excess return indices and not total return indices.**

The Index is linked to twenty-six Strategies, each of which is an excess return index. An excess return index reflects the returns that are potentially available through an uncollateralized or unfunded investment in the assets underlying such index. By contrast, a total return index also reflects interest that could be earned on funds committed to the trading of the underlying assets. Investing in the notes will therefore not generate the same return as one would obtain from investing directly in the relevant underlying assets or in a total return index related to such underlying assets.

**The Index and each Strategy are comprised of a notional or synthetic portfolio or basket of assets.**

The exposures to the Strategies and any of their Underlying Constituents are purely notional and synthetic assets and will exist solely in the records maintained by or on behalf of the index calculation agent. There is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. Consequently, you will not have any claim against any of the reference assets or the Strategies composing the Index or any of their Underlying Constituents.

**The Index and the Strategies have a limited operating history and may perform in unanticipated ways.**

The Index was established in November 2009. The Strategies were established in or prior to November 2009. Therefore, the Multi-Strategy Index and the Strategies have a limited operating history. Any back-testing or similar analysis performed by any person in respect of the Multi-Strategy Index and the Strategies must be considered illustrative only and may be based on estimates or assumptions not used by the index calculation agent when determining the index level of the Multi-Strategy Index or any Strategies. Past performance should not be considered indicative of future performance.

**Failure of publication of the Index Level may adversely affect the calculation and publication of the Index.**

The publication of the Index Level depends on maintenance of requisite strategy or index licenses, the continued exchange trading of the applicable futures contracts or other assets that are notionally comprised in certain Strategies and publication of the levels of the Strategies and the Underlying Constituents and any disturbance or discontinuation of any of these actions may adversely affect the ability of the index calculation agent to continue with the calculation and publication of the Index Level.

**The investment strategies used to construct the Index involve monthly rebalancing and a weighting cap that is applied to the Strategies.**

The Strategies are subject to monthly rebalancing and a maximum weighting cap applied to the total weight of all Strategies. Although the maximum total weight is 200%, an individual weight could itself be almost 200%. By contrast, a synthetic portfolio that does not rebalance monthly and is not subject to a weighting cap in this manner could see greater compounded gains over time through exposure to a consistently and rapidly appreciating portfolio consisting of the Strategies. Therefore, your return on the notes may be less than the return you could realize on an alternative investment in the Strategies that is not subject to rebalancing and a weighting cap.

**The Strategies and the Underlying Constituents composing the Index may be changed in certain extraordinary events.**

Following the occurrence of certain extraordinary events with respect to a Strategy or Underlying Constituent as described under “The J.P. Morgan Alternative Index Multi Strategy 5 (USD) — Extraordinary Events Affecting the Index and the Underlying Constituents,” the affected Strategy or Underlying Constituent may be replaced by a substitute index or strategy. You should realize that the changing of a Strategy or Underlying Constituent may affect the performance of the Index, and therefore, the return on the notes, as the replacement Strategy or Underlying Constituent may perform significantly better or worse than the affected Strategy or Underlying Constituent.

**Foreign exchange rate risk exposure with respect to any Underlying Constituent may negatively impact the Index.**

The level of an Underlying Constituent of a Strategy which is not denominated in the currency of the Index will be notionally converted into the currency of the Index at the prevailing FX Rate for such currency. Such Strategies will therefore be exposed to fluctuations in the rate of exchange between the currency of the Underlying Constituent and the currency of the Index. Such FX Rates, therefore, have an impact (either positive or negative) on the performance of such Strategies.

In addition, it should be noted that Underlying Constituents may contain synthetic exposure to assets which are not denominated in the currency of such Underlying Constituent. In these circumstances there will also be exposure to exchange rate risk within such Underlying Constituents.

Exchange rates can be volatile and move dramatically over short periods of time.

**The notes may be subject to increased volatility due to the use of leverage.**

The Index and some of the Strategies (including the momentum strategies and some of the bond carry strategies) may use leverage to increase the return from any Strategy or Underlying Constituent, as applicable. Where the synthetic portfolio is leveraged, any price movements in the Strategies or Underlying Constituents, as applicable, may result in greater changes in the value of the Strategies or Underlying Constituents, as applicable, than if leverage was not used. In particular, the use of leverage will magnify any negative performance of the Strategies or Underlying Constituents, as applicable, which in turn could cause you to receive a lower payment at maturity than you would otherwise receive.

In addition, some of the Underlying Constituents are composed of highly leveraged instruments, such as futures contracts. A futures contract on an underlying asset often displays considerably higher volatility than the underlying asset. Futures contracts are often less liquid than their underlying asset. Accordingly, the use of these futures contracts as components of these Underlying Constituents may potentially result in higher volatility than in the absence of their usage.

**Correlation of performances among the Strategies may reduce the performance of the notes.**

Performances among the Strategies may become highly correlated from time to time during the term of the notes, including, but not limited to, a period in which there is a substantial decline in a particular sector or asset type represented by the Strategies and which has a higher weighting in the Index relative to any of the other sectors or asset types, as determined by the strategy. High correlation during periods of negative returns among Strategies representing any one sector or asset type and which Strategies have a substantial percentage weighting in the Index could cause you to lose some or all of your investment at maturity.

**Changes in the value of the Strategies may offset each other.**

Because the notes are linked to the Index, which is linked to the performance of the Strategies (and their Underlying Constituents), which collectively represent a diverse range of asset classes and geographic regions, price movements among the Strategies (and their Underlying Constituents) representing different asset classes or geographic regions may not correlate with each other. At a time when the value of a Strategy and its Underlying Constituent representing a particular asset class or geographic region increases, the value of other Strategies and their Underlying Constituents representing a different asset class or geographic region may not increase as much or may decline. In addition, the Strategies are not equally weighted and the weightings are rebalanced monthly. The same return generated by two Strategies, whether positive or negative, may have a different effect on the performance of the Index. Therefore, in calculating the level of the Index, increases in the value of some of the Strategies may be moderated, or more than offset, by lesser increases or declines in the level of other Strategies.

**The return on your investment could be significantly less than the performance of any individual Strategy of the Index or any Strategies grouped together.**

The return on your investment in the notes could be less than the return on an alternative investment with similar risk characteristics, even if some of the Strategies have generated significant returns. The levels of the Strategies may move in different directions at different times compared to each other, and underperformance by one or more of the Strategies may reduce the performance of the Index as a whole.

**The Strategies are not designed to replicate or track a particular market, sector or region or any or all of the assets underlying such Strategies.**

The Strategies are not designed to replicate or track a particular market, sector or region or any or all of the assets underlying such Strategies. The Strategies seek to reflect synthetic exposure to the underlying assets by reference to certain underlying indices or assets based on a notional rules-based strategy, but their performance will not reflect the underlying performance of the relevant markets as a whole.

For any given period, the relevant markets or any or all of the underlying assets may have positive or significantly positive performance, and the Strategies may have negative or significantly negative performance, in absolute terms or relative to the relevant markets or the underlying assets. An increase in the value of the underlying assets will not necessarily result in an increase in the values of the Strategies. In addition, while diversification is generally considered to reduce the amount of risk associated with generating returns, there can be no assurance that any Strategy will be sufficiently diversified at any time to reduce or minimize such risks to any extent.

**The sponsors of the Strategies or Underlying Constituents may adjust such Strategy or Underlying Constituent in a way that affects the level of such Strategy or Underlying Constituent, and such sponsor has no obligation to consider your interests.**

The sponsor of a Strategy or an Underlying Constituent is responsible for calculating and maintaining such Strategy or Underlying Constituent, as the case may be. Such sponsor can add, delete or substitute the Underlying Constituent of such Strategy or underlying of such Underlying Constituent or make other methodological changes that could change the level of such Strategy or Underlying Constituent, as the case may be. You should realize that the changing of the underlying included in such Strategy or Underlying Constituent may affect such Strategy or Underlying Constituent, as a newly added underlying may perform significantly better or worse than the underlying or underlyings it replaces. Additionally, such sponsor may alter, discontinue or suspend calculation or dissemination of such Strategy or Underlying Constituent. Any of these actions could adversely affect the value of the notes. The sponsor of a Strategy or Underlying Constituent has no obligation to consider your interests in calculating or revising such Strategy or Underlying Constituent.

**The reported level of the Multi-Strategy Index and most of the Strategies will include the deduction of an adjustment factor.**

One way in which the Multi-Strategy Index and most of the Strategies differ from a typical index is that their daily reported levels include a deduction from the aggregate values of their respective constituents of an adjustment factor assessed at varying annual rates (0.80% per annum for the Multi-Strategy Index and a range of adjustment factors depending on the Strategy). Each adjustment factor is deducted daily. As a result of the deduction of these multiple adjustment factors, the value of the Multi-Strategy Index will trail the value of a hypothetical identically constituted synthetic portfolio from which no such amounts are deducted.

### **Risks Relating to the Strategies**

**Owning the notes involves risks associated with the Multi-Strategy Index's momentum investment strategy.**

Each Strategy that is a momentum strategy employs a mathematical model intended to implement what is generally known as a momentum investment strategy, which seeks to capitalize on positive and negative trends in the price of assets on the assumption that if an asset performs well or poorly, it will continue to perform well or poorly in the future. This strategy is different from a strategy that seeks long-term long-only exposure to an asset. The momentum investing strategy may fail to realize gains that could occur as a result of holding an asset that has experienced price declines, but after which experiences a sudden price spike, or has experienced price increases, but after which experiences a sudden price decline. Consequently, a momentum investing strategy may perform poorly in non-trending markets characterized by short term volatility. No assurance can be given that a momentum investment strategy will be successful or that it will outperform any alternative strategy.

**Owning the notes involves risks associated with the Multi-Strategy Index's carry investment strategy.**

Each Strategy that is a carry strategy employs an investment strategy that broadly seeks to capitalize on the observed value differential between an asset that is on a relative basis lower priced or higher yielding and an asset that on a relative basis is higher priced or lower yielding. However, if the underlying assets move against the direction expected by the strategy, the strategy may perform poorly. This negative performance may be amplified by potential leverage employed in the strategy. No assurance can be given that a carry strategy will be successful or that it will outperform any alternative strategy.

**Owning the notes involves risks associated with the Multi-Strategy Index's mean reversion investment strategy.**

Each Strategy that is a mean reversion strategy seeks to capitalize on the view that over short periods of time, markets are cyclical – meaning that an upward trend in the level of an Underlying Constituent is usually followed by a downward trend or vice versa. Using this strategy, the relevant Strategy will synthetically invest in an equity index if the index level has experienced a recent decline or will synthetically short that index if the index level has experienced a recent increase. However, we cannot guarantee that the actual performance of the index will exhibit any mean reversion, and any sustained decline in the level of the relevant index at a time when the mean reversion theory would suggest that the index level should increase may result in unexpected losses, which could be significant. Similarly, any sustained increase in the level of the relevant index at a time when the mean reversion theory would suggest that the index level should decrease may result in unexpected losses, which could be significant. No assurance can be given that a mean reversion strategy will be successful or that it will outperform any alternative strategy.

**Owning the notes involves risks associated with the Multi-Strategy Index's short volatility strategy.**

The short volatility strategy seeks to capitalize from the long-term trend of the observed volatility of a broad market equity index, such as the S&P 500 Index, tending to be less than the volatility implied by prices in the equity options market, as represented by the VIX Index. However, we cannot guarantee that the implied volatility will always be greater than the realized volatility, and the value of the short volatility strategy will decrease if the implied volatility is less than the realized volatility. No assurance can be given that a short volatility strategy will be successful or that it will outperform any alternative strategy.

**The bond carry strategies are based on synthetic zero coupon bonds, which may differ from actual bonds that are publicly traded.**

Each Strategy that is a bond carry strategy tracks the performance of a notional portfolio of synthetic zero coupon bonds (which could be long only or long-short, depending on the particular bond carry strategy) denominated in different currencies. Zero coupon bonds are debt securities with a fixed principal amount that do not pay any periodic interest and, accordingly, are typically sold at a discount initially. These synthetic zero coupon bonds are purely hypothetical and are not tradeable, and there is no publicly available source for the prices of these bonds. The prices of these synthetic bonds, which are used in the calculation of the value of the relevant Strategy, is synthetically constructed to equal the present value of the principal amount to be paid at maturity. The present value is calculated by discounting the principal amount to be paid at maturity of such bonds using published swap rates and money market rates. These synthetic bonds may perform differently from actual bonds that are publicly traded, and these Strategies may not perform as well as another index or strategy that tracks actual, publicly traded bonds or other measures of interest rates.

**The volatility matching used in the commodity carry strategy may not achieve its intended result.**

The commodity carry strategy uses a long-short strategy that is intended to reflect the net return of a synthetic long position in a commodity index (the J.P. Morgan Contag Beta Full Energy Class A Excess Return Index, a notional rules-based proprietary index developed and maintained by JPMSL) and a synthetic short position in a benchmark commodity index (the S&P GSCI™ Excess Return). In order to limit realized volatility, the commodity carry strategy uses "volatility matching" by attempting to match the volatility of the short constituent to the volatility of the long constituent. The commodity carry strategy will adjust the weight of the short constituent to reduce exposure to the short constituent where the volatility of the short constituent is greater than the volatility of the long constituent based on their past historical realized volatility. However, no adjustment is made to increase exposure to the short constituent if the volatility of the short constituent is less than the volatility of the long constituent. The volatility matching mechanism seeks to maximize the offsetting effect of these two sources of synthetic exposure. Because (1) the volatility matching only applies when the short constituent has exhibited greater volatility than the long constituent, but not vice versa, (2) the long and short constituents may not be sufficiently correlated to achieve the desired offsetting effect and (3) since past historical realized volatility may not be a good estimate of future realized volatility, there can be no guarantee that the volatility matching mechanism will effectively lead to a reduced volatility of the commodity carry strategy.

**The short volatility strategy may lead to large negative returns in periods of high volatility.**

The strategy of synthetically selling volatility can lead to large negative returns in periods of high volatility in the underlying equity index. Therefore, increased returns (or volatility) of the underlying equity index will result in proportionally higher negative returns in the short volatility strategy, which may adversely affect the value of the notes and the amount you receive at maturity.



**Because the momentum strategies, the carry strategies and the mean reversion strategies include or permit notional short positions, the Index may be subject to additional risks.**

Each Strategy that is a momentum strategy, a carry strategy or a mean reversion strategy includes or permits notional short positions in its Underlying Constituents. Unlike long positions, short positions are subject to unlimited risk of loss because there is no limit on the amount by which the price that the relevant asset may appreciate before the short position is closed. It is possible that any notional short position included in any such Strategy may appreciate substantially with an adverse impact on the value of such Strategy and the Index, and, consequently, on the amount you will receive at maturity for your notes.

**For the Strategies that employ a long-short strategy, your payment at maturity depends on the net performance of the Underlying Constituents, not on the absolute performance of such Underlying Constituents.**

Your return on the notes is solely dependent on the net performance of the Underlying Constituent that has a notional long position (*i.e.* to which the relevant Strategy has long exposure) minus the Underlying Constituent that has a notional short position (*i.e.* to which such Strategy has short exposure). The absolute performance of the levels of the long and short Underlying Constituents is not relevant to the return on your notes.

**For the Strategies that employ a long-short strategy, there is unlimited loss exposure to the short Underlying Constituent and such exposure may result in a significant drop in the level of such Strategy.**

Some of the Strategies employ a technique generally known as a “long-short” strategy. This means the relevant Strategy reflects the net return of a synthetic long position and a synthetic short position and will suffer from a positive return in the short Underlying Constituent when the level of the short Underlying Constituent increases. The maximum increase in the value of any long exposure is unlimited and the maximum decrease in the value of any long exposure is limited to a loss of the entire value of the long Underlying Constituent. The maximum increase of the value of any short exposure is limited to a loss of the entire value of the short Underlying Constituent and the maximum decrease in value of such short exposure is unlimited. Since there is no limit to possible increases in the level of the short Underlying Constituent, the potential losses as a result of a short exposure may be said to be potentially unlimited. Since the relevant Strategy is rebalanced only once per month, there is a risk that a loss-causing return will remain in place for a significant period of time.

**The Index may not be a fully diversified portfolio.**

Diversification is generally considered to reduce the amount of risk associated with generating returns. There can be no assurance that the Index, a synthetic portfolio of Strategies, will be sufficiently diversified at any time.

**The notes are not regulated by the Commodity Futures Trading Commission.**

The net proceeds to be received by us from the sale of the notes will not be used to purchase or sell any commodities futures contracts or options on futures contracts for your benefit. An investment in the notes thus does not constitute an investment in either futures contracts or options on futures contracts or in a collective investment vehicle that trades in these futures contracts (*i.e.*, the notes will not constitute a direct or indirect investment by you in futures contracts), and you will not benefit from the regulatory protections of the Commodity Futures Trading Commission, commonly referred to as the “CFTC.” We are not registered with the CFTC as a futures commission merchant and you will not benefit from the CFTC’s or any non-U.S. regulatory authority’s regulatory protections afforded to persons who trade in futures contracts on a regulated futures exchange through a registered futures commission merchant. Unlike an investment in the notes, an investment in a collective investment vehicle that invests in futures contracts on behalf of its participants may be subject to regulation as a commodity pool and its operator may be required to be registered with and regulated by the CFTC as a commodity pool operator, or qualify for an exemption from the registration requirement. Because the notes will not be interests in a commodity pool, the notes will not be regulated by the CFTC as a commodity pool, we will not be registered with the CFTC as a commodity pool operator, and you will not benefit from the CFTC’s or any non-U.S. regulatory authority’s regulatory protections afforded to persons who invest in regulated commodity pools.

**For the J.P. Morgan Alternative Index Commodity Carry Strategy, increases in the level of the Contag Beta Index may be moderated, or more than offset, by increases in the level of the S&P GSCI™ Excess Return.**

The J.P. Morgan Alternative Index Commodity Carry Strategy is calculated by reference to the net return of long exposure to the Contag Beta Index and short exposure to the S&P GSCI™ Excess Return. Although the Contag Beta Index and S&P GSCI™ Excess Return are comprised of futures contracts on commodities, the methodology behind, and calculation of, such assets, including the particular futures contracts included in the calculation of their value, are different. The Contag Beta Index is calculated pursuant to the proprietary rules for such index developed by JPMSL, and the S&P GSCI™ Excess Return is calculated in accordance with the rules developed by Standard & Poor's. Price movements between the particular futures contracts underlying each constituent may not correlate with each other. At a time when the value of the nominal basket underlying the Contag Beta Index decreases, the value of the futures contracts underlying the S&P GSCI™ Excess Return may increase. Therefore, in calculating the level of the J.P. Morgan Alternative Index Commodity Carry Strategy, increases in the level of the Contag Beta Index may be moderated, or more than offset, by increases in the level of the S&P GSCI™ Excess Return, which would have an adverse affect on the level of the J.P. Morgan Alternative Index Commodity Carry Strategy and accordingly, your payment at maturity, if any.

**Suspension or disruptions of market trading in the commodity and related options futures markets may adversely affect the value of the Underlying Constituents and therefore, the value of the relevant Strategies and 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 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 Underlying Constituents and, therefore, the value of the relevant Strategies and the notes.

**The commodity futures contracts underlying certain Strategies are subject to legal and regulatory regimes that may change in ways that could affect our ability to hedge our obligations under the notes and/or could lead to the early determination of the Additional Amount for your notes, either of which would impact the value of your payment at maturity.**

Futures contracts and options on futures contracts markets, including those future contracts related to the Underlying Constituents are subject to extensive statutes, regulations, and margin requirements. The CFTC and the exchanges on which such futures contracts trade, are authorized to take extraordinary actions in the event of a market emergency, including, for example, the retroactive implementation of speculative position limits or higher margin requirements, the establishment of daily limits and the suspension of trading. Furthermore, certain exchanges have regulations that limit the amount of fluctuations in futures contract prices which may occur during a single five-minute trading period. These limits could adversely affect the market prices of relevant futures contracts and forward contracts. The regulation of commodity transactions in the U.S. is subject to ongoing modification by government and judicial action. In addition, various national governments have expressed concern regarding the disruptive effects of speculative trading in the commodity markets and the need to regulate the derivative markets in general. The effects of any future regulatory change on the value of the notes is impossible to predict, but could be substantial and adverse to the interests of noteholders.

For example, the CFTC has recently announced that it is considering imposing position limits on certain commodities (such as energy commodities) and changes to the manner in which current exemptions for bona fide hedging transactions or positions are implemented in order to protect against excessive speculation, which could result in regulatory changes that may affect our ability to hedge our obligations under the notes.

Upon the occurrence of legal or regulatory changes (including changes in interpreting current law) that the note 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 note calculation agent deems necessary to hedge our obligations under the notes, the note calculation agent may, in its sole and absolute discretion, determine that a commodity hedging disruption event has occurred and we will then have the right, but not the obligation, to adjust your payment at maturity based on further determinations by the note calculation agent. In making such adjustment, the note calculation agent will determine the Option Value of your notes on the commodity hedging disruption date in good faith and in a commercially reasonable manner, *however*, all amounts payable per \$1,000 principal amount note will be due and payable only at maturity. At maturity, we will pay you, instead of the amount specified under "Description of Notes—Payment at Maturity," an amount described under "General Terms of Notes—Consequences of a Commodity Hedging Disruption Event," which will not be less than \$1,000 for each \$1,000 principal amount note (unless the relevant terms supplement specifies a Partial Principal Protection Percentage, in which case the amount due and payable for each \$1,000 principal amount note will not be less than \$1,000 x Partial Principal Protection Percentage). If a commodity hedging disruption event occurs and we decide to exercise our right to have the note calculation agent determine the Option Value of your notes on the commodity hedging disruption date, the amount due and payable on your notes will be due and payable only at maturity. The amount you receive at maturity will not reflect any further appreciation or depreciation of the Dow Jones — UBS Commodity Index Total Return<sup>SM</sup> after the commodity hedging disruption date. Furthermore, you will not receive any amounts (related to the Option Value or otherwise), other than any accrued and unpaid interest on the Interest Payment Dates, if applicable, until maturity. Additionally, if a commodity hedging disruption event ceases to exist, the amounts determined on the commodity hedging disruption date will not be revised after such commodity hedging disruption date. See "General Terms of Notes—Consequences of a Commodity Hedging Disruption Event."

**The commodity futures contracts underlying certain Strategies are subject to legal and regulatory regimes that may change in ways that could result in the index calculation agent making changes to the Strategies or could result in the index calculation agent modifying the rules governing the Strategies, either of which would impact the value of your payment at maturity, if any.**

Changes to the legal or regulatory regimes applicable to the commodity futures contracts that underlie certain Strategies (the J.P. Morgan Alternative Index Commodity Momentum Energy Strategy, the J.P. Morgan Alternative Index Commodity Momentum Non Energy Strategy and the J.P. Morgan Alternative Index Commodity Carry Strategy) may result in the index calculation agent exercising its discretionary right under the rules governing such Strategies to exclude or substitute any futures contract underlying, or substitute for a commodity the futures contracts on which underlie, the relevant Strategies, which may, in turn, have a negative effect on the level of such Strategies and your payment at maturity. The exclusion or substitution of futures contracts or a commodity as described above could also affect the diversity of the Strategies. For example, a substitute futures contract may have a lower level of backwardation than the original futures contract or the value of the substitute commodity could be more correlated with the value of other commodities the futures contracts of which underlie the Strategies.

In addition, changes to the legal or regulatory regimes applicable to the commodity futures contracts that underlie certain Strategies, could also result in the index calculation agent modifying the rules governing the Strategies which would, in turn, have an adverse effect on your payment at maturity. Such modifications to the rules governing the Strategies or cancellation may impact the value of your payment at maturity, if any.

**Commodity prices are characterized by high and unpredictable volatility, which could lead to high and unpredictable volatility in certain Strategies.**

Market prices of the commodity futures contracts underlying certain Strategies (the J.P. Morgan Alternative Index Commodity Momentum Energy Strategy, the J.P. Morgan Alternative Index Commodity Momentum Non Energy Strategy and the J.P. Morgan Alternative Index Commodity Carry Strategy) 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, wars and acts of terror, changes in interest and exchange rates, speculation and trading activities in commodities and related contracts, weather, and agricultural, trade, fiscal and exchange control policies. The price volatility of each commodity also affects the value of the futures and forward contracts related to that commodity and therefore its price at any such time. The price of any one commodity may be correlated to a greater or lesser degree with any other commodity and factors affecting the general supply and demand as well as the prices of other commodities may affect the particular commodity in question. In respect of commodities in the energy sector, due to the significant level of its continuous consumption, limited reserves, and oil cartel controls, energy prices are subject to rapid price increases in the event of perceived or actual shortages. The commodities 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. Many commodities are also highly cyclical. These factors, some of which are specific to the nature of each such commodity, may affect the level of such Strategies in varying ways, and different factors may cause the value of different commodities futures contracts included in the Strategies to move in inconsistent directions at inconsistent rates. This, in turn, will affect the value of the notes linked to the Strategies.

These Strategies provide one avenue for exposure to commodities. The high volatility and cyclical nature of commodity markets may render these investments inappropriate as the focus of an investment portfolio.

**Higher or lower futures contract prices of the Underlying Constituents relative to their current prices may affect the value of the relevant Strategies and the value of the notes.**

Some of the Underlying Constituents 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 Underlying Constituents 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 by 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 "roll yield." While many of the contracts included in the Underlying Constituents have historically exhibited consistent periods of backwardation, backwardation will most likely not exist at all times. The presence of contango in the commodity markets (*i.e.* where the prices for the relevant futures contract are higher in the distant delivery month than in the nearby delivery month) could result in negative "roll yields." Negative "roll yields" could adversely affect the value of the Underlying Constituents and this may adversely affect the value of the relevant Strategies and the value of the notes.

**Some of the Strategies may 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 futures contracts because (among other factors) a number of market participants take physical delivery of the underlying commodities. Many commodities, like those in the energy and industrial metals sectors, have liquid futures contracts that expire every month. Therefore, these contracts are rolled forward every month. Contracts based on certain other commodities, most notably agricultural and livestock products, tend to have only a few contract months each year that trade with substantial liquidity. Thus, these commodities, with related futures contracts that expire infrequently, roll forward less frequently than every month, and can have further pronounced pricing volatility during extended periods of low liquidity. The risk of aberrational liquidity or pricing around the maturity date of a commodity futures contract is greater than in the case of other futures contracts because (among other factors) a number of market participants take delivery of the underlying commodities. In respect of sub-indices that represent energy, it should be noted that due to the significant level of continuous consumption, limited reserves, and oil cartel controls, energy commodities are subject to rapid price increases in the event of perceived or actual shortages. These factors (when combined or in isolation) may affect the price of futures contracts and, as a consequence, the performance of the relevant Strategies.

**Prices for the physical commodities underlying the futures contracts included in the relevant Strategies may change unpredictably and affect the level of those Strategies and the value of the notes in unanticipated ways.**

A decrease in the price of the physical commodities underlying the futures contracts included in certain Strategies (the J.P. Morgan Alternative Index Commodity Momentum Energy Strategy, the J.P. Morgan Alternative Index Commodity Momentum Non Energy Strategy and the J.P. Morgan Alternative Index Commodity Carry Strategy) may have a material adverse effect on the value of the notes and your return on an investment in the notes. The prices of such commodities are affected by numerous factors, including: changes in supply and demand relationships, governmental programs and policies, national and international political and economic events, changes in interest and exchange rates, speculation and trading activities in commodities and related contracts, general weather conditions, and trade, fiscal, monetary and exchange control policies. Many commodities are also highly cyclical. These factors, some of which are specific to the market for each such commodity, as discussed below, may cause the value of the different commodities to move in inconsistent directions at inconsistent rates. If this, in turn, adversely affects the level of the relevant Strategies, the value of the notes could be affected in unanticipated ways. It is not possible to predict the aggregate effect of all or any combination of these factors.

**Changes in the composition and valuation of the Underlying Constituents underlying the relevant Strategies may adversely affect the market value and/or the payment at maturity of the notes.**

The composition of the Underlying Constituents may change over time, as additional futures contracts satisfy the eligibility criteria or futures contracts currently included in the Underlying Constituents fail to satisfy such criteria. Those changes could impact the composition and valuation of certain Strategies, such as the J.P. Morgan Alternative Index Commodity Momentum Energy Strategy, the J.P. Morgan Alternative Index Commodity Momentum Non Energy Strategy and the J.P. Morgan Alternative Index Commodity Carry Strategy. The weighting factors applied to each commodity included in each of the Underlying Constituents may change and the sponsors for such Underlying Constituents may modify the methodology for determining their composition and weighting. A number of modifications to the methodology for determining the contracts to be included in each Underlying Constituent, and for valuing each Underlying Constituent, have been made in the past and further modifications may be made in the future. Such changes could adversely affect the market value and/or the payment at maturity for the notes.

**For the J.P. Morgan Alternative Index Commodity Carry Strategy, an investment in the notes carries the risks associated with the Selection Methodology used to calculate the Contag Beta Index.**

The Contag Beta Index for the J.P. Morgan Alternative Index Commodity Carry Strategy, is constructed, in part, using an algorithmic methodology which uses, along with other criteria, the slope of the commodities futures curve in order to select a particular futures contract for each eligible commodity in which to synthetically gain exposure (the "Selection Methodology"). The futures contract with respect to each eligible commodity with the highest level of 'backwardation' is selected, subject to certain limitations. 'Backwardation' refers to the situation where commodities futures contracts with a delivery month further away in time have lower settlement prices than futures contracts with a delivery month closer in time. If there is no futures contract for one or more eligible commodities with backwardation, the Selection Methodology will select the futures contract with the lowest level of contango for any such commodities. "Contango" refers to the situation where the futures contracts for a commodity with a delivery month further in time have higher contract prices than futures contracts for the same commodity with a delivery month closer in time.

As the futures contracts approach expiration, they are replaced by futures contracts that have a later expiration in a process referred to as 'rolling'. Assuming the commodities futures market is in backwardation, the sale of contracts due for delivery in a nearer delivery month would take place at a price that is higher than the price of contracts that are due for delivery in a later delivery month, creating a yield referred to as a 'roll yield'. By capturing the synthetic return of a notional basket of futures contracts selected by the Selection Methodology, the Contag Beta Index seeks to capitalize on such 'roll yield' and the fact that contracts with backwardation tend to appreciate as they roll to months nearer in time. However, there is no guarantee that the commodities futures market will be, and continue to be, in backwardation throughout the term of the notes. While many of the contracts eligible for inclusion in the Contag Beta Index historically exhibited consistent periods of backwardation, backwardation will most likely not exist at all times. The presence of "contango" in the commodity markets (*i.e.*, where the prices for the relevant futures contracts included in the Contag Beta Index are higher in the distant delivery month than in the nearer delivery month) could result in negative "roll yields." Such contracts may also depreciate as they approach expiration. The Contag Beta Index may perform poorly in such markets and accordingly, the level of the J.P. Morgan Alternative Index Commodity Carry Strategy and your payout at maturity, if any, may be adversely affected.

In addition, the Contag Beta Index is synthetically exposed to the futures contracts selected as the Contag Contracts by the Selection Methodology and such futures contracts may, in general, be deferred futures contracts (*i.e.*, those contracts having a delivery month further dated than the futures contract with the nearest delivery month). It is generally expected that such deferred futures contracts may have less liquidity than the near-month futures contracts (those being the nearest-to-deliver) with respect to the same commodities. Deferred futures contracts may also be less well correlated with the spot market (physical) prices of the relevant commodities and exhibit different levels of volatility. Accordingly, the Contag Beta Index (and therefore, the J.P. Morgan Alternative Index Commodity Carry Strategy) may not perform as well as an index linked to the spot prices of the relevant commodities.

**S&P may be required to replace a contract underlying the S&P GSCI™ Energy Excess Return Index, the S&P GSCI™ Non Energy Excess Return Index and the S&P GSCI™ Excess Return (each, an "S&P GSCI™ Index" and together, the "S&P GSCI™ Indices") if the existing futures contract is terminated or replaced.**

A futures contract known as a "Designated Contract" has been selected as the reference contract for the underlying physical commodity included in any S&P GSCI™ Index. Data concerning this Designated Contract will be used to calculate the relevant S&P GSCI™ Index. The termination or replacement of a futures contract on an established exchange occurs infrequently; however, if one or more Designated Contracts were to be terminated or replaced by an exchange, a comparable futures contract would be selected, if available, to replace each such Designated Contract. The termination or replacement of any Designated Contract may have an impact on the value of any S&P GSCI™ Index. Suspension or disruptions of market trading in the commodity and related futures markets may adversely affect 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 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 S&P GSCI™ Indices and therefore, the value of your notes.

**We are currently one of the companies that make up the S&P 500® Index, the MSCI Daily Total Return Gross World Index and the MSCI Daily Value Total Return Gross World Index, but, to our knowledge, we are not affiliated with any other company the securities of which are included in the Strategies composing the Index.**

We are currently one of the companies that make up the S&P 500® Index, the MSCI Daily Total Return Gross World Index and the MSCI Daily Value Total Return Gross World Index, but, to our knowledge, we are not currently affiliated with any other issuers the securities of which are included in the Strategies composing the Index. As a result, we will have no ability to control the actions of the issuers of such securities, including actions that could affect the value of the securities included in the Strategies or your notes. None of the money you pay us will go to the sponsors of the Strategies or any of the other issuers the securities of which are included in the Strategies and none of those issuers will be involved in the offering of the notes in any way. Neither those issuers nor we will have any obligation to consider your interests as a holder of the notes in taking any actions that might affect the value of your notes.

In the event we become affiliated with any issuers the equity securities of which are included in a Strategy, we will have no obligation to consider your interests as a holder of the notes in taking any action with respect to such issuer that might affect the value of your notes.

**The notes will be subject to currency exchange risk.**

Because some of the Strategies are based on foreign currency exchange rates and the prices of the securities or futures contracts included in the Underlying Constituents of some of the other Strategies are converted into U.S. dollars for the purpose of calculating the value of the relevant Strategy (e.g. MSCI Daily Value Total Return Gross World Index and the MSCI Daily Total Return Gross World Index), holders of the notes will be exposed to currency exchange rate risk. The foreign currency exchange rate between two currencies is at any moment a result of the supply and demand for that currency. Changes in foreign currency exchange rates result over time from the interaction of many factors directly or indirectly affecting economic and political conditions in the countries issuing the currencies, and economic and political developments in other relevant countries. Of particular importance to potential currency exchange risk are:

- existing and expected rates of inflation;
- existing and expected interest rate levels;
- the balance of payments; and
- the extent of governmental surpluses or deficits in the component countries and the United States of America.

All of these factors are in turn sensitive to the monetary, fiscal and trade policies pursued by the governments of various component countries and the United States and other countries important to international trade and finance.

**The current global financial crisis can be expected to heighten currency exchange risks.**

In periods of financial turmoil, capital can move quickly out of regions that are perceived to be more vulnerable to the effects of the crisis than others with sudden and severely adverse consequences to the currencies of those regions. In addition, governments around the world, including the United States government and governments of other major world currencies, have recently made, and may be expected to continue to make, very significant interventions in their economies, and sometimes directly in their currencies. Such interventions affect currency exchange rates globally and, in particular, the value of the relevant currency relative to the U.S. dollar. Further interventions, other government actions or suspensions of actions, as well as other changes in government economic policy or other financial or economic events affecting the currency markets, may cause currency exchange rates to fluctuate sharply in the future, which could have a material adverse effect on the value of the notes and your return on your investment in the notes at maturity.

**A decrease in the value of an Underlying Constituent that is a currency (an “Underlying Currency”) relative to the U.S. dollar may adversely affect your return on the notes.**

The return on the notes is based on the performance of the Strategies and the exchange rates. The index level of each Strategy may be determined based on the adjusted closing level of such Strategy, which is the closing level of such Strategy, converted into U.S. dollars based on the applicable exchange rate. Accordingly, any depreciation in the value of the Underlying Currencies relative to the U.S. dollar (or conversely, any increase in the value of the U.S. dollar relative to the Underlying Currencies) may adversely affect your return on the notes.

**The liquidity, trading value and amounts payable under the notes could be affected by the actions of the governments of the originating nations of the Underlying Currencies and the United States.**

Foreign exchange rates can either be fixed by sovereign governments or floating. Exchange rates of most economically developed nations are permitted to fluctuate in value relative to the value of other currencies. However, governments do not always allow their currencies to float freely in response to economic forces. Governments use a variety of techniques, such as intervention by their central bank or imposition of regulatory controls or taxes, to affect the trading value of their respective currencies. They may also issue a new currency to replace an existing currency or alter the exchange rate or relative exchange characteristics by devaluation or revaluation of a currency. Thus, a special risk in purchasing the notes is that their liquidity, trading value and amounts payable could be affected by the actions of sovereign governments which could change or interfere with theretofore freely determined currency valuation, fluctuations in response to other market forces and the movement of currencies across borders. Unless such an event constitutes a FX disruption event, there will be no adjustment or change in the terms of the notes in the event that exchange rates should become fixed, or in the event of any devaluation or revaluation or imposition of exchange or other regulatory controls or taxes, or in the event of other developments affecting the Underlying Currencies, the U.S. dollar or any other currency. In addition, the price of the notes and payment on the scheduled maturity date could also be adversely affected by delays in, or refusals to grant, any required governmental approval for conversions of the Underlying Currencies and remittances abroad with respect to the Strategies or other de facto restrictions on the repatriation of U.S. dollars, such as a currency disruption event. See “General Terms of Notes — Market Disruption Events.”

**The absence of last-sale and other information about the Underlying Currencies may affect the price of the notes.**

There is no systematic reporting of last-sale information for foreign currencies. Reasonably current bid and offer information is available in certain brokers’ offices, in bank foreign currency trading offices and to others who wish to subscribe for this information, but this information will not necessarily be reflected in the value of the exchange rates used to calculate the Index Return and therefore your return on the notes. There is no regulatory requirement that those quotations be firm or revised on a timely basis. The absence of last-sale information and the limited availability of quotations to individual investors may make it difficult for many investors to obtain timely, accurate data about the state of the underlying foreign exchange markets.



In addition, certain relevant information relating to the originating countries of the Underlying Currencies may not be as well known or as rapidly or thoroughly reported in the United States as comparable United States developments. Prospective purchasers of the notes should be aware of the possible lack of availability of important information that can affect the value of the Underlying Currencies and must be prepared to make special efforts to obtain that information on a timely basis.

**Suspensions or disruptions of market trading in the currency markets may adversely affect the amount payable at maturity and/or the market value of the notes.**

The currency markets are subject to temporary distortions or other disruptions due to various factors, including the participation of speculators and government regulation and intervention. These circumstances could affect the value of the Underlying Currencies and the U.S. dollar, the exchange rates and the Index and, therefore, the amount payable at maturity and the market value of the notes.

**An investment in the notes may be subject to risks associated with non-U.S. securities markets.**

The stocks that constitute foreign equity indices such as the Nikkei 225 Index and the EURO STOXX 50® Index and many of the stocks that constitute global equity indices such as the MSCI Daily Value Total Return Gross World Index and the MSCI Daily Total Return Gross World Index, have been issued by non-U.S. companies. Investments in notes linked to the value of such non-U.S. equity securities involve risks associated with the securities markets in the countries where such securities markets are located, including risks of volatility in those markets, governmental intervention in those markets and cross shareholdings in companies in certain countries. Also, there is generally less publicly available information about companies in some of these jurisdictions than about U.S. companies that are subject to the reporting requirements of the Securities and Exchange Commission (the "SEC"), and generally non-U.S. companies are subject to accounting, auditing and financial reporting standards and requirements and securities trading rules different from those applicable to U.S. reporting companies.

The prices of securities in non-U.S. jurisdictions may be affected by political, economic, financial and social factors in such markets, including changes in a country's government, economic and fiscal policies, currency exchange laws or other foreign laws or restrictions. Moreover, the economies in such countries may differ favorably or unfavorably from economies in the United States in such respects as growth of gross national product, rate of inflation, capital reinvestment, resources and self sufficiency. Such countries may be subjected to different and, in some cases, more adverse economic environments.

The economies of emerging market countries in particular face several concerns, including the relatively unstable governments which may present the risks of nationalization of businesses, restrictions on foreign ownership and prohibitions on the repatriation of assets, and which may have less protection of property rights than more developed countries. These economies may also be based on only a few industries, be highly vulnerable to changes in local and global trade conditions and may suffer from extreme and volatile debt burdens or inflation rates. In addition, local securities markets may trade a small number of securities and may be unable to respond effectively to increases in trading volume, potentially making prompt liquidation of holdings difficult or impossible at times.

The risks of the economies of emerging market countries are relevant for notes where a Strategy includes an Underlying Constituent composed of securities traded in one or more emerging market countries. Some or all of these factors may influence closing level of such Strategy and, consequently, the Index closing value. The impact of any of the factors set forth above may enhance or offset some or all of any change resulting from another factor or factors. You cannot predict the future performance of the Index or such Strategy based on their historical performance. The value of the Index may decrease such that you may not receive more than the principal amount (or a portion of the principal amount if the relevant terms supplement specifies a Partial Principal Protection Percentage) of your notes at maturity. There can be no assurance that the Index closing value will not decrease so that at maturity you will receive any Additional Amount at maturity.

**The notes are subject to interest rate risk.**

Some of the Strategies are based on changes in, or differences between, interest rates. Interest rates are subject to volatility due to a variety of factors, including:

- sentiment regarding underlying strength in the relevant economy and global economies;
- expectation regarding the level of price inflation;
- sentiment regarding credit quality in the relevant economy and global credit markets;
- central bank policy regarding interest rates; and
- performance of capital markets.

Fluctuations in interest rates could affect the value of these Strategies, the Index and the notes. In addition, longer-dated (e.g., 10 year) bonds are exposed to duration risk. Through duration, moves in longer-dated interest rates amplify the movement in the price of longer-dated bonds as compared to bonds with a shorter maturity.

## 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. We may have hedged our obligations under the notes through certain affiliates or unaffiliated counterparties.

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 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 Index, any of the Strategies of the Index or the related Underlying Constituents, or any of the securities, futures contracts or currencies underlying any such Strategies or Underlying Constituents, 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 Strategies included in the Index, and therefore effectively establish a higher level that the Strategies must achieve for you to receive at maturity of the notes more than the applicable principal amount of your notes (other than, if applicable, any interest payment or payment of the Minimum Return). 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 levels of the Strategies 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 or any unaffiliated counterparties may take in connection with our hedging activity.

## THE J.P. MORGAN ALTERNATIVE INDEX MULTI-STRATEGY 5 (USD)

The J.P. Morgan Alternative Index Multi-Strategy 5 (USD) (which we refer to as the “Multi-Strategy Index” or the “Index”) was developed and is maintained by J.P. Morgan Securities Ltd. (which we refer to as “JPMSL”). The description of the Index and its methodology included in this product supplement is based on rules formulated by JPMSL and is qualified by the full text of such rules, as described under “— Rules of the Multi-Strategy Index and Strategies.”

### Overview

The Index is a notional rules-based proprietary index that tracks the return of twenty-six alternative investment strategies (each of which we refer to as a “Strategy”). The Index is based on the theory that returns may be generated from capturing inefficiencies or trends in market prices of multiple asset classes. The Index is not intended to track a single asset class or outperform any particular asset class, benchmark or investment strategy. Instead, the Index employs several alternative investment strategies covering different styles and asset classes, in order to seek to generate positive performance with a low correlation to traditional asset classes. The Index also seeks to cap its volatility to a target volatility of 5% or less.

### The Investment Strategies and Asset Classes Represented in the Index

Each of the twenty-six Strategies can be categorized based on the underlying investment strategy employed and the asset class covered, as follows:

- Underlying investment strategy employed:
  - Momentum strategy: which seeks to capitalize on the observed tendency of many markets to trend either up or down for sustained time periods;
  - Carry strategy: which seeks to capitalize on the value differential between certain assets and is typically implemented by notionally investing in an asset that is on a relative basis lower priced or higher yielding and selling an asset that on a relative basis is higher priced or lower yielding; or
  - Satellite strategy: which consists of one of two types of strategies that fall outside of the momentum and carry styles, namely, mean reversion and short volatility strategies.
    - The mean reversion strategy seeks to capitalize on the view that over certain periods of time, markets are cyclical – meaning that an upward trend in the level of certain assets is usually followed by a downward trend and vice versa.
    - The short volatility strategy aims to exploit the observed tendency of the implied volatility (*i.e.*, the future volatility expected by the market) of an equity index to be higher than the volatility experienced by the index.
- Asset class: equity, interest rates, currencies or commodities.

Table 1 below sets out the twenty-six Strategies and their respective investment strategy, asset class, geographic region of the asset class, currency, Bloomberg ticker and scaling weight.

**Table 1**

	Investment Strategy	Asset Class	Strategy	Bloomberg Ticker	Currency	Geographic Region	Scaling Weight
1	MOMENTUM	EQUITIES	J.P. Morgan Alternative Index US Equity Momentum Strategy	AIJPMEUU	USD	U.S.	3.750%
2			J.P. Morgan Alternative Index European Equity Momentum Strategy	AIJPMEEE	EUR	Europe	3.750%
3			J.P. Morgan Alternative Index Japan Equity Momentum Strategy	AIJPMEJJ	JPY	Japan	3.750%
4		RATES	J.P. Morgan Alternative Index Money Market Momentum US Strategy	AIJPMMUU	USD	U.S.	3.750%
5			J.P. Morgan Alternative Index Money Market Momentum Europe Strategy	AIJPMMEU	EUR	Europe	3.750%
6			J.P. Morgan Alternative Index Money Market Momentum Japan Strategy	AIJPM MJJ	JPY	Japan	3.750%
7		FX	J.P. Morgan Alternative Index EURUSD FX Momentum Strategy	AIJPMF1U	USD	Global	1.875%
8			J.P. Morgan Alternative Index USDJPY FX Momentum Strategy	AIJPMF2U	USD	Global	1.875%
9			J.P. Morgan Alternative Index EURJPY FX Momentum Strategy	AIJPMF3U	USD	Global	1.875%
10			J.P. Morgan Alternative Index USDCAD FX Momentum Strategy	AIJPMF4U	USD	Global	1.875%
11			J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy	AIJPMF5U	USD	Global	1.875%
12			J.P. Morgan Alternative Index EURGBP FX Momentum Strategy	AIJPMF6U	EUR	Global	1.875%
13	CARRY	COMMODITIES	J.P. Morgan Alternative Index Commodity Momentum Energy Strategy	AIJPMCEU	USD	Global	5.625%
14			J.P. Morgan Alternative Index Commodity Momentum Non-Energy Strategy	AIJPMCNU	USD	Global	5.625%
15		EQUITIES	J.P. Morgan Alternative Index Equity Value Carry Strategy	AIJPCE1U	USD	Global	5.625%
16			J.P. Morgan Alternative Index Equity Small Cap Carry Strategy	AIJPCE2U	USD	U.S.	5.625%
17		RATES	J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy	AIJPCB1U	USD	Global	2.8125%
18			J.P. Morgan Alternative Index Bond 2Y Long-Short Carry Strategy	AIJPCB2U	USD	Global	2.8125%
19			J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy	AIJPCB3U	USD	Global	2.8125%

	Investment Strategy	Asset Class	Strategy	Bloomberg Ticker	Currency	Geographic Region	Scaling Weight
20			J.P. Morgan Alternative Index Bond 10Y Long-Short Carry Strategy	AIJPCB4U	USD	Global	2.8125%
21		FX	J.P. Morgan Alternative Index G10 FX Carry Strategy	AIJPCF1U	USD	Global	11.250%
22		COMMODITIES	J.P. Morgan Alternative Index Commodity Carry Strategy	AIJPCC1U	USD	Global	11.250%
23	MEAN REVERSION	EQUITIES	J.P. Morgan Alternative Index Mean Reversion US Strategy	AIJPSR1U	USD	U.S.	1.6667%
24			J.P. Morgan Alternative Index Mean Reversion Europe Strategy	AIJPSR1E	EUR	Europe	1.6667%
25			J.P. Morgan Alternative Index Mean Reversion Japan Strategy	AIJPSR1J	JPY	Japan	1.6667%
26	SHORT VOLATILITY	EQUITIES	J.P. Morgan Alternative Index Short Volatility US Strategy	AIJPSV1U	USD	U.S.	5.000%

Further information about each of the Strategies and the related investment strategies are set out in “— The Strategies.”

### Rebalancing of the Strategies – Risk Budgeting and Seeking to Cap Volatility to a Target Volatility of 5% or Less

The Strategies are rebalanced monthly on the first Index Business Day of each month (each of which we refer to as a “Rebalancing Date”) based on a “risk budgeting” approach to asset allocation in which each Strategy is assigned a fixed percentage of the target volatility of up to 5%. The purpose of such “risk budgeting” is to allocate exposure to the Strategies based on the underlying risk of the Strategy (measured by maximum 1 year historical volatility over each weekday of the previous 5 years) as opposed to fixed weights without taking account of the changes in the volatility of the Strategies over time.

The steps involved in rebalancing the exposure to each Strategy determined monthly on the Index Business Day before the relevant Rebalancing Date (each of which we refer to as a “Rebalancing Selection Date”) are explained below.

#### *First Step (Identify the Scaling Weight for each Strategy)*

Each Strategy has been assigned a fixed initial weight (which we refer to as the “Scaling Weight”). The Scaling Weight represents the “risk budget” (i.e. the fixed percentage of the target volatility) that has been allocated to the relevant Strategy. As can be seen from Table 1 above, the aggregate Scaling Weights of all Strategies has been allocated 45% to the Momentum Strategies, 45% to the Carry Strategies and 10% to the Satellite Strategies. Within each strategy category (momentum, carry or satellite), the weights are equally divided based on asset class (equity, interest rates, currencies or commodities), then further subdivided among Strategies within the same asset class.

*Second Step (Determine the historical volatility of each Strategy):*

The historical volatility of each Strategy (which we refer to as the “Strategy Volatility”) is determined on each Rebalancing Selection Date by reference to the maximum historical one year volatility observed on each weekday of the five prior years. Since the historical volatility is based on the maximum one year volatility and past historical realized volatility may not be a good estimate of future realized volatility, there can be no guarantee that the target volatility will be achieved.

*Third Step (Determine the Preliminary Weight of each Strategy):*

The preliminary weight of each Strategy (which we refer to as the “Preliminary Weight”) is then determined by reducing or leveraging the Scaling Weight (based on the Strategy Volatility) so that the Strategy makes use of the “risk budget” assigned to it. The higher the historical volatility has been for a Strategy, the lower the Preliminary Weight assigned. Conversely, the lower the historical volatility has been for a Strategy, the higher the Preliminary Weight assigned.

*Fourth Step (Determine the historical volatility of a portfolio of the Preliminary Weights):*

The historical volatility of a synthetic portfolio of the Strategies based on the Preliminary Weights is then determined by reference to the maximum historical one year volatility of the portfolio observed on each weekday of the five prior years. Due to correlation among the Strategies, the historical volatility of the portfolio of the Preliminary Weights will tend to be lower than the target volatility, which then requires leveraging of the Preliminary Weights to achieve the target volatility (as set out in the fifth & final step below).

*Fifth & Final Step (Determine the Final Weight of each Strategy)*

The Preliminary Weight of each Strategy is then either scaled up (if the historical portfolio volatility is less than the target volatility of 5%) or scaled down (if the historical portfolio volatility is more than the target volatility of 5%) to arrive at the final weight. The maximum aggregate total weight that can be assigned to the Strategies is 200%. The Preliminary Weights may not be leveraged to a level where the historical volatility of the portfolio exceeds the 5% target. No individual weight can exceed 200%.

The final weights of the Strategies, as determined on each monthly Rebalancing Selection Date as described above, are then used to rebalance the weights of the Strategies (we refer to each as a “Weight”) on the relevant Rebalancing Date. The effective Weight of each of the Strategies within the Index may fluctuate during the period from one Rebalancing Date to the next Rebalancing Date due to movements in the levels of the Strategies.

An “Index Business Day” means, (i) for the Index, each day (other than a Saturday or Sunday) on which (a) commercial banks in London, New York and Tokyo are open generally for business (including for dealings in foreign exchange and foreign currency deposits) and (b) the Trans-European Automated Real-time Gross settlement Express Transfer system (which we refer to as “TARGET”) is open and (ii) in respect of a Strategy, the index business days specified for such Strategy in “Additional Information about the Index and the Strategies — Index Business Days” herein, subject to adjustment in accordance as described under “— Index Market Disruption Events,” “— Extraordinary Events Affecting the Index and the Underlying Constituents” and “— Corrections” below.

### Illustration of December 2009 Strategy Weight Determinations

Table 2 below illustrates the rebalancing process in connection with the determination of the final weights of the Strategies on the Rebalancing Selection Date falling on November 30, 2009 and which were used to rebalance the exposures on the Rebalancing Date falling on December 1, 2009. As can be seen from the table, those Strategies with a higher historic volatility were allocated, relative to their scaling weight, a lower preliminary weight and final weight compared to those Strategies with a lower historic volatility. For example, the J.P. Morgan Alternative Index Equity Small Cap Carry Strategy had a historic volatility of 19.93% and a final weight of 6.88% whereas the J.P. Morgan Alternative Index Equity Value Carry Strategy (with the same scaling weight) had a historic volatility of 5.78% and a final weight of 23.75%. The sum of the final weights of all Strategies was 198.77% for the December 1, 2009 Rebalancing Date.

**Table 2**

	Strategy	Scaling weight	Strategy historical volatility	Prelim. weight	Portfolio historical volatility	Final weight
1	J.P. Morgan Alternative Index US Equity Momentum Strategy	3.750%	22.76%	0.82%	1.02%	4.02%
2	J.P. Morgan Alternative Index European Equity Momentum Strategy	3.750%	22.18%	0.85%	1.02%	4.12%
3	J.P. Morgan Alternative Index Japan Equity Momentum Strategy	3.750%	23.53%	0.80%	1.02%	3.89%
4	J.P. Morgan Alternative Index Money Market Momentum US Strategy	3.750%	15.12%	1.24%	1.02%	6.05%
5	J.P. Morgan Alternative Index Money Market Momentum Europe Strategy	3.750%	8.75%	2.14%	1.02%	10.45%
6	J.P. Morgan Alternative Index Money Market Momentum Japan Strategy	3.750%	2.96%	6.34%	1.02%	30.93%
7	J.P. Morgan Alternative Index EURUSD FX Momentum Strategy	1.875%	17.07%	0.55%	1.02%	2.68%
8	J.P. Morgan Alternative Index USDJPY FX Momentum Strategy	1.875%	17.11%	0.55%	1.02%	2.67%
9	J.P. Morgan Alternative Index EURJPY FX Momentum Strategy	1.875%	23.88%	0.39%	1.02%	1.92%
10	J.P. Morgan Alternative Index USDCAD FX Momentum Strategy	1.875%	19.82%	0.47%	1.02%	2.31%
11	J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy	1.875%	31.16%	0.30%	1.02%	1.47%
12	J.P. Morgan Alternative Index EURGBP FX Momentum Strategy	1.875%	14.41%	0.65%	1.02%	3.17%
13	J.P. Morgan Alternative Index Commodity Momentum Energy Strategy	5.625%	36.06%	0.78%	1.02%	3.80%
14	J.P. Morgan Alternative Index Commodity Momentum Non-Energy Strategy	5.625%	21.96%	1.28%	1.02%	6.25%
15	J.P. Morgan Alternative Index Equity Value Carry Strategy	5.625%	5.78%	4.87%	1.02%	23.75%



	Strategy	Scaling weight	Strategy historical volatility	Prelim. weight	Portfolio historical volatility	Final weight
16	J.P. Morgan Alternative Index Equity Small Cap Carry Strategy	5.625%	19.93%	1.41%	1.02%	6.88%
17	J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy	2.8125%	10.45%	1.35%	1.02%	6.56%
18	J.P. Morgan Alternative Index Bond 2Y Long-Short Carry Strategy	2.8125%	10.32%	1.36%	1.02%	6.65%
19	J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy	2.8125%	11.53%	1.16%	1.02%	5.65%
20	J.P. Morgan Alternative Index Bond 10Y Long-Short Carry Strategy	2.8125%	12.14%	1.22%	1.02%	5.95%
21	J.P. Morgan Alternative Index G10 FX Carry Strategy	11.250%	27.01%	2.08%	1.02%	10.16%
22	J.P. Morgan Alternative Index Commodity Carry Strategy	11.250%	7.23%	7.78%	1.02%	37.95%
23	J.P. Morgan Alternative Index Mean Reversion US Strategy	1.6667%	30.52%	0.27%	1.02%	1.33%
24	J.P. Morgan Alternative Index Mean Reversion Europe Strategy	1.6667%	27.18%	0.31%	1.02%	1.50%
25	J.P. Morgan Alternative Index Mean Reversion Japan Strategy	1.6667%	38.21%	0.22%	1.02%	1.06%
26	J.P. Morgan Alternative Index Short Volatility US Strategy	5.0000%	16.05%	1.56%	1.02%	7.60%

### Calculation of the level of the Multi-Strategy Index ("Index Level")

Unless an Index Market Disruption Event (as defined below) has occurred and is continuing, the Index Level will be calculated and published by the index calculation agent on Bloomberg ticker AIJPM5UE in respect of each Index Business Day.

The Index Level on any Index Business Day reflects the sum of the weighted returns of the Strategies (based on their weights assigned on the previous Rebalancing Date) over the period between the immediately preceding Rebalancing Date and that Index Business Day, adjusted for the change in the applicable currency exchange rate (if applicable) for each Strategy into the currency of the Index (being USD) during that period and the deduction of an Adjustment Factor of 0.80% per annum. The Adjustment Factor of 0.80% per annum will act as a drag on the performance of the Index (in a similar manner to a charge applied on an accrual basis). In addition, adjustments are made to the levels of the Strategies to reflect notional trading costs related to the underlying constituents (the "Underlying Constituents," and each, an "Underlying Constituent") of the relevant Strategy. The Adjustment Factor of 0.80% per annum from the Index Level does not reflect any notional trading costs relating to the Strategies or any Underlying Constituents.

## **Synthetic and notional exposure only**

No assurance can be given that the investment strategies used to construct the Index and underlying Strategies will be successful or that the Index will outperform any alternative basket or strategy that might be constructed from the Strategies. Furthermore, no assurance can be given that the Index will achieve its volatility target of 5%. The actual realized volatility of the Index may be greater or less than 5%.

The Index is described as a “notional” or synthetic portfolio or basket of assets because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. Further, each Strategy is constructed on one or more “notional” Underlying Constituents and as such no person is entitled or has any ownership interest in such underlying constituents. The Index and Strategies merely reference certain assets, the performance of which will be used as a reference point for calculating the level of the Index and Strategies.

## **Start Dates of the Index and Strategies**

The level of the Index and each Strategy (except for the J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy and the J.P. Morgan Alternative Index Commodity Carry Strategy) was set at a value of 100 on August 3, 2009. The J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy was set at a value of 100 on August 5, 2009 and the J.P. Morgan Alternative Index Commodity Carry Strategy was set at a value of 35.980 on December 30, 1994. The Index was established in November 2009. The Strategies were established in or prior to November 2009.

## **Rules of the Multi-Strategy Index and Strategies**

The Index and Strategies were developed and are maintained by JPMSL. The Index and Strategies are each notional rules-based proprietary indices of JPMSL. The description of the Index and Strategies included in this product supplement are based on rules formulated by JPMSL (“Rules”) and is qualified by the full text of the Rules. The Rules for the Index and Strategies are comprised of (1) the document entitled “J.P. Morgan Alternative Index Series Index Rules” dated January 2010 (and amended March 8, 2010), which contains the rules for the Index and all Strategies other than the J.P. Morgan Alternative Index Commodity Carry Strategy; (2) the documents entitled “J.P. Morgan Contag Module A: Selection Methodology” dated August 2009 (and amended March 8, 2010), “J.P. Morgan Contag Module B: J.P. Morgan Contag Beta Indices” dated September 2009, “J.P. Morgan Contag Module B(i): J.P. Morgan Contag Beta Full Energy Class A Excess Return Index and the J.P. Morgan Contag Beta Light Energy Class A Excess Return Index” dated September 2009, “J.P. Morgan Contag Module C: J.P. Morgan Contag Alpha Indices” dated September 2009 and “J.P. Morgan Contag Module C(iii): J.P. Morgan Alternative Index Commodity Carry Strategy” dated November 2009 (and amended March 8, 2010), which together contain the rules for the J.P. Morgan Alternative Index Commodity Carry Strategy; and (3) the document entitled “The J.P. Morgan Futures Tracker Series” dated November 16, 2009, which contains the rules for any Underlying Constituent that is a futures tracker for which JPMSL is the sponsor, which we refer to as a “J.P. Morgan Futures Tracker.” The Rules, and not the description herein, will govern the calculation and construction of the Index and Strategies and other decisions and actions related to their maintenance. The Rules in effect as of the date of this product supplement are attached as Appendix 1, Annex A and Annex B to this product supplement. The Rules are the intellectual property of JPMSL, and JPMSL reserves all rights with respect to its ownership of the Index and Strategies.

The Rules may be amended from time to time at the discretion of JPMSL in its capacity as index calculation agent of the Index and the Strategies. Any successor to JPMSL or any other third party appointed by JPMSL may replace JPMSL in the future. The index calculation agent is responsible for making all calculations and determinations in relation to the Index and the Strategies in accordance with the Rules.

## **Index Market Disruption Events**

The publication of the Index, Strategies and the Underlying Constituents and/or determination of the level of the Index, Strategies and the Underlying Constituents may be affected by the occurrence of certain market disruption events with respect to Strategies or Underlying Constituents (which we refer to as an "Index Market Disruption Event"). The occurrence of any Index Market Disruption Event in respect of any Strategy or Underlying Constituent may result in JPMSL, as calculation agent of the Index, a Strategy or an Underlying Constituent that is a J.P. Morgan Futures Tracker: (a) calculating its good faith estimate of the level for the relevant Strategy or Underlying Constituent that is a J.P. Morgan Futures Tracker; (b) suspending calculation and publication of the level for the relevant Strategy or Underlying Constituent that is a J.P. Morgan Futures Tracker until the first succeeding day that is not disrupted; and/or (c) in certain circumstances, adjusting variables relevant to the calculation of the Index and Strategies that it deems appropriate.

An Index Market Disruption Event may occur upon any of the following events (but are not limited to):

- Certain events which affect the convertibility, delivery, published rates or quoted rates of exchange for relevant currencies, currency pairs or interest rates in connection with the Index, any Strategies or Underlying Constituents;
- The failure by the sponsor of the Index, a Strategy or an Underlying Constituent to calculate and publish the level for such Index, Strategy or Underlying Constituent;
- The occurrence of a commodity carry market disruption event in respect of such day;
- In respect of an Underlying Constituent that is a J.P. Morgan Futures Tracker, the relevant exchange failing to calculate and publish the closing price for a futures contract or the occurrence of an event which disrupts or impairs the ability of market participants to effect transactions in or obtain market values for relevant futures contracts;
- In respect of certain Underlying Constituents, events that disrupt or impair the ability of one or more market participants to effect transactions in or obtain market values for any securities or other components of the Underlying Constituent that comprise 20% or more of the level of the Underlying Constituent; or
- The non-publication or existence of swap rates on particular Reuters pages.

For more information, please see "Additional Information about the Index and the Strategies — Index Market Disruption Events" herein, or with respect to the J.P. Morgan Alternative Index Commodity Carry Strategy, see "The Strategies — Commodity Carry Strategy — Market Disruptions to the Strategy Index Level."

### ***Extraordinary Events Affecting the Index and the Underlying Constituents***

Following the occurrence of certain extraordinary events with respect to the Underlying Constituent of a Strategy, the affected Underlying Constituent may be replaced by a substitute index or strategy. Extraordinary events include (but are not limited to) certain changes in law and events that may have the effect of any one or more of the Underlying Constituents being succeeded to, being subject to a material change in its calculation or being cancelled. For more information, please see "Additional Information about the Index and the Strategies — Extraordinary Events" herein, or with respect to the J.P. Morgan Alternative Index Commodity Carry Strategy, see "The Strategies — Commodity Carry Strategy — Extraordinary Events Affecting the Constituents" and "The Strategies — Commodity Carry Strategy — Modifications to, or Cancellation of, the Constituents."

## ***Corrections***

If, in respect of the Index:

(a) the level or price of any Strategy or Underlying Constituent, variable, input or other matter which is used for any calculation relevant to the Index Level or any Strategy Index Level for any Index Business Day is subsequently corrected and the correction is published by the relevant sponsor of the Strategy or Underlying Constituent, as the case may be, or relevant publication source; or

(b) the index calculation agent identifies an error or omission in any of its calculations or determinations in respect of the Index Level or any Strategy Index Level for any Index Business Day,

then, the index calculation agent may, if practicable and it considers such correction material, adjust or correct the published Index Level or any Strategy Index Level for such day and/or each subsequent Index Business Day and publish (in such manner determined by the index calculation agent) such corrected Index Level(s) or Strategy Index Level(s) as soon as reasonably practicable.

## **THE STRATEGIES**

The Strategies consist of twenty-six notional rules-based proprietary indices developed and maintained by JPMSL. The description of the Strategies included in this product supplement are based on Rules formulated by JPMSL and is qualified by the full text of the Rules as described under "The J.P. Morgan Alternative Index Multi-Strategy 5 (USD) — Rules of the Multi-Strategy Index and Strategies." Please also refer to "Additional Information about the Index and the Strategies" herein for information relating to what constitutes an index business day and how market disruption events and certain extraordinary events affect the Strategies (other than the J.P. Morgan Alternative Index Commodity Carry Strategy).

**Each Strategy is described as a "notional" or synthetic portfolio or basket of assets because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. Further, each Strategy is constructed on one or more "notional" Underlying Constituents and as such no person is entitled to or has any ownership interest in such underlying constituents. The Strategies merely reference certain assets, the performance of which will be used as a reference point for calculating the levels of the Strategies.**

## **MOMENTUM STRATEGIES**

Momentum investing is a strategy that seeks to capitalize on positive and negative trends in the price of assets on the assumption that if an asset performs well or poorly, it will continue to perform well or poorly in the future. Each momentum strategy will be one of an equities, interest rates or commodities strategy (which we refer to as the "Non-FX Momentum Strategies") or a currencies strategy (which we refer to as the "FX Momentum Strategies," and together with the Non-FX Momentum Strategies, the "Momentum Strategies").

### **Non-FX Momentum Strategies**

Each Non-FX Momentum Strategy employs a momentum investment strategy by identifying whether the recent price of the Underlying Constituent is trending up or down based on historical average prices of the Underlying Constituent over a short term window of 5 days ("Short Term Average") and a long term window of 260 days ("Long Term Average"). If the Short Term Average is greater than or equal to the Long Term Average (indicating positive momentum), the Non-FX Momentum Strategy will track the returns of a notional long position in the relevant Underlying Constituent. Conversely, if the Short Term Average is less than the Long Term Average (indicating negative momentum), the Non-FX Momentum Strategy will track the returns of a short position in the relevant Underlying Constituent.

### *Rebalancing the Underlying Constituent of a Non-FX Momentum Strategy*

The exposure to the Underlying Constituent of a Non-FX Momentum Strategy (which we refer to as the “exposure”) can potentially be rebalanced (from long to short exposure, or alternatively, from short to long exposure) if, on any Index Business Day:

- (i) the Short Term Average is greater than or equal to the Long Term Average and, on the immediately preceding Index Business Day, the Short Term Average was less than the Long Term Average; or
- (ii) the Short Term Average is less than the Long Term Average and, on the immediately preceding Index Business Day, the Short Term Average was greater than or equal to the Long Term Average.

We refer to the occurrence of each such event as a “Rebalancing Event.” The Short Term Average reflects the average level of the Underlying Constituent over a recent historical 5 day observation period ending on that Index Business Day. The Long Term Average reflects the average level of the Underlying Constituent over a recent historical 260 day observation period ending on that Index Business Day.

The Index Business Day immediately after the Index Business Day on which a Rebalancing Event occurs will be a Rebalancing Date. There is a one-day lag between determining that a Rebalancing Event has occurred and notionally changing the exposure from long to short exposure (or vice versa) to the Underlying Constituent, where the exposure will be adjusted as follows:

- where the Short Term Average is greater than or equal to the Long Term Average on the Index Business Day in respect of which the Rebalancing Event occurred, the exposure from the relevant Rebalancing Date to the next will be +100%, meaning a notional long position in the Underlying Constituent. In such circumstances, the level of the Strategy will rise when the level of the Underlying Constituent appreciates, and the level of the Strategy will fall when the level of the Underlying Constituent depreciates.
- where the Short Term Average is less than the Long Term Average on the Index Business Day in respect of which the Rebalancing Event occurred, the exposure from the relevant Rebalancing Date to the next will be -100%, meaning a notional short position in the Underlying Constituent. In such circumstances, the level of the Strategy will rise when the level of the Underlying Constituent depreciates, and the level of the Strategy will fall when the level of the Underlying Constituent appreciates.

### *Calculation of the Strategy Index Levels*

The Strategy Index Level on any Index Business Day reflects the return of the relevant Underlying Constituents over the period between the immediately preceding Rebalancing Date and that Index Business Day, as magnified by a leverage factor of 10 for some of the Non-FX Momentum Strategies and will reflect either a notional long position in the Underlying Constituent (*i.e.* the exposure is +100%) or a notional short position in the Underlying Constituent (*i.e.* the exposure is -100%). The Strategy Index Level also reflects the deduction of an Adjustment Factor ranging from 0.04% to 0.35% (depending on the Underlying Constituent), calculated based on the actual number of calendar days from, but excluding the immediately preceding Rebalancing Date to and including that Index Business Day and assuming a 360-day year, and, for the Non-FX Momentum Strategies, a Rebalancing Adjustment Factor of 0.0%, 0.01% or 0.1%. The Adjustment Factor and Rebalancing Adjustment Factor, if applicable, are also magnified by any applicable leverage factor. See Table 3 below for more information.

The Adjustment Factor is intended to reflect the notional cost of maintaining either a notional long or short position in the Underlying Constituent, and the Rebalancing Adjustment Factor, if applicable, is intended to reflect the notional cost of switching from a notional long position to a notional short position (or vice versa) in the Underlying Constituent.

*Specific Terms Relating to Each Non-FX Momentum Strategy*

Table 3 below provides additional terms relating to each Non-FX Momentum Strategy, including the relevant underlying constituent and its sponsor, the notional adjustment factor, rebalancing adjustment factor and leverage factor.

**Table 3**

Strategy (Bloomberg Ticker)	Underlying Constituent (Bloomberg Ticker)	Underlying Constituent Sponsor	Adjustment Factor	Rebalancing Adjustment Factor	Leverage Factor
J.P. Morgan Alternative Index US Equity Momentum Strategy (AIJPMUU)	J.P. Morgan US Equity Futures (G) Tracker (FTJGUSEE)	J.P. Morgan Securities Limited	0.2%	0.1%	1
J.P. Morgan Alternative Index European Equity Momentum Strategy (AIJPMEEE)	J.P. Morgan European Equity Futures (G) Tracker (FTJGEUEE)	J.P. Morgan Securities Limited	0.2%	0.1%	1
J.P. Morgan Alternative Index Japan Equity Momentum Strategy (AIJPMJEE)	J.P. Morgan Japan Equity Futures (G) Tracker (FTJGJPEE)	J.P. Morgan Securities Limited	0.2%	0.1%	1
J.P. Morgan Alternative Index Money Market Momentum US Strategy (AIJPMUU)	J.P. Morgan US Money Market (G) Tracker (RFJGUSME)	J.P. Morgan Securities Limited	0.04%	0.01%	10
J.P. Morgan Alternative Index Money Market Momentum Europe Strategy (AIJPMEE)	J.P. Morgan European Money Market (G) Tracker (RFJGEUME)	J.P. Morgan Securities Limited	0.04%	0.01%	10
J.P. Morgan Alternative Index Money Market Momentum Japan Strategy (AIJPMJJ)	J.P. Morgan Japanese Money Market (G) Tracker (RFJGPME)	J.P. Morgan Securities Limited	0.04%	0.01%	10
J.P. Morgan Alternative Index Commodity Momentum Energy Strategy (AIJPMCEU)	S&P GSCI Energy Excess Return Index (SPGSENP)	Standard & Poor's Corporation	0.35%	0.0%	1
J.P. Morgan Alternative Index Commodity Momentum Non-Energy Strategy (AIJPMCNU)	S&P GSCI Non Energy Excess Return Index (SPGSNEP)	Standard & Poor's Corporation	0.35%	0.0%	1

For additional information about the Underlying Constituent of each Non-FX Momentum Strategy, please see "Background on the J.P. Morgan Futures Tracker Series" or "Background on the S&P GSCI™ Indices."

## FX Momentum Strategies

The underlying constituent of each FX Momentum Strategy is a currency pair comprised of two currencies (Currency One and Currency Two) specified for the relevant FX Momentum Strategy in Table 4 (which we refer to as the "Currency Pair" or "Underlying Constituent"). Each FX Momentum Strategy employs a momentum strategy by identifying whether the recent level of the relevant Currency Pair (which we refer to as the "Currency Pair Observation Level") is trending up or down based on historical average levels of the Currency Pair over a short term window of 5 days ("Short Term Average") and a long term window of 260 days ("Long Term Average"). The level of the Currency Pair for this purpose is determined by reference to a Currency Pair Observation Level.

If the Short Term Average is greater than or equal to the Long Term Average (indicating positive momentum), the FX Momentum Strategy will track the returns of a notional long position in the relevant Currency Pair (that is, long Currency One and short Currency Two). Conversely, if the Short Term Average is less than the Long Term Average (indicating negative momentum), the FX Momentum Strategy will track the returns of a short position in the relevant Currency Pair (that is, short Currency One and long Currency Two).

### *Calculation of the Currency Pair Observation Level*

The index calculation agent will calculate a Currency Pair Observation Level for the Currency Pair solely for the purposes of determining whether a FX Rebalancing Event has occurred in connection with a FX Momentum Strategy. Observing the level of a Currency Pair by reference to foreign exchange spot rates alone would not reflect the entire return of notionally investing in such Currency Pair because interest received and paid on such Currency Pair would not be taken into account. Accordingly, the Currency Pair Observation Level is calculated and observed because it better reflects the performance of a Currency Pair by notionally investing (and receiving implied market rates) in Currency One and borrowing (and paying implied market rates) in Currency Two through the use of rolling foreign exchange spot and forward contracts at mid-rates.

The Currency Pair Observation Level is a theoretical level and is based on mid points which do not incorporate transaction costs in the market.

### *Rebalancing of the Currency Pair*

The synthetic exposure (which we refer to as “exposure”) can potentially be rebalanced from long to short exposure (or vice versa) to the underlying Currency Pair of a FX Momentum Strategy by adjusting the long or short exposure to Currency One and Currency Two of the Currency Pair, as applicable, if, on any Index Business Day:

- (i) the Short Term Average of the Currency Pair Observation Level is greater than or equal to the Long Term Average and, on the immediately preceding Index Business Day, the Short Term Average was strictly less than the Long Term Average; or
- (ii) the Short Term Average of the Currency Pair Observation Level is strictly less than the Long Term Average and, on the immediately preceding Index Business Day, the Short Term Average was greater than or equal to the Long Term Average.

We refer to the occurrence of each such event as a “Rebalancing Event.” The Short Term Average reflects the average of the Currency Pair Observation Level over a recent historical five-day observation period ending on that Index Business Day. The Long Term Average reflects the average of the Currency Pair Observation Level over a longer recent historical 260 day observation period ending on that Index Business Day.

The Index Business Day immediately after the Index Business Day on which a Rebalancing Event occurs will be a Rebalancing Date. There is a one day lag between determining that a Rebalancing Event has occurred and notionally changing the exposure from long to short exposure (or vice versa) to the Underlying Constituent.

- where the Short Term Average is greater than or equal to the Long Term Average on the Index Business Day in respect of which the Rebalancing Event occurred, the exposure from the relevant Rebalancing Date to the next will be +100% (that is long Currency One and short Currency Two), meaning a notional long position in the Underlying Constituent. In such circumstances, the level of the Strategy will rise when the price of the Underlying Constituent appreciates, and the level of the Strategy will fall when the price of the Underlying Constituent depreciates.
- where the Short Term Average is less than the Long Term Average on the Index Business Day in respect of which the Rebalancing Event occurred, the exposure from the relevant Rebalancing Date to the next will be -100% (that is short Currency One and long Currency Two), meaning a notional short position in the Underlying Constituent. In such circumstances, the level of the Strategy will rise when the price of the Underlying Constituent depreciates, and the level of the Strategy will fall when the price of the Underlying Constituent appreciates.

### *Calculation of Strategy Index Levels*

The Strategy Index Level on any Index Business Day reflects the return on the notional long or short position in the relevant Currency Pair over the period between the immediately preceding Rebalancing Date and that Index Business Day. The return is subject to deductions for transaction costs that would be incurred if a hypothetical investor were to replicate the strategy. The return is calculated in the same manner as the Currency Pair Observation Level but differs in that the forward and spot exchange rates of the relevant currency pair are based on bid or offer rates instead of mid-rates. Bid and offer rates for both foreign exchange spot and forward contracts are used to capture the notional transaction costs that would be incurred if such strategy were to be implemented. In certain situations for a given forward contract there may be either no or a small bid-offer spread according to the price source used. In these circumstances, the transaction costs are floored at a minimum level. The aggregate of the Adjustment Factor for Currency One and the Adjustment Factor for Currency Two (outlined in Table 4) reflects this minimum bid-offer spread.

### *Specific Terms Relating to Each FX Momentum Strategy*

Table 4 below provides additional terms relating to each FX Momentum Strategy, including the relevant underlying constituent (currency pair), the currencies that make up the currency pair and adjustment factors relating to the currencies.

**Table 4**

Strategy (Bloomberg Ticker)	Currency Pair	Currency One	Currency Two	Adjustment Factor for Currency One	Adjustment Factor for Currency Two
J.P. Morgan Alternative Index EURUSD FX Momentum Strategy (AIJPMF1U)	EUR/USD	EUR	USD	0.30%	0.00%
J.P. Morgan Alternative Index USDJPY FX Momentum Strategy (AIJPMF2U)	USD/JPY	USD	JPY	0.00%	0.30%
J.P. Morgan Alternative Index EURJPY FX Momentum Strategy (AIJPMF3U)	EUR/JPY	EUR	JPY	0.20%	0.20%
J.P. Morgan Alternative Index USDCAD FX Momentum Strategy (AIJPMF4U)	USD/CAD	USD	CAD	0.00%	0.30%
J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy (AIJPMF5U)	AUD/USD	AUD	USD	0.40%	0.00%
J.P. Morgan Alternative Index EURGBP FX Momentum Strategy (AIJPMF6U)	EUR/GBP	EUR	GBP	0.20%	0.20%



## CARRY STRATEGIES

A carry strategy is an investment strategy which broadly seeks to capitalize on the value differential between an asset that is on a relative basis lower priced or higher yielding and an asset that on a relative basis is higher priced or lower yielding. Each carry strategy will be one of an equities, interest rates, commodities strategy or a currencies strategy (which we refer to as the "Carry Strategies").

### Equity Carry Strategies

Each Equity Carry Strategy aims to track the potential risk premium of a particular asset (a selection of stocks representing either the value equity market or small capitalization equity market, in either case, the "Carry Component Index") compared to a historically lower yielding asset (the broader equity market, the "Market Index," and we refer to each Carry Component Index and Market Index as an "Underlying Constituent"). This risk premium (and return of each Equity Carry Strategy) is determined by reference to the performance of the Carry Component Index relative to the Market Index.

The exposure to the Carry Component Index and Market Index are re-set to 100% on each monthly rebalancing date (which we refer to as the "Rebalancing Date") for each Equity Carry Strategy.

#### *Calculation of Strategy Index Levels*

The Strategy Index Level on any Index Business Day reflects the return of the relevant Underlying Constituents over the period between the immediately preceding Rebalancing Date and that Index Business Day. The return measures the performance of the Carry Component Index as compared to the performance of the Market Index with respect to any Index Business Day from the immediately preceding Rebalancing Date. Accordingly, if the Carry Component Index outperforms the Market Index, the level of the Equity Carry Strategy will generally rise, subject to the Adjustment Factor. Conversely, if the Market Index outperforms the Carry Component Index, the level of the Equity Carry Strategy will fall. The Strategy Index Level also reflects the daily deduction of an Adjustment Factor of 0.5% per annum, calculated based on the actual number of calendar days from, but excluding, the immediately preceding Rebalancing Date to and including that Index Business Day and assuming a 360-day year. The Adjustment Factor is intended to reflect the notional cost that would be incurred in maintaining a notional long position in the Carry Component Index and a notional short position in the Market Index.

#### *Specific Terms Relating to Each Equity Carry Strategy*

Table 5 below provides additional terms relating to each Equity Carry Strategy, including the carry component index and the market index.

**Table 5**

Strategy (Bloomberg Ticker)	Carry Component Index (Bloomberg Ticker)	Market Index (Bloomberg Ticker)
J.P. Morgan Alternative Index Equity Value Carry Strategy (AIJPC1U)	MSCI Daily Value Total Return Gross World Index (GDUVWI)	MSCI Daily Total Return Gross World Index (GDDUWI)
J.P. Morgan Alternative Index Equity Small Cap Carry Strategy (AIJPC2U)	J.P. Morgan US Small Cap Equity Futures (G) Tracker (FTJGUSSE)	J.P. Morgan US Equity Futures (G) Tracker (FTJGUSEE)

For additional information about the Underlying Constituents of the J.P. Morgan Alternative Equity Value Carry Strategy, please see "Background on the MSCI Daily Value Total Return Gross World Index and the MSCI Daily Total Return Gross World Index." For additional information about the Underlying Constituents of the J.P. Morgan Alternative Equity Small Cap Carry Strategy, please see "Background on the J.P. Morgan Futures Tracker Series."

## Bond Carry Long Strategies

Each Bond Carry Long Strategy tracks the returns of notionally borrowing money at short term interest rates and notionally investing such money in long positions in two synthetic zero coupon bonds that contain the highest carry from a particular universe of notional global bonds (which we refer to as the "Potential Underlying Constituents," as set forth in Table 7). Each Bond Carry Long Strategy seeks to capitalize on an upward sloping yield-curve. If the yield curve remains unchanged from one Rebalancing Date to the next, the Bond Carry Long Strategy should generate return from: (i) the difference between the applicable short-term interest rate and the interest rate associated with the relevant synthetic bond; and (ii) the increase in the value of the notional long position in the relevant synthetic bond due to the lower yield available for a bond of slightly shorter maturity. The Bond Carry Long Strategies are not linked to any actual, traded bonds, but are calculated using synthetic zero coupon bonds, the value of which are implied from market interest rates.

### *Rebalancing and Selection of Underlying Constituents*

In respect of each Rebalancing Selection Date, the index calculation agent will determine which Potential Underlying Constituents are to be notionally comprised in a Bond Carry Long Strategy. Each Bond Carry Long Strategy will be comprised of notional long exposure to two Underlying Constituents on the immediately following Effective Rebalancing Date. The effective weight of the Underlying Constituents within a Bond Carry Long Strategy may fluctuate from one Effective Rebalancing Date to the next Effective Rebalancing Date due to movements in the levels of the Underlying Constituents.

"Rebalancing Selection Date" means the weekday prior to the London business day prior to the first scheduled Index Business Day of the month.

"Effective Rebalancing Date" means the first day falling on or following the first Index Business Day of each month which is a Reference Business Day for (x) both Underlying Constituents notionally comprised in the Bond Carry Long Strategy immediately prior to the Rebalancing Date and (y) both Underlying Constituents to be notionally comprised in the Bond Carry Long Strategy from (but excluding) such day as determined above.

"Reference Business Day" means, in respect of a Potential Underlying Constituent, a day (other than a Saturday or Sunday) on which commercial banks are open generally for business (including for dealings in foreign exchange and foreign currency deposits) in the principal financial center for the currency corresponding to that Potential Underlying Constituent.

### *Calculate the Carry of each Potential Underlying Constituent*

In respect of each Rebalancing Selection Date, the index calculation agent will determine the expected carry (which we refer to as the "PUC Carry") for each Potential Underlying Constituent.

The PUC Carry aims to quantify the expected amount of return from holding a synthetic zero coupon bond (with a particular tenor) for one month, assuming the yield curve remains unchanged for the Potential Underlying Constituent, subject to the deduction of an Adjustment Factor. The Adjustment Factor is intended to reflect the notional transaction cost that would be incurred if a hypothetical investor in the Underlying Constituents were to substitute the Underlying Constituents with the relevant Potential Underlying Constituents or maintain the exposure to the Underlying Constituents. The Adjustment Factor will be higher where either Potential Underlying Constituent is not one of the current Underlying Constituents.

Immediately after determining the PUC Carry of each Potential Underlying Constituent in respect of any Rebalancing Selection Date, the index calculation agent will determine the two Potential Underlying Constituents with the highest PUC Carry to be comprised in the Bond Carry Long Strategy from, but excluding, the Effective Rebalancing Date immediately after such Rebalancing Selection Date to, and including, the next Effective Rebalancing Date (which we refer to as the "Long Underlying Constituent A" and the "Long Underlying Constituent B," and the "Underlying Constituents," collectively).

A zero coupon bond is a debt security that pays a fixed principal amount at maturity, but does not otherwise pay any periodic interest during the life of the security. A zero coupon bond is typically sold at a discount to its principal amount upon initial issuance. The value of a zero coupon bond at any given time is generally determined by calculating the present value at the relevant time of the principal amount to be paid at maturity (typically by discounting the principal amount to the present using an assumed discount rate).

#### *Calculation of Strategy Index Levels*

The Strategy Index Level on any Index Business Day reflects the return of the relevant Underlying Constituents over the period between the immediately preceding Effective Rebalancing Date and that Index Business Day. The return measures performance of holding a long position in the Underlying Constituents. The Underlying Constituents are valued using market observed swap and money market rates. Where rates are not available for the specific tenor needed then the rates are interpolated. The long positions are expressed in the currency of the Underlying Constituents and as such are converted to a single common currency (USD) for purposes of calculating the return. A leverage factor of 500% is applied to the J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy such that the risk of the strategy is roughly equivalent to the J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy. No leverage is applied to the J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy. In either case, the return is subject to the deduction of an Adjustment Factor, which is intended to reflect the approximate notional transaction costs that would be incurred if a hypothetical investor were to maintain synthetic long positions in the relevant Underlying Constituents from time to time.

#### *Specific Terms Relating to Each Bond Carry Long Strategy*

The following tables below provide the Bloomberg ticker for each Bond Carry Long Strategy, as well as additional information on the Potential Underlying Constituents.

**Table 6**

Strategy (Bloomberg Ticker)
J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy (AIJPCB1U)
J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy (AIJPCB3U)

**Table 7: Potential Underlying Constituents with respect to each Bond Carry Long Strategy**

	Potential Underlying Constituents	Short-Term Interest Rates	Currency
1	Synthetic USD zero coupon bond	USD 3 month LIBOR	USD
2	Synthetic EUR zero coupon bond	EUR 6 month EURIBOR	EUR
3	Synthetic JPY zero coupon bond	JPY 6 month LIBOR	JPY
4	Synthetic GBP zero coupon bond	GBP 6 month LIBOR	GBP
5	Synthetic CHF zero coupon bond	CHF 6 month LIBOR	CHF
6	Synthetic AUD zero coupon bond	AUD 6 month BBSW	AUD
7	Synthetic CAD zero coupon bond	CAD 3 month CDOR	CAD
8	Synthetic SEK zero coupon bond	SEK 3 month STIBOR	SEK

## Bond Carry Long Short Strategies

Each Bond Carry Long Short Strategy tracks the returns of a notional long position in a Bond Carry Long Strategy (which we refer to as the “Long Underlying Constituent”) and a notional short position in a Bond Carry Short Strategy (which we refer to as the “Short Underlying Constituent”). We refer to the Long Underlying Constituent and the Short Underlying Constituent for a Bond Carry Long Short Strategy as the “Underlying Constituents.” On each Rebalancing Date, the exposure to the Underlying Constituents comprised in a Bond Carry Long Short Strategy will be rebalanced so that the Bond Carry Long Short Strategy provides notional long exposure to the Long Underlying Constituent and notional short exposure to the Short Underlying Constituent (each weighted to the relevant Weighting on the Rebalancing Date). The effective weight of the Underlying Constituents within a Bond Carry Long Short Strategy may fluctuate from one Rebalancing Date to the next Rebalancing Date due to movements in the level of the Underlying Constituents.

“Rebalancing Date” means the first Index Business Day of each month.

In determining the level of a Bond Carry Long Short Strategy, the index calculation agent will use the methodology described above for a Bond Carry Long Strategy, and in determining the level of a Bond Carry Short Strategy, the index calculation agent will use the same methodology for a Bond Carry Long Strategy, as modified below. The J.P. Morgan Alternative Index Bond 2Y Carry Short Strategy and J.P. Morgan Alternative Index Bond 10Y Carry Short Strategy (which comprise the Short Underlying Constituents of the J.P. Morgan Alternative Index Bond 2Y Carry Long Short Strategy and the J.P. Morgan Bond 10Y Carry Long Short Strategy, respectively) are similar to the J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy and J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy, respectively, except that instead of notionally tracking the returns of the two bonds that contain the highest PUC Carry, the relevant Bond Carry Short Strategy tracks the returns of the two bonds that contain the lowest PUC Carry from the universe of Potential Underlying Constituents. The Bond Carry Long Short Strategies are not linked to any actual, traded bonds, but are calculated using synthetic bonds, the value of which are implied from market interest rates.

### *Calculation of Strategy Index Levels*

The Strategy Index Level on any Index Business Day reflects the performance of the Long Underlying Constituent as compared to the performance of the Short Underlying Constituent over the period between the immediately preceding Rebalancing Date and that Index Business Day. Accordingly, if the Long Underlying Constituent outperforms the Short Underlying Constituent, the level of the Bond Carry Long Short Strategy will rise. Conversely, if the Short Underlying Constituent outperforms the Long Underlying Constituent, the level of the Bond Carry Long Short Strategy will fall.

The value of the synthetic zero coupon bonds included in the Long Underlying Constituent and the Short Underlying Constituent are calculated using market observed swap and money market rates. Where rates are not available for the specific tenor needed then the rates are interpolated. Both long and short positions are expressed in the currency of the Underlying Constituents and as such are converted to a single common currency (USD) for purposes of calculating the return. A leverage factor of 500% is applied to the J.P. Morgan Alternative Index Bond 2Y Carry Short Strategy such that the risk of the strategy is roughly equivalent to the J.P. Morgan Alternative Index Bond 10Y Carry Short Strategy. No leverage is applied to the J.P. Morgan Alternative Index Bond 10Y Carry Short Strategy. Similarly, a leverage factor is applied to the J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy, but not the J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy. In either case, the return is subject to the deduction of an Adjustment Factor, which is intended to reflect the approximate notional transaction costs that would be incurred if a hypothetical investor were to enter into a synthetic long position in the Long Underlying Constituent and a synthetic short position in the Short Underlying Constituent.

### *Specific Terms Relating to Each Bond Carry Long Short Strategy*

The following table below provides additional terms relating to each Bond Carry Long Short Strategy, including the Long Underlying Constituent and the Short Underlying Constituent.

**Table 8**

Strategy (Bloomberg Ticker)	Long Underlying Constituent	Short Underlying Constituent
J.P. Morgan Alternative Index Bond 2Y Carry Long Short Strategy (AIJPCB2U)	J.P. Morgan Alternative Index Bond 2Y Carry Long Index	J.P. Morgan Alternative Index Bond 2Y Carry Short Index
J.P. Morgan Alternative Index Bond 10Y Carry Long Short Strategy (AIJPCB4U)	J.P. Morgan Alternative Index Bond 10Y Carry Long Index	J.P. Morgan Alternative Index Bond 10Y Carry Short Index

### **FX Carry Strategy**

The FX Carry Strategy tracks (i) the notional returns of three currencies (versus the U.S. dollar) from a universe of eligible currencies (each currency specified in Table 9 below, an "Eligible Currency") that have the highest short-term interest rates minus (ii) the notional returns of three currencies (versus the U.S. dollar) from a universe of Eligible Currencies that have the lowest short-term interest rates. The FX Carry Strategy is based on a currency trading strategy, known as "positive carry." A positive carry strategy seeks to capitalize on the relationship between certain eligible currency pairs by attempting to earn a return, or "carry," by buying currencies of countries with relatively high interest rates and simultaneously selling currencies of countries with relatively low interest rates. The FX Carry Strategy is published by Bloomberg L.P. under the ticker symbol "AIJPCF1U."

### *Rebalancing and Selection of Underlying Constituents*

In respect of each Rebalancing Selection Date, the index calculation agent will determine which currencies among the Eligible Currencies are to be notionally comprised in the FX Carry Strategy on the immediately following Rebalancing Date.

The "Rebalancing Date" means the first Index Business Day of each month, and each "Rebalancing Selection Date" is the Index Business Day prior to the relevant Rebalancing Date.

The Eligible Currencies will be ranked on each Rebalancing Selection Date, in descending order from the Eligible Currency with the highest interest rate (each interest rate specified in Table 9 below, an "Interest Rate") to the Eligible Currency with the lowest Interest Rate. The three (3) Eligible Currencies with the highest Interest Rates will be selected as the qualifying long currencies, which we refer to as the "Qualifying Long Currencies," and the three (3) Eligible Currencies with the lowest Interest Rates will be selected as the qualifying short currencies, which we refer to as the "Qualifying Short Currencies," together with the Qualifying Long Currencies, the "Qualifying Currencies." Together these Qualifying Currencies versus the USD will form the six (6) "Qualifying Currency Pairs," which we refer to as the "Currency Pairs" and the "Underlying Constituents."

Such Qualifying Currency Pairs will be comprised in the FX Carry Strategy from the Rebalancing Date immediately after the relevant Rebalancing Selection Date.

Each FX Carry Strategy will be deemed to take a notional long position in the Qualifying Long Currencies against a notional short position in the USD and a notional short position in the Qualifying Short Currencies against a notional long position in the USD.

### *Calculation of Strategy Index Levels*

The Strategy Index Level measures the returns generated from investing in a basket of six currencies, consisting of notional long positions in the Qualifying Long Currencies and notional short positions in Qualifying Short Currencies by using synthetic forward contracts for each currency. Generally, the price of a one month forward for a particular currency reflects the interest rate that can be earned from investing in that currency for one month. Accordingly, the return is calculated based on the interest rate that is implied from the price of the one month forward for each currency. To calculate the performance of each currency on a daily basis, the mark-to-market forward price of the forward contract expiring on the next Rebalancing Date is required. When market observable rates are not available, interpolated interest rates are used. The Strategy Index Level incorporates a deduction of an Adjustment Factor of 0.40%, which is intended to reflect the approximate notional transaction costs that would be incurred if a hypothetical investor were to replicate the strategy.

The return will reflect six different synthetic positions, all versus USD. If USD is selected as a currency, then the return for that position will be zero.

### *Specific Terms Relating to the FX Carry Strategy*

Table 9 below provides additional terms relating to the FX Carry Strategy, including the eligible currencies and the interest rate for each eligible currency.

**Table 9**

	<b>Eligible Currency</b>	<b>Interest Rate</b>
1	USD (the lawful currency of the United States)	USD 1 month LIBOR
2	EUR (the lawful currency of the member states of the European Union that adopt the single currency in accordance with the EC Treaty)	EUR 1 month EURIBOR
3	JPY (the lawful currency of Japan)	JPY 1 month LIBOR
4	GBP (the lawful currency of the United Kingdom)	GBP 1 month LIBOR
5	CHF (the lawful currency of Switzerland)	CHF 1 month LIBOR
6	AUD (the lawful currency of the Commonwealth of Australia)	AUD 1 month LIBOR
7	CAD (the lawful currency of Canada)	CAD 1 month LIBOR
8	NOK (the lawful currency of the Kingdom of Norway)	NOK 1 month NIBOR
9	NZD (the lawful currency of New Zealand)	NZD 1 month LIBOR
10	SEK (the lawful currency of the Kingdom of Sweden)	SEK 1 month STIBOR

## Commodity Carry Strategy

The J.P. Morgan Alternative Index Commodity Carry Strategy (which we refer to as the “Commodity Carry Strategy”) was developed and is maintained and calculated by JPMSL. The Commodity Carry Strategy is a notional rules-based proprietary commodity index of JPMSL, reflecting a long-short synthetic exposure to commodities by reference to two excess return commodity indices. The Commodity Carry Strategy is intended to capture the return of a synthetic long exposure to the J.P. Morgan Contag Beta Full Energy Class A Excess Return Index (the “Contag Beta Index”) which is a notional rules-based proprietary commodity index developed by JPMSL, and a synthetic short exposure to the S&P GSCI™ Excess Return. We refer to the Contag Beta Index and the S&P GSCI™ Excess Return as the “Constituents.” The Commodity Carry Strategy is published by Bloomberg L.P. under the ticker symbol “AIJPCC1U.”

The description of the strategy and methodology underlying the Commodity Carry Strategy included in this product supplement is based on rules formulated by JPMSL (which we refer to as the “Commodity Carry Rules”) and is qualified by the full text of the Commodity Carry Rules. The Commodity Carry Rules, and not this description, will govern the calculation and constitution of the Commodity Carry Strategy and other decisions and actions related to its maintenance. The Commodity Carry Rules in effect as of the date of this product supplement are attached as Annex A to this product supplement. The Commodity Carry Rules are the intellectual property of JPMSL, and JPMSL reserves all rights with respect to its ownership of the Commodity Carry Strategy. The Commodity Carry Strategy was finalized in November 2009 and therefore has limited performance.

The Commodity Carry Strategy is an excess return index that is intended to capture the return of a synthetic long exposure to the Contag Beta Index and a synthetic short exposure to the S&P GSCI™ Excess Return. The Commodity Carry Strategy is rebalanced monthly on the Rebalancing Date, which is the fourth day of each calendar month on which the NYSE Euronext is scheduled to be open for its regular trading session. We refer to each day on which the NYSE Euronext is scheduled to be open for its regular trading session as a “Dealing Day.” On each Rebalancing Date, the weight of the S&P GSCI™ Excess Return is adjusted to account for the difference, if any, in volatility between the S&P GSCI™ Excess Return and Contag Beta Index (which process we refer to as “Volatility Matching”). If the S&P GSCI™ Excess Return exhibits greater volatility over a specified period than the Contag Beta Index, then exposure to the S&P GSCI™ Excess Return (which we refer to as “S&P GSCI™ Excess Return Leverage”) will generally be smaller than 100%, *provided* that the S&P GSCI™ Excess Return Leverage is not greater than 100% nor less than 0%. If the S&P GSCI™ Excess Return exhibits lower volatility than the Contag Beta Index, no adjustment is made to increase the exposure to the S&P GSCI™ Excess Return. The Commodity Carry Strategy will benefit from a positive return in the Contag Beta Index when the level of the Contag Beta Index increases and will benefit from a negative return in the S&P GSCI™ Excess Return when the level of the S&P GSCI™ Excess Return decreases. Conversely, the Commodity Carry Strategy will suffer from a negative return in the Contag Beta Index when the level of the Contag Beta Index decreases and will suffer from a positive return in the S&P GSCI™ Excess Return when the level of the S&P GSCI™ Excess Return increases.

Each of the Constituents is an excess return index that reflects synthetic exposure to uncollateralized positions in the futures contracts underlying such Constituent, including any profit or loss realized when rolling such contracts. The Commodity Carry Strategy itself is also an excess return index.

The Contag Beta Index is a notional rules-based proprietary index developed by JPMSL, which is intended to capture the return of a synthetic exposure to a notional basket consisting of 24 commodities (corresponding to the commodities included in the S&P GSCI™ Excess Return), each represented by a commodity futures contract selected by a methodology developed by JPMSL, which we refer to as the "Selection Methodology." The Selection Methodology uses, along with other criteria, the slope of the futures curve for each eligible commodity to select the futures contract for each eligible commodity with the highest level of backwardation (subject to certain limitations). "Backwardation" refers to the situation where the futures contracts for a commodity with a delivery month further in time have lower contract prices than futures contracts for the same commodity with a delivery month closer in time. If there is no futures contract for one or more eligible commodities with backwardation, the Selection Methodology will select the futures contract with the lowest level of contango for any such commodities. "Contango" refers to the situation where the futures contracts for a commodity with a delivery month further in time have higher contract prices than futures contracts for the same commodity with a delivery month closer in time. The weightings of the commodities the futures contracts of which underlie the Contag Beta Index are determined, on an annual basis, by reference to the contract production weights calculated by Standard & Poor's for the S&P GSCI™ Excess Return.

The Contag Beta Index and the Selection Methodology are described in further detail in "Background on the Contag Beta Index —The J.P. Morgan Contag Beta Full Energy Class A Excess Return Index." The Contag Beta Index is published by Bloomberg L.P. under the ticker symbol "JCTABFEE."

The S&P GSCI™ Excess Return is the excess return version of the S&P GSCI™, which is published by Standard & Poor's, a division of The McGraw-Hill Companies, Inc., which we refer to as "S&P." The S&P GSCI™ Excess Return is an excess return index on a world production-weighted basket of principal nonfinancial commodities (*i.e.*, physical commodities) that satisfy specified criteria. The S&P GSCI™ Excess Return is described in further detail in "Background on the S&P GSCI™ Excess Return." The S&P GSCI™ Excess Return is published by Bloomberg L.P. under the ticker symbol "SPGCCIP."

The Commodity Carry Strategy is described as a "notional" or "synthetic" portfolio or basket because its reported value does not represent the value of any actual assets held by any person and there is no actual portfolio of assets in which any person has any ownership interest. The level of the Commodity Carry Strategy at any point is the return of the hypothetical uncollateralized portfolio of the Constituents, as adjusted by an adjustment factor (the "Replication Adjustment Factor") equivalent to 0.40% per year, calculated and deducted daily. The Commodity Carry Strategy had an initial level of 35.980 as of December 30, 1994.

### **Calculation and Publication of the Commodity Carry Strategy Level**

The index calculation agent, or any affiliate or subsidiary designated by it, will act as calculation agent for the Commodity Carry Strategy. Subject to the occurrence or existence of a Commodity Carry Market Disruption Event affecting a Constituent or a futures contract underlying such Constituent, the index calculation agent will calculate and publish the value (the "Strategy Index Level") of the Commodity Carry Strategy on each Dealing Day, reported to four (4) decimal places, on the Bloomberg ticker page "AIJPCC1U".

#### ***(a) Index Rebalancing***

Subject to the occurrence of a Commodity Carry Market Disruption Event, the Commodity Carry Strategy will be rebalanced on each Rebalancing Date to adjust the synthetic exposure of the Commodity Carry Strategy to account for the performance of the Contag Beta Index and the S&P GSCI™ Excess Return since the immediately preceding Rebalancing Date, and the effects of the Volatility Matching as described in further detail below. The effect of the rebalancing will be to reset the exposure of the Commodity Carry Strategy to the Constituents and apply the weighting determined by Volatility Matching, if applicable.



**(b) Volatility Matching**

Volatility Matching is a mechanism to adjust the S&P GSCI™ Excess Return Leverage, which aims to reduce exposure to the S&P GSCI™ Excess Return where the volatility level of the S&P GSCI™ Excess Return is greater than the volatility level of the Contag Beta Index. No adjustment is made to increase exposure to the S&P GSCI™ Excess Return if the volatility level of the S&P GSCI™ Excess Return is less than the volatility level of the Contag Beta Index.

For each relevant month, the index calculation agent will determine the S&P GSCI™ Excess Return Leverage in respect of the relevant Rebalancing Date. A ratio measuring the realized volatility of the Contag Beta Index compared to the realized volatility of the S&P GSCI™ Excess Return will be calculated by the index calculation agent for a period of 64 Dealing Days ending on the fourth Dealing Day immediately preceding the relevant Rebalancing Date (which we refer to as the "Volatility Matching Period") in accordance with the following formula:

$$SCL(RD_{n-1}) = \text{Min}(\text{MaxLeverage}, \text{Max}(\text{MinLeverage}, \text{VolRatio}(RD_{n-1})))$$

where:

$SCL(RD_{n-1})$  means, in respect of Dealing Day d, the S&P GSCI™ Excess Return Leverage for the immediately preceding Rebalancing Date  $RD_{n-1}$ .

$\text{MaxLeverage}$  is equal to 100%, which is the Maximum S&P GSCI™ Excess Return Leverage.

$\text{MinLeverage}$  is equal to 0%, which is the Minimum S&P GSCI™ Excess Return Leverage.

$\text{VolRatio}(RD_{n-1})$  means:

$$\text{VolRatio}(RD_{n-1}) = \frac{\sqrt{\frac{252}{62} \times \sum_{j=1}^{63} \left( Rtn_{Long}(j) - \frac{1}{63} \sum_{k=1}^{63} Rtn_{Long}(k) \right)^2}}{\sqrt{\frac{252}{62} \times \sum_{j=1}^{63} \left( Rtn_{Short}(j) - \frac{1}{63} \sum_{k=1}^{63} Rtn_{Short}(k) \right)^2}}$$

where:

$Rtn_{Long}(j)$  means the return of the Contag Beta Index on the j-th day of the Volatility Matching Period( $RD_{n-1}$ ), defined as follows:

$$Rtn_{Long}(j) = \frac{\text{LookbackLevel}_{Long}(j)}{\text{LookbackLevel}_{Long}(j-1)} - 1$$

$Rtn_{Long}(k)$  means the return of the Contag Beta Index on the k-th day of the Volatility Matching Period( $RD_{n-1}$ ), defined as follows:

$$Rtn_{Long}(k) = \frac{\text{LookbackLevel}_{Long}(k)}{\text{LookbackLevel}_{Long}(k-1)} - 1$$

$Rtn_{Short}(j)$  means the return of the S&P GSCI™ Excess Return on the j-th day of the Volatility Matching Period( $RD_{n-1}$ ), defined as follows:

$$Rtn_{Short}(j) = \frac{\text{LookbackLevel}_{Short}(j)}{\text{LookbackLevel}_{Short}(j-1)} - 1$$

$Rtn_{Short}(k)$  means the return of the S&P GSCI™ Excess Return on the k-th day of the Volatility Matching Period( $RD_{n-1}$ ), defined as follows:

$$Rtn_{Short}(k) = \frac{LookbackLevel_{Short}(k)}{LookbackLevel_{Short}(k-1)} - 1$$

where:

$LookbackLevel_{Long}(j)$  means the official closing level of the Contag Beta Index on the j-th day of the Volatility Matching Period( $RD_{n-1}$ ).

$LookbackLevel_{Long}(k)$  means the official closing level of the Contag Beta Index on the k-th day of the Volatility Matching Period( $RD_{n-1}$ ).

$LookbackLevel_{Short}(j)$  means the official closing level of the S&P GSCI™ Excess Return on the j-th day of the Volatility Matching Period ( $RD_{n-1}$ ).

$LookbackLevel_{Short}(k)$  means the official closing level of the S&P GSCI™ Excess Return on the k-th day of the Volatility Matching Period( $RD_{n-1}$ ).

$LookbackLevel_{Long}(j-1)$  means the official closing level of the Contag Beta Index on the(j-1)th day of the Volatility Matching Period( $RD_{n-1}$ ).

$LookbackLevel_{Long}(k-1)$  means the official closing level of the Contag Beta Index on the(k-1)th day of the Volatility Matching Period( $RD_{n-1}$ ).

$LookbackLevel_{Short}(j-1)$  means the official closing level of the S&P GSCI™ Excess Return on the (j-1)th day of the Volatility Matching Period( $RD_{n-1}$ ).

$LookbackLevel_{Short}(k-1)$  means the official closing level of the S&P GSCI™ Excess Return on the(k-1)th day of the Volatility Matching Period( $RD_{n-1}$ ).

If the S&P GSCI™ Excess Return exhibits greater volatility over any Volatility Matching Period than the Contag Beta Index, then exposure to the S&P GSCI™ Excess Return will be smaller than 100%, *provided* that the S&P GSCI™ Excess Return Leverage is not less than 0%.

### ***(c) The Strategy Index Level***

The Strategy Index Level for the Commodity Carry Strategy is determined in respect of each Dealing Day, by reference to the Strategy Index Level published in respect of the immediately preceding Rebalancing Date and the official closing level, reported in U.S. dollars, of the Constituents on such Dealing Day and such immediately preceding Rebalancing Date. The Strategy Index Level for the Commodity Carry Strategy will be adjusted as a result of a Commodity Carry Market Disruption Event as further described under “— Market Disruptions to the Strategy Index Level” below.

The Strategy Index Level of the Commodity Carry Strategy on December 30, 1994, the earliest Dealing Day in respect of which the time series of Strategy Index Level for the Commodity Carry Strategy is calculated and published by the index calculation agent (the "Initial Strategy Index Day") was 35.980. In respect of each Dealing Day following the Initial Strategy Index Day, the index calculation agent calculates the Strategy Index Level for the Commodity Carry Strategy in accordance with the following formula:

$$Index(d) = [Index(RD_{n-1}) + Index(RD_{n-1}) \times MTDP(d)] \times (1 - RAF_d)$$

where:

$Index(RD_{n-1})$  means the Strategy Index Level on the Rebalancing Date immediately preceding Dealing Day d, rounded to 4 decimals.

$MTDP(d)$  is the Month-to-Date Performance on Dealing Day d, as defined below.

$RAF_d$  is the Replication Adjustment Factor, calculated by the Contag Alpha Calculation Agent as follows:

$$RAF_d = 1 - (1 - RAR)^{\frac{\text{CalendarDays}}{360}}$$

where:

$RAR$  is equal to 0.4%, which is the Replication Adjustment Rate, which is calculated and deducted daily; and

Calendar Days is the number of calendar days from, and including, the Rebalancing Date immediately preceding Dealing Day d to, but excluding, Dealing Day d.

#### ***(d) Month- to- Date Performance***

The Month-to-Date Performance is calculated on each Dealing Day and represents the net return of synthetic unleveraged long exposure to the Contag Beta Index and, subject to the Volatility Matching described above, synthetic leveraged short exposure to the S&P GSCI™ Excess Return since the Rebalancing Date immediately preceding such Dealing Day.

The Month-to-Date Performance ("MTDP") is determined by the index calculation agent in respect of each Dealing Day d in accordance with the following formula:

$$MTDP(d) = \left( \frac{Level_{Long}(d)}{Level_{Long}(RD_{n-1})} - 1 \right) - SCL(RD_{n-1}) \times \left( \frac{Level_{Short}(d)}{Level_{Short}(RD_{n-1})} - 1 \right);$$

where:

$Level_{Long}(d)$  means the official closing level, in USD, of the Contag Beta Index on Dealing Day d.

$Level_{Short}(d)$  means the official closing level, in USD, of the S&P GSCI™ Excess Return on Dealing Day d.

$Level_{Long}(RD_{n-1})$	means the official closing level, in USD, of the Contag Beta Index on Dealing Day $RD_{n-1}$ .
$Level_{Short}(RD_{n-1})$	means the official closing level, in USD, of the S&P GSCI™ Excess Return on Dealing Day $RD_{n-1}$ .
$SCL(RD_{n-1})$	means the S&P GSCI™ Excess Return Leverage, determined as described above.

### Publication of the Strategy Index Level

The index calculation agent may calculate the Commodity Carry Strategy values with greater frequency than daily on each Dealing Day and share this calculation with its affiliates for internal purposes.

The index calculation agent will be under no obligation to any person to provide the Commodity Carry Strategy values by any alternative method if publication of the ticker symbol "AIJPCC1U" is subject to any delay in or interruptions of publication or 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, 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 that may occur or any other event beyond the control of the index calculation agent.

The index calculation agent is under no obligation to continue the calculation, publication and dissemination of the Commodity Carry Strategy or any Strategy Index Level.

### Market Disruptions to the Strategy Index Level

"Commodity Carry Market Disruption Event" means:

(a) in respect of a Constituent and a Dealing Day (such Dealing Day a "Commodity Carry Disrupted Day" in respect of such Constituent), either:

(i) the occurrence or continuation on such Dealing Day of a Commodity Carry Market Disruption Event in respect of any Futures Contract (as defined below) entering into the calculation of the closing level of such Constituent; or

(ii) the occurrence of a Non-Publication Event in respect of such Constituent and such Dealing Day;

(b) in respect of a Futures Contract and a Dealing Day (such Dealing Day a "Commodity Carry Disrupted Day" in respect of such Futures Contract), the occurrence of any of the following:

(i) a material limitation, suspension, discontinuation or disruption of trading of such Futures Contract which results in failure by the Relevant Exchange on which such Futures Contract(s) is/are traded to report an official settlement price for such Futures Contract(s);

(ii) a limitation, suspension or disruption of trading of such Futures Contract, by reason of movements exceeding "limit up" or "limit down" levels permitted by the Relevant Exchange and which, in the opinion of the index calculation agent, is material to trading volume and market conditions in such Futures Contract on such Dealing Day;

(iii) publication by the Relevant Exchange of a “limit price” as the official settlement price for such Futures Contract (by reason of movements exceeding “limit up” or “limit down” levels permitted by the Relevant Exchange);

(iv) the Relevant Exchange for such Futures Contract not being open for trading during its regular trading session, regardless of whether any such exchange closes prior to its scheduled closing time.

“Eligible Commodity” means each commodity listed in Table 1: *Eligible Commodities* under “Background on the Contag Beta Index — J.P. Morgan Contag Beta Full Energy Class A Excess Return Index — The Selection Methodology.”

“Futures Contract” means a contract for delivery of an Eligible Commodity which is associated with a delivery month.

“Index Sponsor” means, in respect of any Constituent, the corporation or other entity that (a) is responsible for setting and reviewing the rules and procedures and the methods of calculation and adjustments, if any, related to the Constituent and (b) announces (directly or through an agent) the level of the Constituent on a regular basis.

“Non-Publication Event” means, with respect to a Constituent and a Dealing Day, the failure by the Relevant Exchange, any Index Sponsor or other price source to announce publicly or publish the following (or the information necessary for determining the following) with respect to such Dealing Day:

(a) the official settlement price for any relevant Futures Contract; or

(b) the closing level of such Constituent, in either case by 12:00 p.m (London time) on the immediately following Dealing Day,

*provided, however,* that the occurrence of such an event shall not constitute a “Non-Publication Event” in the case of clause (b) if the index calculation agent determines in its sole discretion by 12:00 p.m. (London time) on such immediately following Dealing Day that the information necessary for determining the closing level of the relevant Constituent has been announced publicly or has been published by a Relevant Exchange, the Index Sponsor or other price source, in which case the index calculation agent shall determine the official closing level, in USD, of such Constituent in good faith and in a commercially reasonable manner.

“Relevant Exchange” means, in respect of an Eligible Commodity, the exchange on which such futures contract is listed, or any successor to such exchange.

If, with respect to any Dealing Day, a Commodity Carry Market Disruption Event has occurred on such Dealing Day or the Rebalancing Date immediately preceding such Dealing Day, then the Strategy Index Level for such Dealing Day and for each subsequent Dealing Day until such day is not a Commodity Carry Disrupted Day will be equal to the Adjusted Strategy Index Level, calculated as follows:

- (i) the Strategy Index Level in respect of Dealing Day  $t$  shall be equal to the Adjusted Strategy Index Level (as defined below) in respect of  $t$  and observed as at  $t$  ( $AdjIndex_t(t)$ ), calculated and published by the index calculation agent where, for the avoidance of doubt,  $AdjIndex_t(t)$  is calculated in accordance with the following procedure for calculating  $AdjIndex_s(d)$  in the particular case that  $s$  is equal to  $t$  and  $d$  is equal to  $t$ ; and

- (ii) the index calculation agent shall calculate the Adjusted Strategy Index Level in respect of  $t$  and observed as at each Dealing Day  $s$  from and following  $t$ , until the first Dealing Day  $s'$  for which, in respect of each Futures Contract entering into the calculation of the Index, there has been at least one Dealing Day (from, and including,  $t$  to, and including,  $s'$ ) which is not a Commodity Carry Disrupted Day. The Adjusted Strategy Index Level in respect of  $t$  and observed as at such Dealing Day  $s'$  ( $AdjIndex_{s'}(t)$ ) shall be the "Final Adjusted Strategy Index Level". It follows from the procedure described below that  $s'$  shall occur no later than five Dealing Days following  $t$ . For the avoidance of doubt,  $AdjIndex_{s'}(t)$ , calculated in accordance the following procedure for calculating  $AdjIndex_s(d)$  in the particular case that  $s$  is equal to  $s'$  and  $d$  is equal to  $t$ ,

all, in accordance with the following formula:

$$AdjIndex_s(d) = \left[ AdjIndex_s(RD_{n-1}) + AdjIndex_{RD_{n-1}}(RD_{n-1}) \times AdjMTDP_s(d) \right] \times (1 - RAF_d) ;$$

where:

$AdjIndex_s(d)$  means the Adjusted Strategy Index Level in respect of  $d$  observed as at  $s$

$AdjMTDP_s(d)$  means the Adjusted Month-to-Date Performance in respect of Dealing Day  $d$  and observed as at Dealing Day  $s$ , defined as follows:

$$AdjMTDP_s(d) = \left( \frac{AdjLevel_{Long,s}^{(d)}}{AdjLevel_{Long,s}(RD_{n-1})} - 1 \right) - ShortWeight(RD_{n-1}) \left( \frac{AdjLevel_{Short,s}^{(d)}}{AdjLevel_{Short,s}(RD_{n-1})} - 1 \right) ;$$

$AdjIndex_s(RD_{n-1})$  means the Adjusted Strategy Index Level in respect of  $RD_{n-1}$  as observed at Dealing Day  $s$ ;

$AdjIndex_{RD_{n-1}}(RD_{n-1})$  means the Adjusted Strategy Index Level in respect of  $RD_{n-1}$  as observed at  $RD_{n-1}$ ;

where:

$AdjLevel_{Long,s}(RD_{n-1})$  means  $AdjLevel_{c,s}(d)$  where  $c$  is the Contag Beta Index and  $d$  is  $RD_{n-1}$ ;

$AdjLevel_{Short,s}(RD_{n-1})$  means  $AdjLevel_{c,s}(d)$  where  $c$  is the S&P GSCI™ Excess Return and  $d$  is  $RD_{n-1}$ ;

$AdjLevel_{Long,s}(d)$  means  $AdjLevel_{c,s}(d)$  where  $c$  is the Contag Beta Index;

$AdjLevel_{Short,s}(d)$  means  $AdjLevel_{c,s}(d)$  where  $c$  is the S&P GSCI™ Excess Return;

$AdjLevel_{c,s}(d)$  means the Adjusted official closing level as published by the relevant Index Sponsor (the "USD Level") of Constituent  $c$  in respect of Dealing Day  $d$  and observed as at Dealing Day  $s$ , defined as follows:

(x) if Dealing Day  $d$  is not a Commodity Carry Disrupted Day in respect of any Futures Contract entering into the calculation of the closing level of Constituent  $c$ , the USD Level of Constituent  $c$  on Dealing Day  $d$ ; otherwise,

(y) the level for Constituent c calculated by the index calculation agent in respect of Dealing Day d in accordance with the rules of Constituent c by reference to:

- i. with respect to each Futures Contract included in Constituent c which is not affected by a Commodity Carry Market Disruption Event on d, the settlement price of such Futures Contract on Dealing Day d as published by the Relevant Exchange; and
- ii. with respect to each Futures Contract included in Constituent c which is affected by a Commodity Carry Market Disruption Event on Dealing Day d (each an "Affected Futures Contract"):

(A) the settlement price of each such Affected Futures Contract as published by the Relevant Exchange on the Dealing Day which was first to occur during the period from, and including, Dealing Day d to, and including, Dealing Day s on which no Commodity Carry Market Disruption Event exists or is occurring with respect to such Affected Futures Contract; or

(B) in the case that there is no such Dealing Day as mentioned in (a) above, the settlement price of such Affected Futures Contract as published by the Relevant Exchange on the most recent Dealing Day on or before Dealing Day s on which a settlement price has been published for such Affected Futures Contract (whether or not there has been a Commodity Carry Market Disruption Event on such day),

*provided, that*, if a Commodity Carry Market Disruption Event continues for five consecutive Dealing Days following Dealing Day d, the price of such Affected Futures Contract used by the index calculation agent in determining the level for Constituent c in respect of Dealing Day d (the "index calculation agent Determined Price") shall be determined by the index calculation agent acting in good faith and using such information and/or methods as it deems appropriate (notwithstanding the existence of a Commodity Carry Market Disruption Event), and in such case such index calculation agent Determined Price for such Affected Futures Contract will apply in the determination of Adjusted USD Level of Constituent c in respect of Dealing Day d and as observed at each Dealing Day following d + 5.

### **Extraordinary Events Affecting the Constituents**

#### *Successor Index Sponsor or Successor Constituent*

If the Contag Beta Index or the S&P GSCI<sup>TM</sup> Excess Return is (a) not calculated and announced by the Index Sponsor, but is calculated and announced by a successor index sponsor acceptable to the index calculation agent, or (b) replaced by a successor Constituent using, in the determination of the index calculation agent, the same or substantially similar formula for and method of calculation as used in the calculation of such Constituent, then such index will be deemed to be the index so calculated and announced by that successor index sponsor or that successor index, as the case may be.

### *Material Change to Constituent*

If, on or prior to any Dealing Day on which the index calculation agent is determining the Strategy Index Level of the Commodity Carry Strategy, the Index Sponsor makes a material change in the formula for, or the method of calculating, any Constituent (other than a modification prescribed in that formula or method to maintain such Constituent or prescribed routine events) then the index calculation agent shall, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, specified input or any other rule in relation to the Commodity Carry Strategy to account for such modification.

### *Constituent Exclusion and Substitution*

If, on or prior to any Dealing Day on which the index calculation agent is determining the Strategy Index Level of the Commodity Carry Strategy, an Index Sponsor permanently cancels any Constituent, and no successor index exists, the index calculation agent shall, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, valuation terms or any other rule in relation to the Commodity Carry Strategy to account for such cancellation.

### *Change in Law/ Inaccurate Futures Contract Prices*

Without prejudice to the ability of the index calculation agent to amend the Commodity Carry Rules as described elsewhere in this product supplement, the index calculation agent may, acting in good faith and in a commercially reasonable manner:

- (a) exclude; or
- (b) substitute,

any Futures Contract following the occurrence (and/or continuation) of a Change in Law or in circumstances where it considers it reasonably necessary to do so to reflect the intention of the Commodity Carry Strategy, including (without prejudice to the generality of the foregoing) any perception among market participants generally that the published price of the relevant Futures Contract is inaccurate (and the Relevant Exchange fails to correct such level), and if it so excludes or substitutes any Futures Contract, then the index calculation agent may adjust the Commodity Carry Rules as it determines in good faith to be appropriate to account for such exclusion or substitution on such date(s) selected by the index calculation agent. The index calculation agent is under no obligation to continue the calculation and publication of the Commodity Carry Strategy upon the occurrence or existence of a Change in Law; and the index calculation agent may decide to cancel the Commodity Carry Strategy if it determines, acting in good faith, that the objective of the Commodity Carry Strategy can no longer be achieved.

“Change in Law” means:

(a) due to:

- (i) the adoption of, or any change in, any applicable law, regulation, rule or order (including, without limitation, any tax law); or
- (ii) the promulgation of, or any change in, the interpretation, application, exercise or operation by any court, tribunal, regulatory authority, exchange or trading facility or any other relevant entity with competent jurisdiction of any applicable law, rule, regulation, order, decision or determination (including, without limitation, as implemented by the U.S. Commodity and Futures Trading Commission or exchange or trading facility), in each case occurring on or after the Initial Strategy Index Day,



in each case, the index calculation agent determines in good faith that it is contrary (or, upon adoption, it will be contrary) to such law, rule, regulation, order, decision or determination for any market participants that are brokers or financial intermediaries (individually or collectively) to purchase, sell, enter into, maintain, hold, acquire or dispose of any Futures Contracts or any transaction referencing any Futures Contract (in whole or in part) (in the aggregate on a portfolio basis or incrementally on a trade by trade basis) including (without limitation) if such Futures Contract (in whole or in part) are (or, but for the consequent disposal thereof, would otherwise be) in excess of any allowable position limit(s) applicable to any market participants that are brokers or financial intermediaries (individually or collectively) in relation to such Futures Contract traded on any exchange(s) or other trading facility; or

(b) the occurrence or existence of any:

(i) suspension or limitation imposed on trading commodities futures contracts (including, without limitation, the Futures Contracts); or

(ii) any other event that causes trading in commodity futures contracts (including, without limitation, the Futures Contracts) to cease.

### **Modifications to, or Cancellation of, the Constituents**

If any Constituent (which we refer to as an “Affected Index”) is (a) not calculated and announced by the Index Sponsor, but is calculated and announced by a successor sponsor acceptable to the index calculation agent, or (b) replaced by a successor index using, in the determination of the index calculation agent, the same or substantially similar formula for and method of calculation as used in the calculation of the Affected Index, then such index will be deemed to be the index so calculated and announced by that successor index sponsor or that successor index, as the case may be.

If, on or prior to any Dealing Day on which the index calculation agent is determining the Strategy Index Level of the Commodity Carry Strategy, the Index Sponsor makes a material change in the formula for or the method of calculating a Constituent (other than a modification prescribed in that formula or method to maintain such index or prescribed routine events), then the index calculation agent shall, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, specified inputs or any other rule in relation to the Commodity Carry Strategy to account for such modification.

If on or prior to any Dealing Day on which the index calculation agent is determining the Strategy Index Level of the Commodity Carry Strategy, the Index Sponsor permanently cancels any Constituent, and no successor index exists, the index calculation agent shall, in good faith make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, valuation terms or any other rule in relation to the Commodity Carry Strategy to account for such cancellation.

### **Corrections**

In the event that (a) the USD Level of any Constituent used to calculate the Strategy Index Level in respect of any Dealing Day is subsequently corrected and the correction is published by the Index Sponsor before the next following Rebalancing Date, or (b) the index calculation agent identifies an error or omission in any of its calculations or determinations in respect of the Commodity Carry Strategy, then the index calculation agent may, if practicable and the correction is deemed material by the index calculation agent, adjust or correct the Strategy Index Level published in respect of the relevant Dealing Day and each subsequent Dealing Day and publish such corrected Strategy Index Level(s) as soon as reasonably practicable.

## **Index Calculation Agent; Amendment of Rules; Limitation of Liability**

The Rules provide that the index calculation agent must act in good faith and in a commercially reasonable manner. In the event that ambiguities arise in interpreting or applying the Commodity Carry Rules, the index calculation agent will resolve ambiguities in a reasonable manner and, if necessary, amend the Rules to reflect such resolution.

Neither the index calculation agent nor any of its affiliates or subsidiaries or any of their respective directors, officers, employees, delegates or agents (each a "Relevant Person") shall have any responsibility to any person (whether as a result of negligence or otherwise) for any determinations made or anything done (or omitted to be determined or done) in respect of the Commodity Carry Strategy or in respect of the publication of the Strategy Index Level (or failure to publish such Strategy Index Level) and any use to which any person may put the Commodity Carry Strategy or the Strategy Index Levels.

Neither the index calculation agent nor any Relevant Person shall have any liability, contingent or otherwise, to any person or entity for the quality, accuracy, timeliness or completeness of the information or data contained in the Commodity Carry Rules or the Commodity Carry Strategy, or for delays, omissions or interruptions in the delivery of the Commodity Carry Strategy or related data. Neither the index calculation agent nor any Relevant Person makes any warranty, express or implied, as to the results to be obtained by any person or entity in connection with any use of the Commodity Carry Strategy, including but not limited to the trading of or investments in products based on or indexed or otherwise related to the Commodity Carry Strategy, any data related thereto or any components thereof.

Neither the index calculation agent nor any Relevant Person makes any express or implied warranties, and hereby expressly disclaims, to the fullest extent permitted by law, all warranties of merchantability or fitness for a particular purpose or use with respect to the Rules, the Commodity Carry Strategy or any data related thereto. Without limiting any of the foregoing, in no event shall either the index calculation agent or any Relevant Person have any liability for any special, punitive, indirect or consequential damages (including lost profits), in connection with any use by any person of the Commodity Carry Strategy or any products based on or indexed or otherwise related thereto, even if notified of the possibility of such damages.

All determinations of the index calculation agent in respect of the Commodity Carry Strategy shall be final, conclusive and binding and no person shall be entitled to make any claim against any of the Relevant Persons in respect thereof. Once a determination or calculation is made or action taken by the index calculation agent or any other Relevant Person in respect of the Commodity Carry Strategy, neither the index calculation agent nor any other Relevant Person shall be under any obligation to revise any determination or calculation made or action taken for any reason.

## SATELLITE STRATEGIES

The satellite strategies consist of two main types: mean reversion strategies and a short volatility strategy (which we refer to as the “Satellite Strategies”).

### Mean Reversion Strategies

Each Mean Reversion Strategy tracks the return of a synthetic long or short position in the relevant Underlying Constituent. The exposure to the synthetic position in the Underlying Constituent is adjusted on each Index Business Day based on the performance of the Underlying Constituent over the preceding five (5) Index Business Days as described below. The strategy seeks to capitalize on the view that over short periods of time, such as five Index Business Days, markets are cyclical – meaning that an upward trend in the level of an Underlying Constituent is usually followed by a downward trend or vice versa. As such and in general terms, each Mean Reversion Strategy notionally takes a synthetic short position in an Underlying Constituent following a recent increase in its level or a synthetic long position following a recent fall in an Underlying Constituent.

#### *Rebalancing of Underlying Constituents*

The exposure to the Underlying Constituent of each Mean Reversion Strategy (the “exposure”) on any Index Business Day is based on the weighted average of the performance of the Underlying Constituent over a five Index Business Day period, ending with the current Index Business Day. Higher weights are assigned to more recent Index Business Days in the five Index Business Day period. The weighted average performance is multiplied by -40 to calculate the exposure, such that if the weighted average performance of the Underlying Constituent over the five Index Business Day period is 2.5%, the exposure will be -100%; conversely, if the weighted average performance is -2.5%, the exposure will be +100%. The exposure cannot be greater than +100% or less than -100%. The exposure is intended to result in short exposure if the recent performance is positive and long exposure if the recent performance is negative.

#### *Calculation of Strategy Index Levels*

The Strategy Index Level on any Index Business Day measures the performance of the Underlying Constituent multiplied by the exposure over the period from the immediately preceding Index Business Day to that Index Business Day, minus an adjustment which is intended to reflect the approximate notional transaction costs involved in replicating the strategy. The adjustment is calculated by multiplying the absolute value of the change in the exposure from one Index Business Day to the following Index Business Day by the Adjustment Factor of 0.03%. The Adjustment Factor is intended to reflect the notional cost of maintaining either a notional long or short position in the relevant Underlying Constituent.

#### *Specific Terms Relating to Each Mean Reversion Strategy*

Table 10 below provides additional terms relating to each Mean Reversion Strategy, including the Bloomberg ticker and the Underlying Constituent.

**Table 10**

Strategy (Bloomberg Ticker)	Underlying Constituent (Bloomberg Ticker)
J.P. Morgan Alternative Index Mean Reversion US Strategy (AIJPSR1U)	J.P. Morgan US Equity Futures (G) Tracker (FTJGUSEE)
J.P. Morgan Alternative Index Mean Reversion Europe Strategy (AIJPSR1E)	J.P. Morgan European Equity Futures (G) Tracker (FTJGEUEE)
J.P. Morgan Alternative Index Mean Reversion Japan Strategy (AIJPSR1J)	J.P. Morgan Japanese Equity Futures (G) Tracker (FTJGJP EE)

## Short Volatility Strategy

The Short Volatility Strategy tracks the return of a synthetic sale of a one-month variance swap on the S&P 500 Index (Bloomberg ticker: SPX), which we refer to as the “Underlying Constituent” on each monthly rebalancing date (which we refer to as a “Rebalancing Date”). The Short Volatility Strategy seeks to capitalize from the long-term trend of the observed volatility of a broad market equity index, such as the S&P 500 Index tending to be less than the implied, by prices in the equity options market, as represented by the CBOE Volatility Index® (Bloomberg page VIX <Index>), which we refer to as the “Underlying Volatility Index.” If the actual volatility in any month is less than the reference volatility implied by the options market at the beginning of such month (less any applicable transaction costs), then the Short Volatility Strategy will make a positive return. Conversely, if the actual volatility in such month is more than the reference volatility implied by the options market at the beginning of the month, then the Short Volatility Strategy will record a negative return. The Short Volatility Strategy is published by Bloomberg L.P. under the ticker symbol “AIJPSV1U.”

A variance swap is an instrument designed to give investors direct exposure to the volatility of an underlying asset. Volatility is a measure of the variability of the returns of an asset over a time period. Realized volatility is a calculation of this amount of movement historically from prices or levels of the asset observed periodically in the market over a set period. Variance is the square of volatility and is used in certain products in the over-the-counter (OTC) derivatives market in place of volatility due to mathematical properties that make it more convenient to value and hedge those products. The index calculation agent primarily uses variance in its calculation of the Strategy Index Level for the Short Volatility Strategy for this reason, but uses and refers to volatility as a standard reference measure consistent with market practice.

In a variance swap, parties arrange to exchange (e.g., in one month) a pre-agreed notional amount multiplied by the difference between the realized volatility of an underlying asset and a strike level determined by reference to implied volatility. The implied volatility reflects the market’s expectation of realized volatility at the time the variance swap is entered into. Implied volatility is a market estimate of the volatility an asset will realize over a future period of time. Implied volatility is determined from the market prices of listed options on such asset — in the case of the Short Volatility Strategy, the market prices of listed options on the S&P 500® Index as represented by the Underlying Volatility Index. Selling a variance swap means that an investor will benefit when actual volatility is lower than the predetermined strike level. However, if actual volatility is higher than the strike level, this will result in a loss to the investor. Additionally, this payoff is non-linear with respect to the returns of the underlying asset. Sellers of variance swaps may experience significant losses when the volatility of the underlying asset is considerably higher than the strike level.

### *Rebalancing of Underlying Constituent*

On each Rebalancing Date, the Underlying Constituent will be assigned a weight (which we refer to as the “Weight”) determined by the index calculation agent.

The Weight is determined as  $1/(8 \times \text{strike level})$ . The Weight is in general terms assigned such that if the realized volatility is 1% less than the strike level, the Short Volatility Strategy returns approximately 0.25%, conversely if the realized volatility is 1% greater than the strike level then the strategy returns approximately -0.25% (the exact numbers are dependent on the strike level). However, the payoff is non-linear with respect to the realized volatility. Accordingly, the gains or losses will be magnified the further the realized volatility is from the strike level.

“Rebalancing Date” means the third Friday of each month. If, on such day, the Chicago Mercantile Exchange (the “CME”) is not open for business, the Rebalancing Date will be the first preceding day on which the CME is open for business.

### *Calculation of Strategy Index Levels*

The Strategy Index Level on any Index Business day reflects the return of the notional short position in the variance swap over the period between the immediately preceding Rebalancing Date and that Index Business Day. The return of the Short Volatility Strategy at the end of any monthly period is calculated by reference to the actual realized volatility in any month such that if the actual realized volatility during the relevant period is less than the strike level then the Short Volatility Strategy will make a positive return. Conversely, if the actual realized volatility during such period is greater than the reference volatility implied by the Underlying Volatility Index at the beginning of the month, then the Short Volatility Strategy will record a negative return.

The return on any Index Business Day reflects the mark-to-market of a short variance swap position, which takes into account the implied volatility to the maturity of the variance swap and the realized volatility since the start of the swap.

In calculating the Strategy Index Level, the maximum possible loss for the short variance swap position is -100%.

The determination of the implied volatilities and strike levels are based on the closing levels of the Underlying Volatility Index, adjusted for notional transaction costs. The notional transaction costs are reflected as a downwards adjustment of the strike level. This adjustment increases with increased levels of implied volatility, and is subject to a minimum reduction of 1.1 volatility points.

### *Index Calculation Agent Determination of Variance Swap Strike Levels*

If, on any Index Business Day, the index calculation agent determines, by reference to at least three (3) independent leading market sources, that the one month implied volatility level for the Underlying Constituent is 3% greater than or 3% less than the closing level of the Underlying Volatility Index, the index calculation agent may (but is not obliged to), for such period of time determined by the index calculation agent, utilize the average of at least three (3) independent leading market sources for the purposes of calculating the closing level of the Underlying Volatility Index when calculating the Strategy Index Level of the Short Volatility Strategy.

The index calculation agent is under no obligation to monitor actively whether or not the above event has occurred.

### **Additional Information about the Index and the Strategies**

#### *Index Market Disruption Events*

With respect to the Index, any Strategy or Underlying Constituent, an "Index Market Disruption Event," means, in respect of any Index Business Day, the occurrence or existence of any of the following events:

- where the Underlying Constituent is a currency pair, the occurrence or existence of an inconvertibility event or a foreign exchange disruption event (generally, an event that affects the convertibility or delivery of any relevant currency or the imposition or implementation by the relevant government of laws or regulations that impact the ability to obtain reliable spot exchange rates) that the index calculation agent determines is material or a price source disruption (generally, the determination by the index calculation agent that it is impossible or practicably difficult to obtain quotes for the relevant exchange rates, FX forward points or interest rates);

- where the Underlying Constituent is a notional position in a synthetic bond, the occurrence or existence of swap rates not being published on the relevant Reuters page that the index calculation agent determines is material or a price source disruption;
- where the Underlying Constituent is a non-proprietary index (*i.e.*, an index calculated and maintained by an entity other than JPMSL or its affiliates) either (i) a failure by the sponsor of the Underlying Constituent to calculate and publish the closing level for the Underlying Constituent in respect of such day; or (ii) an event that, in the determination of the index calculation agent, disrupts or impairs the ability of one or more market participants to effect transactions in or obtain market values for any securities or other components of the Underlying Constituent that comprise 20% or more of the level of the Underlying Constituent;
- with respect to the Index, any Strategy (other than the Commodity Carry Strategy) or where the Underlying Constituent is a J.P. Morgan Futures Tracker, a failure by the sponsor of the index, strategy or tracker to calculate and publish the closing level for the Index, Strategy or Underlying Constituent, as the case may be, in respect of such day; or
- where the Strategy is the Commodity Carry Strategy, a failure by the sponsor of the Strategy to calculate and publish the level for the Strategy in respect of such day or the occurrence of a Commodity Carry Market Disruption Event (as defined in the “The Strategies — Commodity Carry Strategy — Market Disruptions to the Strategy Index Level”) in respect of such day.

Upon the occurrence of an Index Market Disruption Event regarding:

(a) *Any Strategy (other than an Equity Carry Strategy or the Commodity Carry Strategy):*

If an Index Market Disruption Event occurs or exists on any Index Business Day (including a Rebalancing Date) (which we refer to as a “Disrupted Day”) with respect to any Underlying Constituent of a Strategy (other than any Equity Carry Strategy or the Commodity Carry Strategy) (each such affected Underlying Constituent, which we refer to as an “Affected Constituent”), the index calculation agent, acting in good faith and a commercially reasonable manner, may (but is not obliged to) either:

- (i) calculate and publish its good faith estimate of the Strategy Index Level for such Index Business Day, using its good faith estimate of the level of the Affected Constituent(s) or any other variable relevant to the calculation of the Strategy Index Level; or
- (ii) not calculate the Strategy Index Level for such Index Business Day and suspend the calculation and publication of the Strategy Index Level until the first succeeding Index Business Day which is not a Disrupted Day for any Underlying Constituent of the Strategy (*i.e.*, the relevant Disrupted Day will not be an Index Business Day for the purposes of the Strategy).

(b) *the Index or any Strategy that is an Equity Carry Strategy:*

If any Index Business Day (including a Rebalancing Date) is a Disrupted Day for any Underlying Constituent (each affected constituent, which we refer to as an “Affected Constituent”), then for the purposes of determining the Index Level or Strategy Index Level for such Index Business Day, the Closing Level for each Affected Constituent in respect of such Disrupted Day will be deemed to be:

- (i) where the Affected Constituent is not the Commodity Carry Strategy, the Closing Level for the Affected Constituent as of the first following Index Business Day on which the Closing Level of the Affected Constituent is published and is not a Disrupted Day for the Affected Constituent, unless the five Index Business Days immediately following the original Index Business Day are Disrupted Days for such Affected Constituent, in which case the index calculation agent will determine the Closing Level of the Affected Constituent acting in good faith and using such information and/or methods as it determines, in its reasonable discretion, are appropriate; or

- (ii) where the Affected Constituent is the Commodity Carry Strategy, the Final Adjusted Strategy Index Level (as defined in the “The Strategies — Commodity Carry Strategy”) published for the Affected Constituent in respect of the original Index Business Day, unless no Final Adjusted Strategy Index Level is published in respect of such day on or before the day that is six Dealing Days (as defined in the “The Strategies — Commodity Carry Strategy”) immediately following the original Index Business Day, in which case the index calculation agent shall determine the Closing Level of such Affected Constituent acting in good faith and using such information and/or methods as it determines, in its reasonable discretion, are appropriate.

provided that, notwithstanding the foregoing in clauses (a) and (b) above, if an inconvertibility event or foreign exchange disruption event (in either case, that the index calculation agent determines is material) or a price source disruption occurs on any Index Business Day in respect of a currency relevant to the Index or any Strategy, the index calculation agent may (but is not obliged to) adjust any variable relevant to the calculation of the Index Level or Strategy Index Level on such Index Business Day that it deems appropriate.

### ***Extraordinary Events***

Certain events may have the effect of any one or more of the Underlying Constituents being succeeded to, being subject to a material change in its calculation or being cancelled. We refer to each of these events individually as an “Extraordinary Event.”

(a) *Extraordinary Events for an Underlying Constituent that is a Non-Proprietary Index or a J.P. Morgan Futures Tracker*

- If any such Underlying Constituent is (a) not calculated and announced by the sponsor or any successor sponsor of the Underlying Constituent for the relevant Strategy for the relevant Underlying Constituent, but is calculated and announced by a successor sponsor acceptable to the index calculation agent, or (b) replaced by a successor index or tracker using, in the determination of the index calculation agent, the same or substantially similar formula for and method of calculation as used in the calculation of that Underlying Constituent, then that Underlying Constituent will be deemed to be the successor index or tracker so calculated and announced by that successor sponsor or that successor underlying constituent, as the case may be with effect from a date determined by the index calculation agent who may make such adjustment to the Rules as it determines in good faith is appropriate to account for such change.
- If on or prior to any Index Business Day, any sponsor of the Underlying Constituent makes a material change in the formula for or the method of calculating an Underlying Constituent or in any other way materially modifies that Underlying Constituent (other than a modification prescribed in that formula or method to maintain that Underlying Constituent), then the index calculation agent will either (i) calculate the Index Level or Strategy Index Level using, in lieu of a published level for that Underlying Constituent the level for that Underlying Constituent as at that Index Business Day as determined by the index calculation agent in accordance with the formula for and method of calculating that Underlying Constituent last in effect prior to that change or (ii) select a replacement Underlying Constituent, acting in good faith and a commercially reasonable manner, that possesses similar characteristics to the Underlying Constituent that is being replaced in its sole and absolute discretion.
- If on or prior to any Index Business Day, any Underlying Constituent Sponsor permanently cancels any Underlying Constituent that is an index or tracker, and no successor index or tracker exists, the index calculation agent will, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation methodology, valuation terms or any other rule in relation to the relevant Strategy to account for such cancellation which may include, without limitation, selecting a replacement constituent for the Underlying Constituent that is to be replaced.

(b) *Currency Extraordinary Events*

If any currency relevant to a Strategy or any Underlying Constituent is lawfully eliminated, converted, redenominates or exchanges into a new currency (which we refer to as a "Successor Currency") then such currency affected by such elimination, conversion, redenomination or exchange will be deemed replaced by such Successor Currency with effect from a date determined by the index calculation agent who may make such adjustment to the Rules, as it determines in good faith to account for such event, or if any such elimination, conversion, redenomination or exchange results in any currency pair for any Strategy being the same, the index calculation agent will, in good faith, make such adjustment(s) that it determines to be appropriate.

(c) *Cancellation of Underlying Constituent License*

If in respect of any Strategy, at any time, the license granted (if required) to the index calculation agent (or its affiliates) to use any Underlying Constituent for the purposes of the Strategy terminates, or the index calculation agent's rights to use the Underlying Constituent for the purpose of the Strategy is otherwise disputed, impaired or ceases (for any reason), the index calculation agent may remove such Underlying Constituent from the Strategy or replace such Underlying Constituent and may make such adjustments to the Rules, each as it determines in good faith to be appropriate to account for such event on such dates as selected by the index calculation agent.

(d) *Alteration of Underlying Constituents*

Without prejudice to the ability of the index calculation agent to amend the Rules, the index calculation agent may in respect of any Strategy, acting in good faith and in a commercially reasonable manner, exclude or substitute any Underlying Constituent following the occurrence (and/or continuation) of a Change in Law, and if it excludes or substitutes any Underlying Constituent, then the index calculation agent may adjust the Rules as it determines in good faith to be appropriate.

For the purposes herein, "Change in Law" means:

(i) due to:

- (a) the adoption of, or any change in, any applicable law, regulation or rule (including, without limitation, any tax law); or
- (b) 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 U.S. Commodity and Futures Trading Commission or any exchange or trading facility),

in either case, the index calculation agent determines in good faith that (x) it is contrary to such law, rule, regulation or order for any market participants that are brokers or financial intermediaries (individually or collectively) to hold, acquire or dispose of (in whole or in part) any Underlying Constituent of the Index or any Strategy, any transaction referencing the Index, any Strategy or any Underlying Constituent or any component of the Index, any Strategy or any Underlying Constituent or, (y) holding a position in the Index, any Strategy or any Underlying Constituent, any transaction referencing the Index, any Strategy or any Underlying Constituent or any component of the Index, any Strategy or any Underlying Constituent is (or, but for the consequent disposal or termination thereof, would otherwise be) in excess of any allowable position limit(s) applicable to any market participants that are brokers or financial intermediaries (individually or collectively) under any such law, rule, regulation in relation to the Index, such Strategy or such Underlying Constituent, a transaction referencing the Index, any Strategy or any Underlying Constituent or component of the Index, any Strategy or any Underlying Constituent traded on any exchange(s) or other trading facility (including, without limitation, any relevant exchange); or



- (ii) the occurrence or existence of any:
- (a) suspension or limitation imposed on trading futures contracts (relating to any Underlying Constituent, any transaction referencing the Index, any Strategy or any Underlying Constituent or any component of the Index, any Strategy or any Underlying Constituent) including without limitation, commodities futures contracts; or
  - (b) any other event that causes trading in futures contracts (relating to any Underlying Constituent, any transaction referencing the Index, any Strategy or any Underlying Constituent or any component of the Index, any Strategy or any Underlying Constituent) to cease, including without limitation commodities futures contracts.

### ***Index Business Days***

With respect to each Strategy (other than the J.P. Morgan Alternative Index Commodity Carry Strategy), the table below defines what constitutes an index business day with respect to each Strategy.

	Strategy	Index Business Days
1	J.P. Morgan Alternative Index US Equity Momentum Strategy	Each day (other than a Saturday or Sunday) on which (i) the Chicago Mercantile Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits)
2	J.P. Morgan Alternative Index European Equity Momentum Strategy	Each day (other than a Saturday or Sunday) on which (i) the Eurex Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
3	J.P. Morgan Alternative Index Japan Equity Momentum Strategy	Each day (other than a Saturday or Sunday) on which (i) the Osaka Stock Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
4	J.P. Morgan Alternative Index Money Market Momentum US Strategy	Each day (other than a Saturday or Sunday) on which (i) the Chicago Mercantile Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
5	J.P. Morgan Alternative Index Money Market Momentum Europe Strategy	Each day (other than a Saturday or Sunday) on which (i) the LIFFE Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
6	J.P. Morgan Alternative Index Money Market Momentum Japan Strategy	Each day (other than a Saturday or Sunday) on which (i) the Tokyo Stock Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
7	J.P. Morgan Alternative Index EURUSD FX Momentum Strategy	<p>Each day which is either (1) a Currency Business Day for the currency specified for the relevant FX Momentum Strategy in Table 4, which we refer to as "Currency One;" or (2) a Currency Business Day for the currency specified for the relevant FX Momentum Strategy in Table 4, which we refer to as "Currency Two," where Currency One and Currency Two shall each be a "Currency."</p> <p>A "Currency Business Day" means, with respect to either Currency One or Currency Two, respectively, each day on which: (a) the WM Company is scheduled to publish spot and forward points for the pair comprised of USD and such currency and (b) the principal financial center for such currency is open for dealings in foreign exchange and banking institutions in such primary local market are not otherwise authorized or required by law, regulation or executive order to close.</p>
8	J.P. Morgan Alternative Index USDJPY FX Momentum Strategy	
9	J.P. Morgan Alternative Index EURJPY FX Momentum Strategy	
10	J.P. Morgan Alternative Index USDCAD FX Momentum Strategy	
11	J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy	
12	J.P. Morgan Alternative Index EURGBP FX Momentum Strategy	

	Strategy	Index Business Days
13	J.P. Morgan Alternative Index Commodity Momentum Energy Strategy	Each day (other than a Saturday or Sunday) on which (i) the Chicago Mercantile Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
14	J.P. Morgan Alternative Index Commodity Momentum Non-Energy Strategy	
15	J.P. Morgan Alternative Index Equity Value Carry Strategy	Each day (other than a Saturday or Sunday) on which: (a) commercial banks in London, New York and Tokyo are open generally for business (including dealings in foreign exchange and foreign currency deposits); and (b) TARGET is open.
16	J.P. Morgan Alternative Index Equity Small Cap Carry Strategy	Each day on which the Chicago Mercantile Exchange and the London Stock Exchange are both scheduled to be open for business.
17	J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy	Each day (other than a Saturday or Sunday) on which (a) commercial banks in London, New York and Tokyo are open generally for business (including for dealings in foreign exchange and foreign currency deposits) and (b) TARGET is open.
18	J.P. Morgan Alternative Index Bond 2Y Long-Short Carry Strategy	
19	J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy	
20	J.P. Morgan Alternative Index Bond 10Y Long-Short Carry Strategy	
21	J.P. Morgan Alternative Index G10 FX Carry Strategy	Each day (other than a Saturday or Sunday) on which commercial banks in New York and London are generally open for business (including for dealings in foreign exchange and foreign currency deposits).
22	J.P. Morgan Alternative Index Mean Reversion US Strategy	Each day on which the Chicago Mercantile Exchange is scheduled to open for business.
23	J.P. Morgan Alternative Index Mean Reversion Europe Strategy	Each day on which the Eurex Exchange is scheduled to open for business.
24	J.P. Morgan Alternative Index Mean Reversion Japan Strategy	Each day on which the Osaka Stock Exchange is scheduled to open for business.
25	J.P. Morgan Alternative Index Short Volatility US Strategy	Each day on which the index sponsor of the Underlying Constituent is scheduled to calculate and announce the level of such Underlying Constituent.

## BACKGROUND ON THE J.P. MORGAN FUTURES TRACKER SERIES

Payment on notes linked to the J.P. Morgan Alternative Index US Equity Momentum Strategy, the J.P. Morgan Alternative Index European Equity Momentum Strategy the J.P. Morgan Alternative Index Japan Equity Momentum Strategy, the J.P. Morgan Alternative Index Money Market Momentum US Strategy, the J.P. Morgan Alternative Index Money Market Momentum Europe Strategy, the J.P. Morgan Alternative Index Money Market Momentum Japan Strategy, the J.P. Morgan Alternative Index Equity Small Cap Carry Strategy, the J.P. Morgan Alternative Index Mean Reversion US Strategy, the J.P. Morgan Alternative Index Mean Reversion Europe Strategy and the J.P. Morgan Alternative Index Mean Reversion Japan Strategy are linked, in part, to a synthetic exposure to the performance of a J.P. Morgan Futures Tracker (which we refer to each as a “Futures Tracker,” and together, the “Futures Trackers”). The Futures Trackers were developed and is maintained and calculated by JPMSL. The Futures Trackers are a notional rules-based proprietary index of JPMSL.

The description of the strategy and methodology underlying the Futures Trackers included in this product supplement is based on rules formulated by JPMSL (which we refer to as the “Futures Tracker Rules”) and is qualified by the full text of the Rules. The Futures Tracker Rules, and not this description, will govern the calculation and constitution of the Futures Tracker and other decisions and actions related to its maintenance. The Futures Tracker Rules in effect as of the date of this product supplement are included as part of the Rules attached as Annex B to this product supplement. The Futures Tracker Rules are the intellectual property of JPMSL, and JPMSL reserves all rights with respect to its ownership of the Futures Trackers.

Each Futures Tracker is a notional dynamic strategy that aims to replicate the returns of a long position in the near month listed futures contract (each a “Futures Contract” and together the “Futures Contracts”) on a specific underlying in Table 12 (which we refer to as the “Base Underlying”) traded on the relevant exchange specified in Table 11, which we refer to as the “Relevant Exchange.” For purposes of a money market Futures Tracker, the “Base Underlying” refers to the potential Futures Contracts that the Futures Tracker may seek to track. A futures contract is a standardized contract traded on an exchange to buy or sell a standard quantity of an asset at a specific date in the future (such date being its expiry date), at a price specified today. Each Futures Contract is identified by its expiry date.

On each day on which the Relevant Exchange (or any successor exchange) is open for trading during its regular trading session, which we refer to as a “Tracker Business Day,” each Futures Tracker will be notionally invested in the nearest listed expiry Futures Contract (which we refer to as the “Near Futures Contract”). It will maintain this exposure until several Tracker Business Days before the expiry date of such Near Futures Contract (such date being the “Re-weighting Date”). The “Re-weighting Date” of each Futures Tracker is specified in Table 16 below. After the Re-weighting Date, it will then be notionally invested in the Futures Contract expiring after the Near Futures Contract expiry date (which we refer to as the “Far Futures Contract”). For the avoidance of doubt, on any Tracker Business Day after the Near Futures Contract expiry date, the Far Futures Contract becomes the Near Futures Contract.

The Futures Trackers are described as a “notional” or “synthetic” portfolio or strategy because its reported value does not represent the value of any actual assets held by any person and there is no actual portfolio of assets in which any person has any ownership interest.

## Calculation and Publication of the Futures Tracker Level

JPMSL, as the index calculation agent, or any affiliate or subsidiary designated by it, will act as calculation agent for each Futures Tracker. Subject to the occurrence or existence of a Tracker Market Disruption Event affecting a Base Underlying or a futures contract underlying such Base Underlying, the index calculation agent will calculate and publish the value (which we refer to as the "Tracker Level") of each Futures Tracker on each Tracker Business Day, reported to two (2) decimal places. The Tracker Level is calculated in its relevant currency (which we refer to as the "Futures Tracker Currency") in accordance with the methodology set out in "Futures Tracker Level" below.

### *(a) Initial Composition of the Futures Tracker*

Each Futures Tracker has a base date (which we refer to as the "Base Date") which is the date on which the Futures Tracker comprised a notional investment of one contract in the relevant Near Futures Contract in respect of such date.

The composition of each of the Futures Trackers has been and will be adjusted in accordance with the methodology described below (and in accordance of the Futures Tracker Rules).

In respect of each Futures Tracker, there are typically 4 listed Futures Contracts per calendar year over the Base Underlying. Each Futures Contracts has a specific expiry date (which we refer to as the "Expiry Date" and together, the "Expiry Dates") specified in Table 11.

### *(b) Futures Tracker Rebalancing*

Unless a Tracker Market Disruption Event has occurred and is continuing, the Futures Tracker will be rebalanced on the relevant Re-weighting Date.

### *(c) Futures Tracker Level*

Unless a Tracker Market Disruption Event has occurred and is continuing, the level of the Futures Tracker will be calculated by the index calculation agent on each Tracker Business Day.

On the Base Date, the Tracker Level was equal to the initial tracker level (which we refer to as the "Initial Tracker Level") and the Exposure ( $E_0$ ) was set at 1. On each Tracker Business Day from, but excluding, the immediately preceding Re-weighting Date to, and including, the next following Re-weighting Date, the Tracker Level is calculated by the index calculation agent in accordance with the following formula:

$$\text{Tracker}_{k,t} = E_k \times \text{Future}_{k+1,t}$$

where:

$\text{Tracker}_{k,t}$  means the Tracker Level on Tracker Business Day  $t$ ;

$\text{Future}_{k+1,t}$  means the Closing Price on Tracker Business Day  $t$  of the Futures Contract that expires on the first Expiry Date to occur following Re-weighting Date  $k+1$  (*i.e.* the current futures contract);

Closing Price means, in respect of a Futures Contract and a Dealing Day, the Official Settlement Price; and

where

“Dealing Day” means, in respect of a Futures Contract, a day upon which the Official Settlement Price for such Futures Contract is, or but for the occurrence of a Market Disruption Event would have been, scheduled to be calculated and published by the Relevant Exchange (or any successor exchange); and

“Official Settlement Price” means the closing price published on the price source given by the relevant Bloomberg Code for a Futures Contract.

$E_k$  means the Exposure of the Futures Tracker on Re-weighting Date  $k$  immediately preceding Tracker Business Day  $t$  calculated as:

$$E_k = E_{k-1} \times \frac{\text{Future}_k - A}{\text{Future}_{k+1}}$$

where:

$\text{Future}_k$  means the Closing Price on Re-weighting Date  $k$  of the Futures Contract that expires on the first Expiry Date to occur following Re-weighting Date  $k$  (*i.e.* the contract preceding the current futures contract);

$\text{Future}_{k+1}$  means the Closing Price on Re-weighting Date  $k$  of the Futures Contract that expires on the first Expiry Date to occur following Re-weighting Date  $k+1$  (*i.e.* the current futures contract); and

$A$  is the adjustment factor (the “Adjustment Factor”) of 0, provided that, were any hypothetical holder of  $\text{Future}_k$  required, relative to Re-weighting Date  $k-1$ , to incur an increased (or decreased) cost or amount of tax, duty, expense or fee to acquire, establish, re-establish, substitute, maintain, unwind or dispose of the relevant Futures Contract to synthetically hedge the Tracker Level, then such additional amount shall be deemed to have been added to (or deducted from) the Adjustment Factor on Re-weighting Date  $k$ .

The Exposure has a base value of 1 on the Base Date, meaning that on the Base Date, the Futures Tracker was notionally invested in one unit of the relevant Futures Contract. On each Re-weighting Date, the Exposure is changed to reflect the number of units of the Far Futures Contract that could be purchased at the relevant closing price on the Re-weighting Date by selling the number of units of the Near Futures Contract notionally held by the relevant Futures Tracker immediately before the roll at the relevant closing price on the Re-weighting Date. On each Tracker Business Day, the Tracker Level measures the value of the number of units of the relevant Futures Contract notionally held by the relevant Futures Tracker based on the closing price on that Tracker Business Day.

Unless a Tracker Market Disruption Event has occurred and is continuing, the Tracker Level will be published in respect of each Tracker Business Day by the index calculation agent on the relevant Price Source.

## Tracker Market Disruptions to the Tracker Level

The index calculation agent will calculate and publish the Tracker Level on each Tracker Business Day so long as no Tracker Market Disruption Event has occurred or is continuing on such day. A "Tracker Market Disruption Event" means, in respect of a Futures Contract and a Dealing Day, a failure by the Relevant Exchange (or any successor exchange) to calculate and publish the Closing Price for the Futures Contract on such Dealing Day, or any event that, in the determination of the index calculation agent, disrupts or impairs the ability of market participants generally to effect transactions in or obtain market values for such Futures Contract. These events may include, but are not limited to, the occurrence of any of a Trading Disruption, Exchange Disruption or Early Closure.

"Early Closure" means the closure by the Relevant Exchange or any successor exchange on any Tracker Business Day prior to its scheduled closing time unless such earlier closing time is announced by such exchange at least one hour prior to the actual closing time for the regular trading session on such exchange;

"Exchange Disruption" means any event (other than an Early Closure) that disrupts or impairs (as determined by the index calculation agent) the ability of market participants in general to effect transactions in, or obtain market values for, futures (including, without limitation, the Futures Contracts) or options contracts relating to the Base Underlying on any Relevant Exchange (or any successor exchange); and

"Trading Disruption" means any suspension of or limitation imposed on trading by the Relevant Exchange (or any successor exchange) or otherwise and whether by reason of movements in price exceeding limits permitted by such exchange (or any successor exchange) or otherwise in futures (including, without limitation, the Futures Contracts) or options contracts relating to the Base Underlying on any Relevant Exchange (or any successor exchange).

### *(a) On a Re-weighting Date*

If any Re-weighting Date is a Dealing Day on which a Tracker Market Disruption Event occurs or exists, which we refer to as a "Disrupted Day," in respect of any relevant Futures Contract (we refer to each such Futures Contract affected by a Disrupted Day, an "Affected Futures Contract"), then the relevant Re-weighting Date for the Affected Futures Contract will be deemed to be the first following Dealing Day for the Affected Futures Contract which is not a Disrupted Day, unless the four Dealing Days for an Affected Futures Contract immediately following the day originally scheduled to be the Re-weighting Date are Disrupted Days for such Affected Futures Contract. In such circumstances, the fourth Dealing Day following the day originally scheduled to be the relevant Re-weighting Date will be deemed to be the relevant Re-weighting Date (notwithstanding that it is a Disrupted Day in respect of the Affected Futures Contract), and the index calculation agent will re-weight the Futures Tracker acting in good faith using such information and/or methods as it determines, in its reasonable discretion, are appropriate.

### *(b) On a Tracker Business Day*

Notwithstanding paragraph (a) above, if any Tracker Business Day is a Disrupted Day for any relevant Futures Contract, the index calculation agent may either:

- (i) calculate its good faith estimate of the Tracker Level for such Tracker Business Day, using its good faith estimate of the level of the Affected Futures Contract. Any such estimated level may be subject to correction on the first succeeding Tracker Business Day which is not a Disrupted Day in respect of any Affected Futures Contract; or
- (ii) suspend the calculation and publication of the Tracker Level until the first succeeding Tracker Business Day that is not a Disrupted Day in respect of any relevant Futures Contract.

## Extraordinary Events

Certain events, which we refer to as “Extraordinary Events” will cause the index calculation agent to replace or remove any Futures Contract to which the Futures Tracker has exposure, or make an adjustment to the Rules as it determines in good faith, is appropriate.

### *(a) Successor Futures Contract*

If any Futures Contract is:

(a) not calculated and quoted by the Relevant Exchange but by a successor exchange acceptable to the index calculation agent; or

(b) replaced by a successor futures contract using, in the determination of the index calculation agent, the same or substantially similar formula and method of calculation as used in the calculation of the relevant Futures Contract,

then, in each case that successor futures contract (which we refer to as the “Successor Futures Contract”) will replace the relevant Futures Contract with effect from a date determined by the index calculation agent who may make such adjustment to the Futures Tracker Rules, as it determines in good faith is appropriate, to account for such change.

### *(b) Material Change to Futures Contracts*

Without prejudice to the ability of the index calculation agent to amend the Futures Tracker Rules, the index calculation agent may, acting in good faith and in a commercially reasonable manner:

(a) exclude; or

(b) substitute,

any Futures Contract following the occurrence (and/or continuation) of a Change in Law or in circumstances where it considers it reasonably necessary to do so to reflect the intention of the Futures Tracker, including (without prejudice to the generality of the foregoing) changes announced by the Relevant Exchange (or any successor exchange) relating to the modification, exclusion, inclusion or substitution of any one Futures Contracts or any perception among market participants generally that the published price of the relevant Futures Contract is inaccurate (and the Relevant Exchange (or any successor exchange) fails to correct such level), and if it so excludes or substitutes for any Futures Contract, then the index calculation agent may adjust the Futures Tracker Rules as it determines in good faith to be appropriate to account for such exclusion or substitution on such date(s) selected by the index calculation agent. The index calculation agent is under no obligation to continue the calculation and publication of any Futures Tracker upon the occurrence or existence of a Change in Law; and the index calculation agent may decide to cancel any Futures Tracker if it determines, acting in good faith, that the objective of the relevant Futures Tracker can no longer be achieved.

“Change in Law” means:

(a) due to:

(i) the adoption of, or any change in, any applicable law, regulation or rule (including, without limitation, any tax law); 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 U.S. Commodity and Futures Trading Commission or exchange or trading facility),

in each case, the index calculation agent determines in good faith that (x) it is contrary to such law, rule, regulation or order for any market participants that are brokers or financial intermediaries (individually or collectively) to hold, acquire or dispose of (in whole or in part) any Futures Contract or any transaction referencing any Futures Contract or, (y) holding a position in any Futures Contract or any transaction referencing any Futures Contract is (or, but for the consequent disposal or termination thereof, would otherwise be) in excess of any allowable position limit(s) applicable to any market participants that are brokers or financial intermediaries (individually or collectively) under any such law, rule, regulation in relation to such Futures Contract traded on any exchange(s) or other trading facility (including, without limitation, any relevant Exchange); or

(b) the occurrence or existence of any:

- (i) suspension or limitation imposed on trading commodities futures contracts (including, without limitation the Futures Contracts); or
- (ii) any other event that causes trading in commodity futures contracts (including, without limitation, the Futures Contracts) to cease;

*(c) Cancellation or Non-publication*

If, at any time, any Relevant Exchange (or any successor exchange):

(a) announces that it will make a material change in the definition of any Futures Contract or in any other way materially modifies such contract (other than a modification prescribed in the definition of such contract); or

(b) (i) permanently cancels any Futures Contract and no Successor Futures Contract exists or (ii) is otherwise unable or unwilling to publish levels of the Futures Contract,

then the index calculation agent may remove such futures contract from the Futures Tracker and may adjust the Rules as it determines in good faith to be appropriate to account for such change(s) (including, without limitation, selecting (a) a replacement futures contract traded on an equivalent exchange and having similar characteristics to the affected contract; and (b) the date of such replacement) on such date(s) as selected by the index calculation agent.



## Corrections

If (i) the Closing Price of any Futures Contract as of any date which is published or otherwise made available by or on behalf of the Relevant Exchange (or any successor exchange) is subsequently corrected and such correction is published or otherwise made available by or on behalf of such Futures Contract; or (ii) the index calculation agent identifies an error or omission in any of its calculations or determinations in respect of the Futures Tracker, the index calculation agent may, if practicable and if it determines acting in good faith that such correction, error or omission (as the case may be) is material, adjust or correct the relevant calculation or determination and/or the Tracker Level as of any Tracker Business Day to take into account such correction, if such correction is practicable.

## Responsibility of the Index Calculation Agent

The index calculation agent will act in good faith and in a commercially reasonable manner with respect to the performance of its obligations and the exercise of its discretions pursuant to the Futures Tracker Rules.

While the Futures Tracker Rules are intended to be comprehensive, ambiguities may arise. In such circumstances, the index calculation agent will resolve such ambiguities in a reasonable manner and, if necessary, amend the Futures Tracker Rules to reflect such resolution.

Neither the index calculation agent nor any of its affiliates or subsidiaries or any of their respective directors, officers, employees, representatives, delegates or agents (we refer to each as a "Relevant Person") will have any responsibility to any person (whether as a result of negligence or otherwise) for any determinations made or anything done (or omitted to be determined or done) in respect of the Futures Tracker and any use to which any person may put the Futures Tracker or the Tracker Level. All determinations of the index calculation agent in respect of the Futures Tracker will be final, conclusive and binding and no person shall be entitled to make any claim against any of the Relevant Persons in respect thereof. Once a determination or calculation is made or any action taken by the index calculation agent in respect of the Futures Tracker, neither the index calculation agent or any other Relevant Person will be under any obligation to revise any determination or calculation made or action taken for any reason.

## Specific Terms for each Futures Tracker

Table 11 below provides additional terms relating to each Futures Tracker, including the price source, base underlying (and Bloomberg page), re-weighting date, currency, relevant exchange, initial tracker level, expiry dates, base date and futures contracts for each Futures Tracker.

**Table 11**

Futures Tracker	Price Source (Bloomberg Ticker)	Base Underlying (Bloomberg Ticker)	Re-weighting Date	Futures Tracker Currency	Relevant Exchange	Initial Tracker Level	Expiry Dates	Base Date
The J.P. Morgan US Equity Futures (G) Tracker	FTJGUSEE	The S&P 500 Index (SPX)	Five (5) Tracker Business Days prior to the Expiry Date of the Near Futures Contract	USD	As of the Base Date, the Chicago Mercantile Exchange (CME) or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time	1303.80	Expected to be the third Friday of March, June, September and December	March 12, 1999
The J.P. Morgan European Equity Futures (G) Tracker	FTJGEUEE	The Dow Jones EURO STOXX 50 Index (SX5E)	Five (5) Tracker Business Days prior to the Expiry Date of the Near Futures Contract	EUR	As of the Base Date, Eurex or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time	3573.00	Expected to be the third Friday of March, June, September and December	March 12, 1999

Futures Tracker	Price Source (Bloomberg Ticker)	Base Underlying (Bloomberg Ticker)	Re-weighting Date	Futures Tracker Currency	Relevant Exchange	Initial Tracker Level	Expiry Dates	Base Date
The J.P. Morgan Japanese Equity Futures (G) Tracker	FTJGJPEE	The Nikkei 225 Index (NKY)	Two (2) Tracker Business Days prior to the Expiry Date of the Near Futures Contract	JPY	As of the Base Date, Osaka Securities Exchange or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time	15150.00	Expected to be the second Friday of March, June, September and December	March 10, 1999
The J.P. Morgan US Small Cap Equity Futures (G) Tracker	FTJGJUSSE	The Russell 2000 Index (RTY)	Five (5) Tracker Business Days prior to the Expiry Date of the Near Futures Contract	USD	As of the Base Date, InterContinental Exchange (ICE) or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time	472.30	Expected to be the third Friday of March, June, September and December	December 14, 2001
The J.P. Morgan US Money Market Futures (G) Tracker	RFJGJUSME	CME Eurodollar Futures (ED1)	First Tracker Business Day of March, June, September and December	USD	As of the Base Date, the Chicago Mercantile Exchange (CME) or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time	94.79	Expected to be the third Wednesday of March, June, September and December	March 1, 1999
The J.P. Morgan European Money Market Futures (G) Tracker	RFJGEUME	Euronext LIFFE Euro Euribor Futures (ER1)	First Tracker Business Day of March, June, September and December	EUR	As of the Base Date, the Euronext LIFFE or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time	96.96	Expected to be the third Wednesday of March, June, September and December	March 1, 1999
The J.P. Morgan Japanese Money Market Futures (G) Tracker	RFJGJPME	TFX Euroyen Futures (YE1)	First Tracker Business Day of March, June, September and December	JPY	As of the Base Date, the Tokyo Financial Exchange or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time	99.71	Expected to be the third Wednesday of March, June, September and December	March 1, 1999

**Table 12: Futures Contracts with respect to each Futures Tracker**

Futures Tracker	Futures Contract	Bloomberg Month Code	Expected Bloomberg Code*	Currency of Futures Contract
The J.P. Morgan US Equity Futures (G) Tracker	March	H	SPH&"Year"<Index>	USD
	June	M	SPM&"Year"<Index>	USD
	September	U	SPU&"Year"<Index>	USD
	December	Z	SPZ&"Year"<Index>	USD

Futures Tracker	Futures Contract	Bloomberg Month Code	Expected Bloomberg Code*	Currency of Futures Contract
The J.P. Morgan European Equity Futures (G) Tracker	March	H	VGH&"Year" <Index>	EUR
	June	M	VGM&"Year" <Index>	EUR
	September	U	VGU&"Year" <Index>	EUR
	December	Z	VGZ&"Year" <Index>	EUR
The J.P. Morgan Japanese Equity Futures (G) Tracker	March	H	NK&"Year" <Index>	JPY
	June	M	NK&"Year" <Index>	JPY
	September	U	NK&"Year" <Index>	JPY
	December	Z	NK&"Year" <Index>	JPY
The J.P. Morgan US Small Cap Equity Futures (G) Tracker	March	H	RTAH&"Year" <Index>	USD
	June	M	RTAM&"Year" <Index>	USD
	September	U	RTAU&"Year" <Index>	USD
	December	Z	RTAZ&"Year" <Index>	USD
The J.P. Morgan US Money Market Futures (G) Tracker	March	H	EDH&"Year" <Comdty>	USD
	June	M	EDM&"Year" <Comdty>	USD
	September	U	EDU&"Year" <Comdty>	USD
	December	Z	EDZ&"Year" <Comdty>	USD
The J.P. Morgan European Money Market Futures (G) Tracker	March	H	ERH&"Year" <Comdty>	EUR
	June	M	ERM&"Year" <Comdty>	EUR
	September	U	ERU&"Year" <Comdty>	EUR
	December	Z	ERZ&"Year" <Comdty>	EUR
The J.P. Morgan Japanese Money Market Futures (G) Tracker	March	H	YEH&"Year" <Comdty>	JPY
	June	M	YEM&"Year" <Comdty>	JPY
	September	U	YEU&"Year" <Comdty>	JPY
	December	Z	YEZ&"Year" <Comdty>	JPY

\* The actual Bloomberg Code is specified in the Futures Tracker Rules.

## BACKGROUND ON THE J.P. MORGAN CONTAG CONDITIONAL FULL ENERGY CLASS A EXCESS RETURN INDEX

Payment on notes linked to the J.P. Morgan Alternative Index Commodity Carry Strategy are linked, in part, to a synthetic long exposure to the performance of the J.P. Morgan Contag Conditional Full Energy Class A Excess Return Index (the "Contag Beta Index"). The Contag Beta Index is a notional rules-based proprietary index developed by JPMSL, which is intended to capture the return of the synthetic exposure to a notional basket consisting of 24 commodities, each of which is represented by a commodity futures contract selected by a methodology developed by JPMSL, which we refer to as the "Selection Methodology." The Selection Methodology uses the slope of the futures curve for each eligible commodity to select the futures contract for each eligible commodity with the highest level of backwardation. "Backwardation" refers to the situation where the futures contracts for a commodity with a delivery month further in time have lower contract prices than futures contracts for the same commodity with a delivery month closer in time.

The description of the strategy and methodology underlying the Contag Beta Index (including the Selection Methodology) included in this product supplement is based on rules formulated by JPMSL (which we refer to as the "Contag Beta Rules") and is qualified by the full text of the Contag Beta Rules. The Contag Beta Rules, and not this description, will govern the calculation and constitution of the Contag Beta Indices and other decisions and actions related to its maintenance. The Contag Beta Rules in effect as of the date of this product supplement are attached as Annex A to this product supplement. The Contag Beta Rules are the intellectual property of JPMSL, and JPMSL reserves all rights with respect to its ownership of the Contag Beta Index. The Contag Beta Index was created on May 29, 2009 and therefore has limited performance.

The Contag Beta Index is an excess return index that is intended to capture the return of synthetic long exposure to a nominal basket consisting of the Contag Contracts for each of 24 Eligible Commodities during each relevant month, including the effect of the monthly composition change of the Contag Beta Index due to the roll from the Contag Contract for each commodity listed in **Table 13: Eligible Commodities** under "— The Selection Methodology" below (which we refer to as an "Eligible Commodity") for a relevant month to the Contag Contract for each Eligible Commodity for the next relevant month. The "Contag Contract" for each Eligible Commodity is the futures contract for such Eligible Commodity selected according to the Selection Methodology as the one with the highest level of backwardation. The "Eligible Commodities" are the 24 commodities that are currently represented by the S&P GSCI™ and are set forth in Table 13 under "— Selection Methodology" below. Each month, the Selection Methodology will determine the Contag Contracts to which the Contag Beta Index should be synthetically exposed, based on the settlement price of the futures contracts as published by the relevant exchange (which we refer to as the "Contract Price") for the last Dealing Day of the calendar month immediately preceding the relevant month (each of which we refer to as a "Contract Selection Date"). A "Dealing Day" is a day on which the NYSE Euronext is scheduled to open for trading for its regular trading session. When a new Contag Contract is selected, the Contag Beta Index transfers its synthetic exposure from the previously selected Contag Contract to the new Contag Contract, such exposure being gradually transferred in equal percentages per Dealing Day over a roll period in order to limit any adverse impact of such rolling process on the value of the Contag Beta Index. The Selection Methodology is described in further detail under "— Selection Methodology" below.

The Contag Beta Index is described as a "notional" or "synthetic" portfolio or basket because their reported level does not represent the value of any actual assets held by any person and there is no actual portfolio of assets in which any person has any ownership interest. The level of the Contag Beta Index at any point is the return of the hypothetical uncollateralized portfolio of the relevant Contag Contracts, which are weighted in accordance with the weighting algorithm described below. The Contag Beta Index had an initial value of 100 as of December 30, 1994 (which we refer to as the "Initial Index Day").

## Calculation and Publication of the Contag Beta Index Level

The index calculation agent, or any affiliate or subsidiary designated by it, will act as calculation agent for the Contag Beta Index. Subject to the occurrence of the occurrence of a Market Disruption (as described below), the index calculation agent will calculate and publish the level of the Contag Beta Index on each Dealing Day (which we refer to as the "Index Level"), reported to four (4) decimal places, on the Bloomberg ticker page "JCTABFEE."

### ***(a) Commodity Weights***

#### *(i) Determining Commodity Weights*

Each Eligible Commodity included in the Nominal Basket is attributed a decimal number that represents the number of units of such Eligible Commodity included in the Nominal Basket used to calculate the Index Level for the Contag Beta Index, referred to as a "Commodity Weight".

The Commodity Weight for each Eligible Commodity in the Contag Beta Index is equal to the Contract Production Weight of the relevant Designated Contract in the S&P GSCI™ (Bloomberg ticker: SPGCCIP Index) for the S&P GSCI Period corresponding to the relevant Weights Period for the Contag Beta Index, as specified in the document setting out the rules of the S&P GSCI™ indices entitled "S&P GSCI™ Index Methodology" as updated, modified and superseded from time to time by S&P, the sponsor of the S&P GSCI™, which we refer to as the "S&P Index Sponsor" (the "S&P GSCI Methodology").

Each Commodity Weight for an Eligible Commodity is calculated in respect of a period of one or more months, which we refer to as a "Weights Period", each of which starts with the first calendar day of a month and ends with the last calendar day of the same or any subsequent month. The Weights Periods for the Contag Beta Index is the period beginning on the first calendar day of the first month of the S&P GSCI Period, to and including the last calendar day of the month immediately preceding the last day of the S&P GSCI Period.

"Contract Production Weight" means the Contract Production Weight assigned to the Designated Contracts included in the S&P GSCI™, as applicable, in accordance with the S&P GSCI Methodology. As at the date of this product supplement, the Contract Production Weights, or CPWs, used in calculating the S&P GSCI™ are derived from world or regional production averages, as applicable, of the relevant commodities, and are calculated based on the total quantity traded for the relevant contract and the world or regional production average, as applicable, of the underlying commodity. However, if the volume of trading in the relevant contract, as a multiple of the production levels of the commodity, is below specified thresholds, the CPW of the contract is reduced until the threshold is satisfied. This is designed to ensure that trading in each such contract is sufficiently liquid relative to the production of the commodity.

"Designated Contract" has the same meaning as in the S&P GSCI Methodology. As at the date of this product supplement, "Designated Contract" means a particular contract included in the S&P GSCI for a given S&P GSCI Period, based on eligibility criteria set forth in section II of the S&P GSCI Methodology.

"S&P GSCI Period" has the same meaning as in the S&P GSCI Methodology. As at the date of this product supplement, "S&P GSCI Period" means the period beginning on the fifth S&P GSCI Business Day of the calendar month in which new Contract Production Weights first become effective, and ending on the S&P GSCI Business Day immediately preceding the first day of the next following S&P GSCI Period.

"S&P GSCI Business Day" means a day on which the S&P GSCI™ indices are calculated, as determined by the NYSE Euronext holiday & hours schedule.

*(ii) Regular Amendments to Commodity Weights*

The Commodity Weights in respect of the Contag Beta Index are determined by reference to the Contract Production Weights as specified in the S&P GSCI Methodology and as described above. The Commodity Weights for the Contag Beta Index are expected to change on an annual basis in line with the frequency with which the Contract Production Weights are routinely updated by the S&P Index Sponsor. From time to time the S&P Index Sponsor may change the Contract Production Weights on an intra-annual basis, in which case a new S&P GSCI Period will begin, in which case corresponding changes will be made by the index calculation agent to the Weights Period for the Contag Beta Index. The Commodity Weights for the Contag Beta Index in respect of a given Weights Period will always be equal to the Contract Production Weights in respect of the corresponding S&P GSCI Period.

*(b) Normalising Constant*

The “Normalising Constant” is a number associated with each Weights Period, and is an adjustment to allow for the fact that the Commodity Weights change from one Weights Period to the next. The Commodity Weights are not percentage weights which would sum to 100% in the Nominal Basket in all cases, and accordingly, changes in the Commodity Weights may have the unintended effect of increasing or decreasing the total weight of the Nominal Basket. This, in turn, could distort the intended rate of rolling from the applicable Contag Contracts for the month preceding the current month (which we refer to as the “Outgoing Contracts”) to the applicable Contag Contracts for the current month (which we refer to as the “Incoming Contracts”). Such rolling occurs in the sequence of Dealing Days over which the exposure of the Contag Beta Index is rolled from the Outgoing Contracts to the Incoming Contracts (the “Roll Period”). The monthly Roll Period for the Contag Beta Index is the first 10 Dealing Days of the relevant month.

A new Normalising Constant (which we refer to as the “New Normalising Constant”) is determined by the index calculation agent with respect to each subsequent Weights Period (which we refer to as the “New Weights Period”) based on:

- (a) the Contract Prices on the Dealing Day immediately preceding the first Dealing Day of the first Roll Period of the New Weights Period;
- (b) the Commodity Weights for (x) the New Weights Period and (y) the Weights Period immediately preceding the New Weights Period (which we refer to as the “Old Weights Period”); and
- (c) the Normalising Constant associated with the Old Weights Period (which we refer to as the “Old Normalising Constant”).

The Normalising Constant:

- (a) for the Weights Period following the Initial Index Day is 1,000; and
- (b) thereafter, for any New Weights Period, is determined by the index calculation agent in accordance with the following formula:

$$NC_{new} = NC_{old} \times \frac{\sum_c CWI_d^c \times CPO_d^c (d - 1)}{\sum_c CWO_d^c \times CPO_d^c (d - 1)}$$

where:

$NC_{new}$	means the New Normalising Constant;
$NC_{old}$	means the Old Normalising Constant, being 1,000 if the Old Weights Period is the first Weights Period;
$CW_d^c$	means the Commodity Weight in respect of Dealing Day d and Eligible Commodity c for the Weights Period in which such Dealing Day falls (the "Commodity Weight Incoming");
$CWO_d^c$	means the Commodity Weight in respect Dealing Day d and Eligible Commodity c for the Weights Period for the month immediately preceding the relevant month in which such Dealing Day falls (the "Commodity Weight Outgoing");
$CPO_d^c(d-1)$	means the Contract Price on Dealing Day vd (the "Valuation Day") of the Outgoing Contract for Dealing Day cd (the "Composition Day") (the "Contract Price Outgoing") in respect of Eligible Commodity c with Composition Day d and Valuation Day d-1; and
$d$	means the first Dealing Day of the first Roll Period of the New Weights Period.

The New Normalising Constant is applicable to the whole of the New Weights Period. During the first Roll Period of the New Weights Period, the Nominal Basket will be based on a combination of the Commodity Weights for the Old Weights Period and the Commodity Weights for the New Weights Period.

The Commodity Weights given to the Outgoing Contracts is adjusted by the ratio of the New Normalising Constant to the Old Normalising Constant as described further in " — The Nominal Basket".

### ***(c) Contract Roll Weights***

The exposure of the Contag Beta Index to the Contag Contract in respect of an Eligible Commodity is rolled from the Outgoing Contract to the Incoming Contract over the course of a Roll Period. The Outgoing Contracts and the Incoming Contracts for an Eligible Commodity are assigned a weighting (which we refer to as the "Contract Roll Weight Outgoing" and the "Contract Roll Weight Incoming," respectively, and together, the "Contract Roll Weights"), determined as further described below.

In respect of an Eligible Commodity c and a Dealing Day d, each of the Contract Roll Weight Incoming and Contract Roll Weight Outgoing is a number between 0.0 and 1.0, representing the fraction of the weight for that Eligible Commodity given to the Incoming Contract and the Outgoing Contract, respectively, and is calculated by the index calculation agent in accordance as described below. The sum of the Contract Roll Weight Outgoing and the Contract Roll Weight Incoming is always equal to 1.

#### ***(i) The Contract Roll Weight on any Dealing Day in a Roll Period***

The Contract Roll Weights on each i-th Dealing Day ( $d_i$ ) of the Roll Period for a relevant month (where i is between 1 and 10, inclusive) are determined by the index calculation agent as follows:

$$CRWI_{d_i}^c = \frac{i}{10}$$

$$CRWO_{d_i}^c = 1 - \frac{i}{10}$$

where:

$CRWI_{d_i}^c$  means the Contract Roll Weight Incoming for Eligible Commodity c and Dealing Day d;

$CRWO_{d_i}^c$  means the Contract Roll Weight Outgoing for Eligible Commodity c and Dealing Day d;  
and

$d_i$  means the i-th Dealing Day of the Roll Period.

*(ii) The Contract Roll Weight on any Dealing Day which is not in the Roll Period*

The Contract Roll Weights on each Dealing Day d which is not during the Roll Period for a relevant month are determined by the index calculation agent as follows:

- (a) In respect of any Dealing Day d of the relevant month prior to the start of the Roll Period for such relevant month, the Contract Roll Weight Incoming is 0.0 and the Contract Roll Weight Outgoing is 1.0.
- (b) In respect of any Dealing Day d of the relevant month following the last Dealing Day of the Roll Period for such relevant month, the Contract Roll Weight Incoming is 1.0 and the Contract Roll Weight Outgoing is 0.0.

For example, because the Roll Period for the Contag Beta Index begins on the first Dealing Day of a relevant month and ends on the third Dealing Day of that month, in the absence of Market Disruptions, the Contract Roll Weights would be as shown as follows:

Dealing Day d of the relevant month	Contract Roll Weight Outgoing	Contract Roll Weight Incoming
1 (first Dealing Day of Roll Period)	0.90	0.10
2	0.80	0.20
3	0.70	0.30
4	0.60	0.40
5	0.50	0.50
6	0.40	0.60
7	0.30	0.70
8	0.20	0.80



Dealing Day d of the relevant month	Contract Roll Weight Outgoing	Contract Roll Weight Incoming
9	0.10	0.90
10 (last Dealing Day of Roll Period)	0.0	1.0
11	0.0	1.0
etc.	etc.	etc.

***(d) Adjustment of the roll for Disrupted Days***

If any Dealing Day during the Roll Period is a Disrupted Day (as described under “— Market Disruptions to the Contag Beta Index”) for either an Incoming Contract or an Outgoing Contract, then the portion of the roll which was scheduled to take place on that Dealing Day for the affected Eligible Commodity will be postponed until the next following Dealing Day which is not a Disrupted Day for either of the Incoming Contract or Outgoing Contract in respect of such Eligible Commodity, irrespective of whether such day is already a day on which a portion of the roll is scheduled to take place.

For example, if the first and second Dealing Days of the relevant month are Disrupted Days for the Eligible Commodity Corn (CBOT); then the Contract Roll Weights for Corn (CBOT) would be as follows:

Dealing Day d of the relevant month	$CRWO_d^c$	$CRWI_d^c$
1 (first Dealing Day of the Roll Period that is a Disrupted Day)	1.0	0.0
2 (Disrupted Day)	1.0	0.0
3	0.70	0.30
4	0.60	0.40
5	0.50	0.50
6	0.40	0.60
7	0.30	0.70
8	0.20	0.80
9	0.10	0.90
10 (last Dealing Day of Roll Period)	0.0	1.0
11	0.0	1.0
etc.	etc.	etc.

***(e) The Nominal Basket***

The “Nominal Basket” for the Contag Beta Index is a nominal basket of Futures Contracts representing the synthetic exposure of the Contag Beta Index. Associated with each Composition Day, which is the Dealing Day in respect of which the Nominal Basket is composed, is a particular composition of the Nominal Basket. Furthermore, associated with each Valuation Day, which is the Dealing Day on which the Nominal Basket is valued, is a level of the Nominal Basket composed in respect of that Composition Day, defined as follows:

$$NB_{cd}(vd) = \frac{NCI}{NCO} \sum_c CWO_{cd}^c \times CRWO_{cd}^c CPO_{cd}^c(vd) + \sum_c CWI_{cd}^c \times CRWI_{cd}^c \times CPI_{cd}^c(vd)$$

where:

$NCO_{cd}(vd)$  means the level of the Nominal Basket composed in respect of Dealing Day  $cd$  (“Composition Day”), valued as at Dealing Day  $vd$  (“Valuation Day”);

$NCO$  means the Normalising Constant in respect of the Weights Period including the previous month as at Dealing Day  $cd$ ;

$NCI$  means the Normalising Constant in respect of the Weights Period including the current month as at Dealing Day  $cd$ ;

$c$  means an Eligible Commodity, where the summation sign ( $\sum$ ) indicates summation over all Eligible Commodities;

$cd$  means the Dealing Day in respect of which the Nominal Basket is composed; and

$vd$  means the Dealing Day in respect of which the Nominal Basket is valued.

Accordingly, the value of the Nominal Basket in respect of a Dealing Day (the Composition Day) is based on the weighted Contract Price of each Outgoing Contract valued as of the Valuation Day and the weighted Contract Price of each Incoming Contract valued as of the Valuation Day, and adjusted by the Normalising Constants.

***(f) The Index Level for the Contag Beta Index***

The Index Level for the Contag Beta Index on the Initial Index Day is the “Initial Index Level,” which was 100.

The Index Level for the Contag Beta Index is determined in respect of each Dealing Day by reference to the Index Level published in respect of the immediately preceding Dealing Day and the notional return on the exposure of the Contag Beta Index to the relevant Contag Contracts from the close of business on the Relevant Exchanges on the immediately preceding Dealing Day to the close of business on the Relevant Exchanges on such Dealing Day. This notional return is measured by reference to the Contract Prices of the relevant Contag Contracts on such Dealing Days. Where one or more Relevant Exchanges is closed on a Dealing Day, this will constitute a Market Disruption and the Contract Prices of the affected Eligible Commodities will be determined in accordance with “— Market Disruptions to the Contag Beta Index”.

“Relevant Exchange” means, in respect of an Eligible Commodity, the exchange on which such futures contract is listed, or any successor to such exchange.

In respect of each Dealing Day following the Initial Index Day, the Index Level for the Contag Beta Index will be determined by the index calculation agent, representing the cumulative effect of the Investment Return (as described below) since the Initial Index Day, in accordance with the following formula:

$$Index_d = Index_{d-1} \times (1 + IR_d)$$

where:

$IR_d$  means the Investment Return for Dealing Day d, which is determined by the Index Calculation Agent in accordance with the following formula:

$$IR_d = \frac{NAR_d}{NAI_{d-1}} - 1$$

where:

$NAI_{d-1}$  means the Nominal Amount Invested as at Dealing Day d-1;

$NAR_d$  means the Nominal Amount Returned as at Dealing Day d;

*Nominal Amount Invested as at Dealing Day d-1*

means  $NB_{d-1}(d-1)$ , which is the level of the Nominal Basket composed in respect of Dealing Day d-1, valued as at Dealing Day d-1; and

*Nominal Amount Returned as at Dealing Day d*

means  $NB_{d-1}(d)$ , which is the level of the Nominal Basket composed in respect of Dealing Day d-1, valued as at Dealing Day d.

### **Selection Methodology**

The Selection Methodology is an algorithmic methodology developed by JPMSL, which uses the slope of the futures curve of the Eligible Commodities in order to select a particular futures contract in respect of each Eligible Commodity in which to synthetically gain exposure. The Selection Methodology determines, in respect of each relevant month and each Eligible Commodity, the Contag Contract, based on the Contract Prices on the Contract Selection Date. The Selection Methodology may be described as "backwardation-seeking" in that it aims to select a futures contract with the highest level of "backwardation", based on the Contract Price for a futures contract on the Contract Selection Date compared to the Contract Price for the Closest Dated Preceding futures contract (as defined below), subject to certain constraints, as described in further detail below.

"Backwardation" is used to refer to the situation where commodities futures contracts with a Delivery Month further away in time have lower settlement prices than commodities futures contracts with a Delivery Month closer in time. If plotted on a graph, the curve of the settlement prices of commodities futures contracts would be downward sloping.

The Eligible Commodities used in the Selection Methodology are listed below:

**Table 13: Eligible Commodities**

Eligible Commodity	Relevant Exchange	Deferring Commodity (D) or Non-Deferring Commodity (N)	Liquid Months Contract
WTI Crude Oil	NYMEX	D	Z
RBOB Gasoline	NYMEX	D	None
Heating Oil	NYMEX	D	M, Z
Natural Gas	NYMEX	D	F, H, J, V
Brent Crude Oil	ICE	D	Z
Gas Oil	ICE	D	M, Z
Gold	COMEX	N	Not Applicable
Silver	COMEX	N	Not Applicable
Aluminium	LME	D	Z
Copper	LME	D	Z
Lead	LME	D	Z
Nickel	LME	D	Z
Zinc	LME	D	Z
Corn	CBOT	D	Z
Soybeans	CBOT	D	X
Wheat	CBOT	D	N, Z
Kansas Wheat	KCBOT	D	N, Z
Cocoa	NYBOT	D	None
Coffee	NYBOT	D	None
Cotton	NYBOT	N	Not Applicable
Sugar	NYBOT	D	H
Feeder Cattle	CME	N	Not Applicable
Lean Hogs	CME	N	Not Applicable
Live Cattle	CME	D	None

***(a) The Base Set***

In respect of each relevant month and for each Eligible Commodity, only certain Futures Contracts may be considered by the Selection Methodology. These Futures Contracts comprise the “Base Set” and each such Futures Contract in the Base Set is a “Base Contract.”

The Base Set for each relevant month is determined by reference to Table 14 (*Futures Contracts entering into the Base Set*) below.

Each row of Table 14 gives information about an Eligible Commodity. Under the heading “Contract at Month Start” are twelve columns, corresponding (from left to right) to each calendar month from, and including, January to, and including, December. The entries in the columns are single uppercase letters (each a “Contract Letter”). Each Contract Letter relates to a month which is detailed in Table 15 (*Mapping of Contract Letter to Delivery Months*) below and such month is the Delivery Month of a Futures Contract. Reading from left to right in Table 14, the Delivery Month is increasing through the year, so that where the Delivery Month in the columns towards the right of the table moves from a later month e.g., Z (December) to an earlier month e.g. F (January) the Delivery Month refers to that month in the year immediately following the, year in which the relevant month falls.

**Table 14: Futures Contracts entering into the Base Set**

Eligible Commodity (Relevant Exchange)	Contract at Month Start											
	Ja n	F e b	M a r	A p r	M a y	Ju n	Ju l	A u g	S e p	O c t	N o v	D e c
WTI Crude Oil (NYMEX)	G	H	J	K	M	N	Q	U	V	X	Z	F
Brent Crude Oil (ICE)	H	J	K	M	N	Q	U	V	X	Z	F	G
Heating Oil (NYMEX)	G	H	J	K	M	N	Q	U	V	X	Z	F
Gas Oil (ICE)	G	H	J	K	M	N	Q	U	V	X	Z	F
RBOB Gasoline (NYMEX)	G	H	J	K	M	N	Q	U	V	X	Z	F
Natural Gas (NYMEX)	G	H	J	K	M	N	Q	U	V	X	Z	F
Wheat (CBOT)	H	H	K	K	N	N	U	U	Z	Z	Z	H
Kansas Wheat (KCBOT)	H	H	K	K	N	N	U	U	Z	Z	Z	H
Soybeans (CBOT)	H	H	K	K	N	N	X	X	X	X	F	F
Corn (CBOT)	H	H	K	K	N	N	U	U	Z	Z	Z	H
Coffee (NYBOT)	H	H	K	K	N	N	U	U	Z	Z	Z	H
Sugar (NYBOT)	H	H	K	K	N	N	V	V	V	H	H	H
Cotton (NYBOT)	H	H	K	K	N	N	Z	Z	Z	Z	Z	H
Cocoa (NYBOT)	H	H	K	K	N	N	U	U	Z	Z	Z	H
Aluminium (LME)	G	H	J	K	M	N	Q	U	V	X	Z	F
Copper (LME)	G	H	J	K	M	N	Q	U	V	X	Z	F
Lead (LME)	G	H	J	K	M	N	Q	U	V	X	Z	F
Nickel (LME)	G	H	J	K	M	N	Q	U	V	X	Z	F
Zinc (LME)	G	H	J	K	M	N	Q	U	V	X	Z	F
Gold (COMEX)	G	J	J	M	M	Q	Q	Z	Z	Z	Z	G
Silver (COMEX)	H	H	K	K	N	N	U	U	Z	Z	Z	H
Lean Hogs (CME)	G	J	J	M	M	N	Q	V	V	Z	Z	G
Live Cattle (CME)	G	J	J	M	M	Q	Q	V	V	Z	Z	G
Feeder Cattle (CME)	H	H	J	K	Q	Q	Q	U	V	X	F	F

**Table 15: Mapping of Contract Letter to Delivery Months**

Contract Letter	F	G	H	J	K	M	N	Q	U	V	X	Z
Delivery Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

The Base Set in respect of each Eligible Commodity comprises (i) the Futures Contract indicated as the “Contract at Month Start” in Table 14 above for the relevant month, which is the Futures Contract with the earliest Delivery Month in the Base Set, and (ii) each Futures Contract indicated for each subsequent month from, but excluding, the relevant month to, and including, the month falling twelve months after the relevant month.

For example, for the Eligible Commodity WTI Crude Oil (NYMEX) and the relevant month of January 2009, the Base Set consists of the 13 Futures Contracts with Delivery Months of February 2009 (the Contract at Month Start for the relevant month), March 2009, April 2009, May 2009, June 2009, July 2009, August 2009, September 2009, October 2009, November 2009, December 2009, January 2010 and February 2010.

Although the Base Set considers the Futures Contracts for the thirteen calendar months from and including the relevant month to and including the month falling twelve months after the relevant month, the number of Base Contracts in the Base Set may be less than thirteen (as in the example below). The number of Base Contracts in the Base Set can be determined by considering the number of different Contract Letters in the row relevant to an Eligible Commodity in Table 14 (*Futures Contracts entering into the Base Set*) above.

For example, for the Eligible Commodity Corn (CBOT) and the relevant month of January 2009, the Base Set consists of the six Futures Contracts with Delivery Months of March 2009 (the Contract at Month Start for the relevant month), May 2009, July 2009, September 2009, December 2009 and March 2010.

The Base Contracts contained in the Base Set is enumerated from 1 (the nearest-dated Base Contract in the Base Set) to  $i$  (the farthest-dated Base Contract in the Base Set) where  $i$  is the size of the Base Set. In the first example above, the February 2009 Base Contract is numbered 1 and the February 2010 Base Contract is numbered 13. In the second example above, the March 2009 Base Contract is numbered 1 and the March 2010 Base Contract is numbered 6.

***(b) Eligible Contracts***

Once the Base Set in respect of an Eligible Commodity is determined, the index calculation agent will then determine a sub-set of the Base Set (the "Eligible Set") by classifying each Eligible Commodity as either a "Deferring Commodity" or a "Non-Deferring Commodity" as specified in Table 13 (*Eligible Commodities*) above. Each Futures Contract which is a member of such the Eligible Set is an "Eligible Contract."

In respect of Deferring Commodities, the Base Contracts with a Delivery Month:

- (a) not earlier than the second Base Contract in the Base Set ( $F_2$ ); and
- (b) (i) not more than six months following the relevant month; or
- (ii) more than six months following the relevant month and included in the list of Liquid Contract Months for the Eligible Commodity as specified in Table 13 (*Eligible Commodities*) above,

will be the Eligible Contracts in the Eligible Set.

In respect of Non-Deferring Commodities, the Contract at Month Start for the month immediately following the relevant month will be the only Eligible Contract in the Eligible Set.

***(c) Choice of Contag Contract: Selecting the Most Backwardated Contract for the relevant Eligible Commodity***

In the Selection Methodology, the term "Local Backwardation" is used as a measure of the degree of backwardation for the  $i^{\text{th}}$  Base Contract ( $F_i$ ) in the Base Set compared to the preceding Base Contract ( $F_{i-1}$ ) in the Base Set (the "Closest Dated Preceding Futures Contract"). In respect of each Eligible Commodity, the Local Backwardation is calculated for each Eligible Contract in the Eligible Set. When determining the Local Backwardation for an Eligible Contract, the Closest Dated Preceding Futures Contract in relation to such Eligible Contract is the Base Contract immediately preceding the Eligible Contract in the Base Set.

Subject to the occurrence of a Market Disruption and in respect of a relevant month, the index calculation agent determines the Local Backwardation in respect of each Base Contract in the Base Set ( $F_i$ ) in accordance with the following formula:

$$\text{Local Backwardation}(F_i) = \frac{1}{m} \left( \frac{\text{Level}(F_{i-1})}{\text{Level}(F_i)} - 1 \right)$$

where:

$\text{Level}(F_i)$  means the Contract Price of the  $i^{\text{th}}$  Base Contract in the Base Set ( $F_i$ ) on the Contract Selection Date in respect of the relevant month;

$Level(F_{i-1})$  means the Contract Price of the (i-1)<sup>th</sup> Base Contract in the Base Set ( $F_{i-1}$ ) on the Contract Selection Date in respect of the relevant month; and

$m$  means the number of calendar months from and including the Delivery Month of  $F_{i-1}$  to but excluding the Delivery Month of  $F_i$ . If the Delivery Months of  $F_{i-1}$  and  $F_i$  are consecutive,  $m$  shall be 1.

Local Backwardation cannot be determined for the first Base Contract in a Base Set ( $F_1$ ) since there is no Closest Dated Preceding Futures Contract in respect of Base Set ( $F_1$ ).

The Eligible Contract with the highest Local Backwardation shall be the “Most Backwardated Contract” for the relevant Eligible Commodity (subject to certain limitations). If there is no futures contract for one or more Eligible Commodities with backwardation, the Selection Methodology will select the futures contract with the lowest level of contango for any such commodities.

***(d) Changing the Contag Contract: the “Significant Benefit Test”***

In cases where the Contag Contract for an Eligible Commodity for the month immediately preceding the relevant month (the “Previously Selected Contract”) is also an Eligible Contract in the Eligible Set for the relevant month, the index calculation agent will apply the Significant Benefit Test to determine if the Contag Contract should change from the prior month to the next relevant month. Under the Significant Benefit Test, the Contag Contract will change only where the increase in Local Backwardation with respect to the relevant Eligible Commodity by changing the exposure of the Contag Beta Index to the Most Backwardated Contract significantly increases the Local Backwardation with respect to the relevant Eligible Commodity.

The Significant Benefit Test is considered to be passed if either:

- (1)  $F_{PS}$  is not in the Eligible Set; or
- (2) the following inequality is true:

$$Local\ Backwardation(F_{MB}) > Local\ Backwardation(F_{PS}) + SBT$$

where:

$F_{PS}$  means the Previously Selected Contract;

$F_{MB}$  means the Most Backwardated Contract;

$SBT$  means the “Significant Benefit Threshold” and is equal to 0.005.

If the Significant Benefit Test is passed, the Contag Contract for the relevant month will be the Most Backwardated Contract; otherwise it will be the Previously Selected Contract. In addition, if the Previously Selected Contract and the Most Backwardated Contract are the same Futures Contract, the Significant Benefit Test will fail and the Contag Contract for the prior month will remain as the Contag Contract for the relevant month.

***(e) Market Disruptions/ Disrupted Days***

If, on any Contract Selection Date, any of the conditions (i) to (iii) below apply to a Futures Contract due to comprise the Base Set, then such day shall be regarded as a “Contag Beta Index Disrupted Day” in respect of that Futures Contract and this will constitute a Market Disruption for such Futures Contract:

- (a) such Contract Selection Date is not a Contract Business Day with respect to such Futures Contract;
- (b) the Contract Price of such Futures Contract on such Contract Selection Date is a Limit Price;
- (c) no Contract Price is available for the Futures Contract on such Contract Selection Date.

If a Market Disruption exists in respect of a Futures Contract, the Selection Methodology will be adjusted by the index calculation agent as follows:

(i) in the case of (a) and (c) above, the Selection Methodology will treat the Contract Price for such Contract Selection Date as being equal to the Contract Price for the relevant Futures Contract which was available on the Dealing Day immediately preceding the Contract Selection Date and on which no Market Disruption occurred. If no such Contract Price exists, then that particular Futures Contract will be excluded from the Base Set and the Selection Methodology will otherwise remain unaltered; or

(ii) in the case of (b) above, the Selection Methodology will not be modified and the Contract Price for such Contract Selection Date will be the Limit Price.

“Contract Business Day” means, in relation to an Eligible Commodity and a Futures Contract, a day on which the Relevant Exchange for such Eligible Commodity is scheduled to be open for trading for its regular trading sessions and to publish a settlement price.

“Limit Price” means, in relation to a Dealing Day and a Contract Price, the maximum or minimum price allowed for that Futures Contract by the Relevant Exchange on such day.

## **Changes to the Relevant Eligible Commodities**

### ***(a) Amendment to the Relevant Eligible Commodities***

In the event that a Designated Contract is added to or removed from the calculation of the S&P GSCI™, each of which determine the Commodity Weight of each Eligible Commodity in the Contag Beta Index, corresponding changes will be made by the index calculation agent to the Eligible Commodities which correspond to the Designated Contracts used in the calculation of the S&P GSCI™ (the “Relevant Eligible Commodities”) contained in the Contag Beta Index. Such amendments will be published by the index calculation agent and will be effective for the Weights Period corresponding to the S&P GSCI Period in respect of which such Designated Contract is added or removed from the calculation of the S&P GSCI™.

### ***(b) Addition of Eligible Commodities***

In the event that a Designated Contract is added to the calculation of the S&P GSCI™ that is not currently in the set of Eligible Commodities, such Designated Contract (the “New Eligible Commodity”) will be considered an Eligible Commodity for the purposes of calculating the Contag Beta Index, effective as of the Weights Period corresponding to the S&P GSCI Period for which the addition is set to take effect in the S&P GSCI™. All details relating to such New Eligible Commodity necessary for the purposes of carrying out the Selection Methodology (for example, the Liquid Contract Months) will be published by the index calculation agent.



## **Modifications to, or Cancellation of, the S&P GSCI™**

If the S&P GSCI™ is (a) not calculated and announced by the S&P Index Sponsor, but is calculated and announced by a successor sponsor acceptable to the index calculation agent, or (b) replaced by a successor index using, in the determination of the index calculation agent, the same or substantially similar formula for and method of calculation as used in the calculation of the S&P GSCI™, then such index will be deemed to be the index so calculated and announced by that successor index sponsor or that successor index, as the case may be.

If, on or prior to any Dealing Day on which the index calculation agent is determining the Index Level of the Contag Beta Index, the S&P Index Sponsor makes a material change in the formula for or the method of calculating the S&P GSCI™ (other than a modification prescribed in that formula or method to maintain such index in the S&P GSCI™ or prescribed routine events) which affects the ability of the index calculation agent to define the Commodity Weights or Weights Periods in respect of the Contag Beta Index, then the index calculation agent shall, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, specified inputs or any other rule in relation to the Contag Beta Index to account for such modification.

If on or prior to any Dealing Day on which the index calculation agent is determining the Index Level of the Contag Beta Index the S&P Index Sponsor permanently cancels the S&P GSCI™, and no successor index exists, the index calculation agent shall, in good faith, either:

- (i) continue to calculate the Index Level of the Contag Beta Index using the latest available Commodity Weights or Weights Periods at the time the S&P GSCI™ was cancelled; or
- (ii) make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, valuation terms or any other rule in relation to the Contag Beta Index to account for such cancellation.

## **Publication of the Index Level**

The index calculation agent may calculate the Contag Beta Index values with greater frequency than daily on each Dealing Day and share this calculation with its affiliates for internal purposes.

The index calculation agent will be under no obligation to any person to provide the Contag Beta Index values by any alternative method if publication of the relevant Index Ticker identified above is subject to any delay in or interruptions of publication or 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, 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 that may occur or any other event beyond the control of the index calculation agent.

The index calculation agent is under no obligation to continue the calculation, publication and dissemination of the Contag Beta Index or any Index Level.

## Market Disruptions to the Contag Beta Index

If there is a Market Disruption on any Dealing Day:

(i) during a Roll Period, the portion of the roll which was scheduled to take place on such Dealing Day shall be postponed as described above under "*— d) Adjustment of the roll for Contag Beta Index Disrupted Days*"; or

(ii) on which the Nominal Basket or the Normalising Constant is determined, the index calculation agent will calculate the Nominal Basket or the Normalising Constant, as applicable by (i) taking all published Contract Prices in respect of the Dealing Day in question and (ii) using the most recently published Contract Prices for those Futures Contracts for which no Contract Price is published by the Relevant Exchange on such day.

## Extraordinary Events

### *Successor Futures Contract*

If any Futures Contract is:

- (a) not quoted by the Relevant Exchange but by a successor exchange acceptable to the index calculation agent; or
- (b) replaced by a successor futures contract referencing, in the determination of the index calculation agent, a substantially similar commodity as used in the relevant Futures Contract,

then, in each case, the successor futures contract (the "Successor Futures Contract") shall replace the relevant Futures Contract and the Calculation Agent shall determine in good faith the adjustments to Contag Beta Rules, as it determines appropriate, to account for such change.

### *Change in Law/Inaccurate Contract Prices*

Without prejudice to the ability of the index calculation agent to amend the Contag Beta Rules, the index calculation agent may, acting in good faith and in a commercially reasonable manner:

- (a) exclude; or
- (b) substitute,

any Futures Contract following the occurrence (and/or continuation) of a Change in Law or in circumstances where it considers it reasonably necessary to do so to reflect the intention of the Contag Beta Index, including (without prejudice to the generality of the foregoing) any perception among market participants generally that the published price of the relevant Futures Contract is inaccurate (and the Relevant Exchange fails to correct such level), and if it so excludes or substitutes any Futures Contract, then the index calculation agent may adjust the Contag Beta Rules as it determines in good faith to be appropriate to account for such exclusion or substitution on such date(s) selected by the index calculation agent. The index calculation agent is under no obligation to continue the calculation and publication of the Contag Beta Index upon the occurrence or existence of a Change in Law; and the index calculation agent may decide to cancel the Contag Beta Index if it determines, acting in good faith, that the objective of the Contag Beta Index can no longer be achieved.

For purposes of the paragraph above, "Change in Law" means:

- (a) due to:
  - (i) the adoption of, or any change in, any applicable law, regulation, rule or order (including, without limitation, any tax law); or

(ii) the promulgation of, or any change in, the interpretation, application, exercise or operation by any court, tribunal, regulatory authority, exchange or trading facility or any other relevant entity with competent jurisdiction of any applicable law, rule, regulation, order, decision or determination (including, without limitation, as implemented by the CFTC or exchange or trading facility), in each case occurring on or after the Initial Index Day,

in each case, the index calculation agent determines in good faith that it is contrary (or, upon adoption, it will be contrary) to such law, rule, regulation, order, decision or determination for any market participants that are brokers or financial intermediaries (individually or collectively) to purchase, sell, enter into, maintain, hold, acquire or dispose of any Futures Contracts or any transaction referencing any Futures Contract (in whole or in part) (in the aggregate on a portfolio basis or incrementally on a trade by trade basis) including (without limitation) if such Futures Contract (in whole or in part) are (or, but for the consequent disposal thereof, would otherwise be) in excess of any allowable position limit(s) applicable to any market participants that are brokers or financial intermediaries (individually or collectively) in relation to any Futures Contract traded on any exchange(s) or other trading facility; or

(b) the occurrence or existence of any:

(i) suspension or limitation imposed on trading commodities futures contracts (including, without limitation the Futures Contracts); or

(ii) any other event that causes trading in commodity futures contracts (including, without limitation Futures Contracts) to cease.

*Material change to Futures Contract, cancellation or non-publication*

If, at any time, any Relevant Exchange:

(a) announces that it will make a material change to any Futures Contract or in any other way materially modifies such contract (other than a modification prescribed in the definition of such contract); or

(b) (i) permanently cancels any Futures Contract and no Successor Futures Contract exists or (ii) is otherwise unable or unwilling to publish levels of the Futures Contract,

then the index calculation agent may remove such futures contract from the Contag Beta Index and may adjust the Contag Beta Rules as it determines in good faith to be appropriate to account for such change(s) (including, without limitation, selecting a replacement underlying futures contract traded on an equivalent exchange and having similar characteristics to the affected Futures Contract) on such date(s) as selected by the index calculation agent.

**Corrections**

In the event that (a) the Contract Price of any Futures Contract used to calculate the Index Level in respect of any Dealing Day is subsequently corrected and the correction is published by the Relevant Exchange before the next following Roll Period or (b) the index calculation agent identifies an error or omission in any of its calculations or determinations in respect of the Contag Beta Index, then the index calculation agent may, if practicable and the correction is deemed material by the index calculation agent, adjust or correct the Index Level published in respect of the relevant Dealing Day and each subsequent Dealing Day and publish such corrected Index Level(s) as soon as reasonably practicable.

## **Index Calculation Agent; Amendment of Rules; Limitation of Liability**

The Rules provide that the index calculation agent must act in good faith and in a commercially reasonable manner. In the event that ambiguities arise in interpreting or applying the Contag Beta Rules, the index calculation agent will resolve ambiguities in a reasonable manner and, if necessary, amend the Contag Beta Rules to reflect such resolution.

Neither the index calculation agent nor any of its affiliates or subsidiaries or any of their respective directors, officers, employees, delegates or agents (each a "Relevant Person") shall have any responsibility to any person (whether as a result of negligence or otherwise) for any determinations made or anything done (or omitted to be determined or done) in respect of the Contag Beta Index or in respect of the publication of the Index Level (or failure to publish such Index Level) and any use to which any person may put the Contag Beta Index or the Index Levels.

Neither the index calculation agent nor any Relevant Person shall have any liability, contingent or otherwise, to any person or entity for the quality, accuracy, timeliness or completeness of the information or data contained in the Contag Beta Rules or the Contag Beta Index, or for delays, omissions or interruptions in the delivery of the Contag Beta Index or related data. Neither the index calculation agent nor any Relevant Person makes any warranty, express or implied, as to the results to be obtained by any person or entity in connection with any use of the Contag Beta Index, including but not limited to the trading of or investments in products based on or indexed or otherwise related to the Contag Beta Index, any data related thereto or any components thereof.

Neither the index calculation agent nor any Relevant Person makes any express or implied warranties, and hereby expressly disclaims, to the fullest extent permitted by law, all warranties of merchantability or fitness for a particular purpose or use with respect to the Contag Beta Index, the Contag Beta Index or any data related thereto. Without limiting any of the foregoing, in no event shall either the index calculation agent or any Relevant Person have any liability for any special, punitive, indirect or consequential damages (including lost profits), in connection with any use by any person of the Contag Beta Index or any products based on or indexed or otherwise related thereto, even if notified of the possibility of such damages.

All determinations of the index calculation agent in respect of the Contag Beta Index shall be final, conclusive and binding and no person shall be entitled to make any claim against any of the Relevant Persons in respect thereof. Once a determination or calculation is made or action taken by the index calculation agent or any other Relevant Person in respect of the Contag Beta Index, neither the index calculation agent nor any other Relevant Person shall be under any obligation to revise any determination or calculation made or action taken for any reason.

## BACKGROUND ON THE S&P GSCI™ INDICES

Payment on the notes linked to the J.P. Morgan Alternative Index Commodity Momentum Energy Strategy, J.P. Morgan Alternative Index Commodity Momentum Non Energy Strategy and the J.P. Morgan Alternative Index Commodity Carry Strategy is linked, in part, to a synthetic short exposure to the performance of the S&P GSCI™ Energy Excess Return, the S&P GSCI™ Non Energy Excess Return and the S&P GSCI™ Excess Return (together, the "S&P GSCI™ Indices"), respectively. The S&P GSCI™ Indices are published by Standard & Poor's, a division of the McGraw-Hill Companies ("S&P"), and is determined, composed and calculated by S&P without regard to the notes. S&P acquired the rights to the S&P GSCI™ Index (the "S&P GSCI™") from Goldman, Sachs & Co. in 2007. Goldman, Sachs & Co. established and began calculating the index in May 1991. The former name of the S&P GSCI™ was the Goldman Sachs Commodity Index.

The S&P GSCI™ Energy Excess Return is a sub-index of the S&P GSCI™ Excess Return and represents only the energy components of the S&P GSCI™. The S&P GSCI™ Energy Excess Return is a world production-weighted index of certain energy commodities in the world economy, including WTI Crude Oil, Brent Crude Oil, RBOB Gasoline, Heating Oil, Gasoil and Natural Gas. As of March 5, 2010, the S&P GSCI™ Energy Index Excess Return composed 70.66% of the total S&P GSCI™ Index Excess Return Index. As of March 5, 2010, 37.10% of the value of the S&P GSCI™ Non Energy Excess Return was determined by futures contracts for WTI Crude Oil, 14.57% of the value was determined by futures contracts for Brent Crude Oil, 4.81% of the value was determined by futures contracts for RBOB Gasoline, 4.50% of the value was determined by futures contracts for Heating Oil, 5.63% of the value was determined by futures contracts for GasOil and 4.06% of the value was determined by futures contracts for Natural Gas.

The S&P GSCI™ Non Energy Excess Return is a sub-index of the S&P GSCI™ Excess Return and represents only the non energy components of the S&P GSCI™. The S&P GSCI™ Non Energy Excess Return is a world production-weighted index of certain non-energy commodities in the world economy, including Industrial Metals, Precious Metals, Agriculture and Livestock. As of March 5, 2010, the S&P GSCI™ Non Energy Index Excess Return composed 29.34% of the total S&P GSCI™ Index Excess Return Index. As of March 5, 2010, 8.48% of the value of the S&P GSCI™ Non Energy Excess Return was determined by futures contracts for Industrial Metals, 3.14% of the value was determined by futures contracts for Precious Metals, 13.14% of the value was determined by futures contracts for Agriculture, 4.58% of the value was determined by futures contracts for Livestock.

The S&P GSCI™ Excess Return is an excess return version of the S&P GSCI™ which is an index on a world production-weighted basket of principal nonfinancial commodities (i.e., physical commodities) that satisfy specified criteria. The S&P GSCI™ Excess Return is designed to be a measure of the performance over time of the markets for these commodities. The only commodities represented in the S&P GSCI™ Excess Return are those physical commodities on which active and liquid contracts are traded on trading facilities in major industrialized countries. The commodities included in the S&P GSCI™ Excess Return are weighted, on a production basis, to reflect the relative significance (in the view of S&P, in consultation with its Index Advisory Panel, as described below) of such commodities to the world economy. The fluctuations in the value of the S&P GSCI™ Excess Return are intended generally to correlate with changes in the prices of such physical commodities in global markets. The S&P GSCI™ Excess Return has been normalized such that its hypothetical level on January 2, 1970 was 100. As of March 5, 2010, 4.58% of the value of the S&P GSCI™ Excess Return was determined by futures contracts for Livestock, 70.66% of the value was determined by futures contracts for Energy, 8.48% of the value was determined by futures contracts for Industrial Metals, 3.14% of the value was determined by futures contracts for Precious Metals and 13.14% of the value was determined by futures contracts for Agriculture.

As an 'excess return' index, the S&P GSCI™ Indices reflect the excess returns that are potentially available through an unleveraged investment in the relevant commodities futures contracts underlying the S&P GSCI™ Indices.

Since the S&P GSCI™ Indices are each an excess return version of the S&P GSCI™, the methodology for compiling the S&P GSCI™ relates as well to the methodology of compiling the S&P GSCI™ Indices.

The value of the S&P GSCI™ Indices on any given day reflects:

- the price levels of the contracts included in the S&P GSCI™ (which represents the value of the S&P GSCI™), and
- the "contract daily return," which is the percentage change in the total dollar weight of the S&P GSCI™ from the previous day to the current day.

Set forth below is a summary of the composition of and the methodology used to calculate the S&P GSCI™ and accordingly, the S&P GSCI™ Excess Return. The methodology for determining the composition and weighting of the S&P GSCI™ and for calculating its value is subject to modification in a manner consistent with the purposes of the S&P GSCI™, as described below. S&P makes the official calculations of the S&P GSCI™ and the S&P GSCI™ Excess Return.

### **The Index Committee and the Index Advisory Panel**

S&P has established an Index Committee to oversee the daily management and operations of the S&P GSCI™, and is responsible for all analytical methods and calculation of the indices. The Committee consists of three full-time professional members of S&P's staff and two members of Goldman Sachs Group, Inc. At each meeting, the Committee reviews any issues that may affect index constituents, statistics comparing the composition of the indices to the market, commodities that are being considered as candidates for an addition to an index, and any significant market events. In addition, the Index Committee may revise index policy covering rules for selecting commodities or other matters.

S&P considers information about changes to its indices and related matters to be potentially market-moving and material. Therefore, all Index Committee discussions are confidential.

S&P has established an Index Advisory Panel (the "Advisory Panel") to assist it in connection with the operation of the S&P GSCI™. The Advisory Panel meets on an annual basis and at other times at the request of S&P. The principal purpose of the Advisory Panel is to advise S&P with respect to, among other things, the calculation of the S&P GSCI™, the effectiveness of the S&P GSCI™ as a measure of commodity futures market performance and the need for changes in the composition or in the methodology of the S&P GSCI™. The Advisory Panel acts solely in an advisory and consultative capacity; all decisions with respect to the composition, calculation and operation of the S&P GSCI™ are made by S&P.

### **Composition of the S&P GSCI™**

In order to be included in the S&P GSCI™, a contract must satisfy the following eligibility criteria:

- The contract must be in respect of a physical commodity and not a financial commodity;
- The contract must:
  - have a specified expiration or term or provide in some other manner for delivery or settlement at a specified time, or within a specified period, in the future; and
  - at any given point in time, be available for trading at least five months prior to its expiration or such other date or time period specified for delivery or settlement.

- The contract must be traded on a trading facility which allows market participants to execute spread transactions, through a single order entry, between the pairs of contract expirations included in the S&P GSCI™ that, at any given point in time, will be involved in the rolls to be effected in the next three roll periods (defined below).

The commodity must be the subject of a contract that:

- is denominated in U.S. dollars; and
- is traded on or through an exchange, facility or other platform (referred to as a “trading facility”) that has its principal place of business or operations in a country which is a member of the Organization for Economic Cooperation and Development and that:
  - makes price quotations generally available to its members or participants (and to S&P) in a manner and with a frequency that is sufficient to provide reasonably reliable indications of the level of the relevant market at any given point in time;
  - makes reliable trading volume information available to S&P with at least the frequency required by S&P to make the monthly determinations;
  - accepts bids and offers from multiple participants or price providers; and
  - is accessible by a sufficiently broad range of participants.

With respect to inclusion on each sub-index of the S&P GSCI™, a contract must be in respect to the physical commodity that is described by that specific index.

The price of the relevant contract that is used as a reference or benchmark by market participants (referred to as the “daily contract reference price”) must generally have been available on a continuous basis for at least two years prior to the proposed date of inclusion in the S&P GSCI™. In appropriate circumstances, however, S&P, in consultation with the Advisory Panel, may determine that a shorter time period is sufficient or that historical daily contract reference prices for such contract may be derived from daily contract reference prices for a similar or related contract.

At and after the time a contract is included in the S&P GSCI™, the daily contract reference price for such contract must be published between 10:00 a.m. and 4:00 p.m., New York City time, on each business day relating to such contract by the trading facility on or through which it is traded and must generally be available to all members of, or participants in, such facility (and to S&P) on the same day from the trading facility or through a recognized third-party data vendor. Such publication must include, at all times, daily contract reference prices for at least one expiration or settlement date that is five months or more from the date the determination is made, as well as for all expiration or settlement dates during such five-month period.

For a contract to be eligible for inclusion in the S&P GSCI™, volume data with respect to such contract must be available for at least the three months immediately preceding the date on which the determination is made. The following eligibility criteria apply:

- A contract that is not included in the S&P GSCI™ at the time of determination and that is based on a commodity that is not represented in the S&P GSCI™ at such time must, in order to be added to the S&P GSCI™ at such time, have a total dollar value traded, over the relevant period, as the case may be and annualized, of at least U.S. \$15 billion. The total dollar value traded is the dollar value of the total quantity of the commodity underlying transactions in the relevant contract over the period for which the calculation is made, based on the average of the daily contract reference prices on the last day of each month during the period.

- A contract that is already included in the S&P GSCI™ at the time of determination and that is the only contract on the relevant commodity included in the S&P GSCI™ must, in order to continue to be included in the S&P GSCI™ after such time, have a total dollar value traded, over the relevant period, as the case may be and annualized, of at least U.S. \$5 billion and at least U.S. \$10 billion during at least one of the three most recent annual periods used in making the determination.
- A contract that is not included in the S&P GSCI™ at the time of determination and that is based on a commodity on which there are one or more contracts already included in the S&P GSCI™ at such time must, in order to be added to the S&P GSCI™ at such time, have a total dollar value traded, over the relevant period, as the case may be and annualized of at least U.S. \$30 billion.
- A contract that is already included in the S&P GSCI™ at the time of determination and that is based on a commodity on which there are one or more contracts already included in the S&P GSCI™ at such time must, in order to continue to be included in the S&P GSCI™ after such time, have a total dollar value traded, over the relevant period, as the case may be and annualized, of at least U.S. \$10 billion and at least U.S. \$20 billion during at least one of the three most recent annual periods used in making the determination.

In addition:

- A contract that is already included in the S&P GSCI™ at the time of determination must, in order to continue to be included after such time, have a reference percentage dollar weight of at least 0.10%. The reference percentage dollar weight of a contract is determined by multiplying the CPW (defined below) of a contract by the average of its daily contract reference prices on the last day of each month during the relevant period. These amounts are summed for all contracts included in the S&P GSCI™ and each contract's percentage of the total is then determined.
- A contract that is not included in the S&P GSCI™ at the time of determination must, in order to be added to the S&P GSCI™ at such time, have a reference percentage dollar weight of at least 1.00%.
- In the event that two or more contracts on the same commodity satisfy the eligibility criteria, such contracts will be included in the S&P GSCI™ in the order of their respective total quantity traded during the relevant period (determined as the total quantity of the commodity underlying transactions in the relevant contract), with the contract having the highest total quantity traded being included first, provided that no further contracts will be included if such inclusion would result in the portion of the S&P GSCI™ attributable to such commodity exceeding a particular level.
- If additional contracts could be included with respect to several commodities at the same time, that procedure is first applied with respect to the commodity that has the smallest portion of the S&P GSCI™ attributable to it at the time of determination. Subject to the other eligibility criteria relating to the composition of the S&P GSCI™, the contract with the highest total quantity traded on such commodity will be included. Before any additional contracts on the same commodity or on any other commodity are included, the portion of the S&P GSCI™ attributable to all commodities is recalculated. The selection procedure described above is then repeated with respect to the contracts on the commodity that then has the smallest portion of the S&P GSCI™ attributable to it.



The contracts currently included in the S&P GSCI™ are all futures contracts traded on the New York Mercantile Exchange, Inc. ("NYMEX"), the IntercontinentalExchange Futures ("ICE Futures"), the Chicago Mercantile Exchange ("CME"), the Chicago Board of Trade ("CBOT"), the Coffee, Sugar & Cocoa Exchange, Inc. ("CSC"), the New York Cotton Exchange ("NYC"), the Kansas City Board of Trade ("KBT"), the Commodities Exchange Inc. ("CMX") and the LME.

The quantity of each of the contracts included in the S&P GSCI™ is determined on the basis of a five-year average (referred to as the "world production average") of the production quantity of the underlying commodity as published by the United Nations Statistical Yearbook, the Industrial Commodity Statistics Yearbook and other official sources. However, if a commodity is primarily a regional commodity, based on its production, use, pricing, transportation or other factors, S&P, in consultation with the advisory committee, may calculate the weight of such commodity based on regional, rather than world, production data. At present, natural gas is the only commodity the weight of which is calculated on the basis of regional production data, with the relevant region being North America.

The five-year moving average is updated annually for each commodity included in the S&P GSCI™, based on the most recent five-year period (ending approximately two years prior to the date of calculation and moving backwards) for which complete data for all commodities is available. The contract production weights, or CPWs, used in calculating the S&P GSCI™ are derived from world or regional production averages, as applicable, of the relevant commodities, and are calculated based on the total quantity traded for the relevant contract and the world or regional production average, as applicable, of the underlying commodity. However, if the volume of trading in the relevant contract, as a multiple of the production levels of the commodity, is below specified thresholds, the CPW of the contract is reduced until the threshold is satisfied. This is designed to ensure that trading in each such contract is sufficiently liquid relative to the production of the commodity.

In addition, S&P performs this calculation on a monthly basis and, if the multiple of any contract is below the prescribed threshold, the composition of the S&P GSCI™ is reevaluated, based on the criteria and weighting procedure described above. This procedure is undertaken to allow the S&P GSCI™ to shift from contracts that have lost substantial liquidity into more liquid contracts, during the course of a given year. As a result, it is possible that the composition or weighting of the S&P GSCI™ will change on one or more of these monthly evaluation dates. In addition, regardless of whether any changes have occurred during the year, S&P reevaluates the composition of the S&P GSCI™, in consultation with the Advisory Panel, at the conclusion of each year, based on the above criteria. Other commodities that satisfy such criteria, if any, will be added to the S&P GSCI™. Commodities included in the S&P GSCI™ which no longer satisfy such criteria, if any, will be deleted.

S&P, in consultation with the Advisory Panel, also determines whether modifications in the selection criteria or the methodology for determining the composition and weights of and for calculating the S&P GSCI™ are necessary or appropriate in order to assure that the S&P GSCI™ represents a measure of commodity market performance. S&P has the discretion to make any such modifications, in consultation with the Advisory Panel.

## **Contract Expirations**

Because the S&P GSCI™ comprises actively traded contracts with scheduled expirations, it can only be calculated by reference to the prices of contracts for specified expiration, delivery or settlement periods, referred to as "contract expirations." The contract expirations included in the S&P GSCI™ for each commodity during a given year are designated by S&P, in consultation with the Advisory Panel, provided that each such contract must be an "active contract." An "active contract" for this purpose is a liquid, actively traded contract expiration, as defined or identified by the relevant trading facility or, if no such definition or identification is provided by the relevant trading facility, as defined by standard custom and practice in the industry.

If a trading facility deletes one or more contract expirations, the S&P GSCI™ will be calculated during the remainder of the year in which such deletion occurs on the basis of the remaining contract expirations designated by S&P. If a trading facility ceases trading in all contract expirations relating to a particular contract, S&P may designate a replacement contract on the commodity. The replacement contract must satisfy the eligibility criteria for inclusion in the S&P GSCI™. To the extent practicable, the replacement will be effected during the next monthly review of the composition of the S&P GSCI™. If that timing is not practicable, S&P will determine the date of the replacement and will consider a number of factors, including the differences between the existing contract and the replacement contract with respect to contractual specifications and contract expirations.

### **Value of the S&P GSCI™**

The value of the S&P GSCI™ on any given day is equal to the total dollar weight of the S&P GSCI™ divided by a normalizing constant that assures the continuity of the S&P GSCI™ over time. The total dollar weight of the S&P GSCI™ is the sum of the dollar weight of each of the underlying commodities.

The dollar weight of each such commodity on any given day is equal to:

- the daily contract reference price,
- multiplied by the appropriate CPWs, and
- during a roll period, the appropriate “roll weights” (discussed below).

The daily contract reference price used in calculating the dollar weight of each commodity on any given day is the most recent daily contract reference price made available by the relevant trading facility, except that the daily contract reference price for the most recent prior day will be used if the exchange is closed or otherwise fails to publish a daily contract reference price on that day. In addition, if the trading facility fails to make a daily contract reference price available or publishes a daily contract reference price that, in the reasonable judgment of S&P, reflects manifest error, the relevant calculation will be delayed until the price is made available or corrected; provided, that, if the price is not made available or corrected by 4:00 p.m., New York City time, S&P may, if it deems such action to be appropriate under the circumstances, determine the appropriate daily contract reference price for the applicable futures contract in its reasonable judgment for purposes of the relevant S&P GSCI™ calculation.

### **Contract Daily Return**

The contract daily return on any given day is equal to the sum, for each of the commodities included in the S&P GSCI™, of the applicable daily contract reference price on the relevant contract multiplied by the appropriate CPW and the appropriate “roll weight,” divided by the total dollar weight of the S&P GSCI™ on the preceding day, minus one.

The “roll weight” of each commodity reflects the fact that the positions in contracts must be liquidated or rolled forward into more distant contract expirations as they approach expiration. If actual positions in the relevant markets were rolled forward, the roll would likely need to take place over a period of days. Since the S&P GSCI™ is designed to replicate the performance of actual investments in the underlying contracts, the rolling process incorporated in the S&P GSCI™ also takes place over a period of days at the beginning of each month (referred to as the “roll period”). On each day of the roll period, the “roll weights” of the first nearby contract expiration on a particular commodity and the more distant contract expiration into which it is rolled are adjusted, so that the hypothetical position in the contract on the commodity that is included in the S&P GSCI™ is gradually shifted from the first nearby contract expiration to the more distant contract expiration.

If on any day during a roll period any of the following conditions exists, the portion of the roll that would have taken place on that day is deferred until the next day on which such conditions do not exist:

- no daily contract reference price is available for a given contract expiration;
- any such price represents the maximum or minimum price for such contract month, based on exchange price limits (referred to as a "Limit Price");
- the daily contract reference price published by the relevant trading facility reflects manifest error, or such price is not published by 4:00 p.m., New York City time. In that event, S&P may, but is not required to, determine a daily contract reference price and complete the relevant portion of the roll based on such price; *provided, that*, if the trading facility publishes a price before the opening of trading on the next day, S&P will revise the portion of the roll accordingly; or
- trading in the relevant contract terminates prior to its scheduled closing time.

If any of these conditions exist throughout the roll period, the roll with respect to the affected contract will be effected in its entirety on the next day on which such conditions no longer exist.

### **Calculation of the S&P GSCI™ Indices**

The value of each of the S&P GSCI™ Indices on any S&P GSCI™ business day is equal to the product of (1) the value of the underlying futures contracts on the immediately preceding S&P GSCI™ business day multiplied by (2) one plus the contract daily return of the relevant S&P GSCI™ Index on the S&P GSCI™ business day on which the calculation is made.

### **Information**

All information contained herein relating to the S&P GSCI™ and the S&P GSCI™ Indices, including their make-up, method of calculation, changes in their components and historical performance, has been derived from publicly available information.

The information contained herein with respect to the S&P GSCI™ Indices and the S&P GSCI™ reflects the policies of, and is subject to change by, S&P.

Current information regarding the market value of the S&P GSCI™ Indices is available from S&P and from numerous public information sources. We make no representation that the publicly available information about the S&P GSCI™ Indices is accurate or complete.

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## **BACKGROUND ON THE MSCI DAILY VALUE TOTAL RETURN GROSS WORLD INDEX AND THE MSCI DAILY TOTAL RETURN GROSS WORLD INDEX**

Payment on the notes linked to the J.P. Morgan Alternative Index Equity Value Carry Strategy is linked, in part, to a synthetic exposure to the performance of the MSCI Daily Value Total Return Gross World Index and the MSCI Daily Total Return Gross World Index.

### **MSCI Indices**

We have derived all information contained in this product supplement regarding the MSCI Daily Value Total Return Gross World Index and the MSCI Daily Total Return Gross World Index (the “MSCI Indices”), including, without limitation, their make-up, method of calculation and changes in its components, from publicly available information. Such information reflects the policies of, and is subject to change by, MSCI Inc. (“MSCI”). We make no representation or warranty as to the accuracy or completeness of such information. The MSCI Indices are calculated, maintained and published by MSCI. MSCI has no obligation to continue to publish, and may discontinue publication of, any of the MSCI Indices.

The MSCI Daily Value Total Return Gross World Index and the MSCI Daily Total Return Gross World Index are reported by Bloomberg L.P. under the ticker symbols “GDUVWI” and “GDDUWI,” respectively.

### **Transition**

On March 28, 2007, MSCI announced changes to the methodology used by MSCI to calculate its Standard and Small Cap Indices. The transition of the Standard and Small Cap Indices to the MSCI Indices occurred in two phases, the first completed as of November 30, 2007 and the second completed as of May 30, 2008. The current index calculation methodology used to formulate the MSCI Indices (and which is also used to formulate the indices included in the MSCI Global Index Series) (the “MSCI Global Investable Market Indices Methodology”) was implemented as of June 1, 2008.

### ***MSCI Daily Value Total Return Gross World Index***

The MSCI Daily Value Total Return Gross World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of certain developed equity markets. As of March 5, 2010 the MSCI Daily Value Total Return Gross World Index consisted of companies from the following 23 developed market country indices: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

The MSCI Daily Value Total Return Gross World Index is constructed by applying MSCI’s Global Investable Market Value and Growth Indices Methodology to the Standard and Small Cap Indices on a market by market basis by identifying securities based on certain value characteristics such as book value to price ratio, earnings to price ratio and dividend yield. See “*Creating Style Indices within Each Size Segment*” for more information about the Global Investable Market Value and Growth Indices Methodology.

### ***MSCI Daily Total Return Gross World Index***

The MSCI Europe Gross Total Return Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of certain developed equity markets. As of March 2, 2009 the MSCI Daily Total Return Gross World Index consisted of companies from the following 23 developed market country indices: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

### ***The MSCI Indices are Total Return Indices With Gross Dividends***

The MSCI Indices are total return indices which include gross dividends, meaning that they measure the market performance, including both price performance and income from dividend payments. The MSCI Daily Total Return (DTR) Methodology reinvests dividends in the indices on the day the security is quoted ex-dividend (xd-date). Indices with gross dividends approximate the maximum possible dividend reinvestment. The amount reinvested is the entire dividend distributed to individuals resident in the country of the company, but does not include tax credits.

### **Constructing the MSCI Global Investable Market Indices**

MSCI undertakes an index construction process, which involves: (i) defining the Equity Universe; (ii) determining the Market Investable Equity Universe for each market; (iii) determining market capitalization size segments for each market; (iv) applying Index Continuity Rules for the MSCI Standard Index; (v) creating style segments within each size segment within each market; and (vi) classifying securities under the Global Industry Classification Standard (the "GICS").

The "relevant market" with respect to a single country index is equivalent to the single country, except in DM-classified countries in Europe (as described below), where all such countries are first aggregated into a single market for index construction purposes. Subsequently, individual DM Europe country indices within the MSCI Europe Index are derived from the constituents of the MSCI Europe Index under the MSCI Global Investable Market Indices Methodology.

The "relevant market" with respect to a composite index includes each of the single countries which comprise the composite index.

The "Equity Universe" is the aggregation of all Market Investable Equity Universes. The "DM Investable Equity Universe" is the aggregation of all the Market Investable Equity Universes for Developed Markets.

#### ***Defining the Equity Universe***

(i) Identifying Eligible Equity Securities: The Equity Universe initially looks at securities listed in any of the countries in the MSCI Global Index Series, which will be classified as either Developed Markets ("DM") or Emerging Markets ("EM"). All listed equity securities, or listed securities that exhibit characteristics of equity securities, except mutual funds, exchange traded funds, equity derivatives, limited partnerships, and most investment trusts, are eligible for inclusion in the Equity Universe. Real Estate Investment Trusts ("REITs") in some countries and certain income trusts in Canada are also eligible for inclusion.

(ii) Country Classification of Eligible Securities: Each company and its securities (*i.e.*, share classes) are classified in one and only one country, which allows for a distinctive sorting of each company by its respective country.

#### ***Determining the Market Investable Equity Universes***

A Market Investable Equity Universe for a market is derived by applying investability screens to individual companies and securities in the Equity Universe that are classified in that market. A market is equivalent to a single country, except in DM Europe, where all DM countries in Europe are aggregated into a single market for index construction purposes. Subsequently, individual DM Europe country indices within the MSCI Europe Index are derived from the constituents of the MSCI Europe Index under the Global Investable Market Indices methodology.

The investability screens used to determine the Investable Equity Universe in each market are as follows:

- (i) **Equity Universe Minimum Size Requirement:** This investability screen is applied at the company level. In order to be included in a Market Investable Equity Universe, a company must have the required minimum full market capitalization. A company will meet this requirement if its cumulative free float-adjusted market capitalization is within the top 99% of the sorted Equity Universe.
- (ii) **Equity Universe Minimum Float-Adjusted Market Capitalization Requirement:** This investability screen is applied at the individual security level. To be eligible for inclusion in a Market Investable Equity Universe, a security must have a free float-adjusted market capitalization equal to or higher than 50% of the Equity Universe Minimum Size Requirement.
- (iii) **DM and EM Minimum Liquidity Requirement:** This investability screen is applied at the individual security level. To be eligible for inclusion in a Market Investable Equity Universe, a security must have adequate liquidity as measured by the Annualized Traded Value Ratio ("ATVR") and the Frequency of Trading. The ATVR screens out extreme daily trading volumes, taking into account the free float-adjusted market capitalization size of securities. The aim of the 12-month and 3-month ATVR together with 3-month Frequency of Trading is to select securities with a sound long and short-term liquidity. A minimum liquidity level of 20% of 3-month ATVR and 90% of 3-month Frequency of Trading over the last 4 consecutive quarters, as well as 20% of 12-month ATVR are required for the inclusion of a security in a Market Investable Equity Universe of a Developing Market. A minimum liquidity level of 15% of 3-month ATVR and 80% of 3-month Frequency of Trading over the last 4 consecutive quarters, as well as 15% of 12-month ATVR are required for the inclusion of a security in a Market Investable Equity Universe of an Emerging Market.

In instances when a security does not meet the above criteria, the security will be represented by a relevant liquid eligible Depository Receipt if it is trading in the same geographical region. Depository Receipts are deemed liquid if they meet all the above mentioned criteria for 12-month ATVR, 3-month ATVR and 3-month Frequency of Trading.

- (iv) **Global Minimum Foreign Inclusion Factor Requirement:** This investability screen is applied at the individual security level. To be eligible for inclusion in a Market Investable Equity Universe, a security's Foreign Inclusion Factor ("FIF") must reach a certain threshold. The FIF of a security is defined as the proportion of shares outstanding that is available for purchase in the public equity markets by international investors. This proportion accounts for the available free float of and/or the foreign ownership limits applicable to a specific security (or company). In general, a security must have an FIF equal to or larger than 0.15 to be eligible for inclusion in a Market Investable Equity Universe.
- (v) **Minimum Length of Trading Requirement:** This investability screen is applied at the individual security level. For an initial public offering ("IPO") to be eligible for inclusion in a Market Investable Equity Universe, the new issue must have started trading at least four months before the implementation of the initial construction of the index or at least three months before the implementation of a Semi-Annual Index Review. This requirement is applicable to small new issues in all markets. Large IPOs are not subject to the Minimum Length of Trading Requirement and may be included in a Market Investable Equity Universe and the Standard Index outside of a Quarterly or Semi-Annual Index Review.

### *Defining Market Capitalization Size Segments for Each Market*

Once a Market Investable Equity Universe is defined, it is segmented into the following size-based indices:

- Investable Market Index (Large + Mid + Small)
- Standard Index (Large + Mid)
- Large Cap Index
- Mid Cap Index
- Small Cap Index

Creating the Size Segment Indices in each market involves the following steps: (i) defining the Market Coverage Target Range for each size segment; (ii) determining the Global Minimum Size Range for each size segment; (iii) determining the Market Size-Segment Cutoffs and associated Segment Number of Companies; (iv) assigning companies to the size segments; and (v) applying final size-segment investability requirements and index continuity rules.

### *Index Continuity Rules for the Standard Indices*

In order to achieve index continuity, as well as provide some basic level of diversification within a market index, notwithstanding the effect of other index construction rules, a minimum number of five constituents will be maintained for a DM Standard Index and a minimum number of three constituents will be maintained for an EM Standard Index.

If after the application of the index construction methodology, a Standard Index contains fewer than five securities in a Developed Market or three securities in an Emerging Market, then the largest securities by free float-adjusted market capitalization are added to the Standard Index in order to reach five constituents in that Developed Market or three in that Emerging Market. At subsequent Index Reviews, if the free float-adjusted market capitalization of a non-index constituent is at least 1.50 times the free float-adjusted market capitalization of the smallest existing constituent after rebalancing, the larger free float-adjusted market capitalization security replaces the smaller one.

### *Creating Style Indices within Each Size Segment*

All securities in the investable equity universe are classified into Value or Growth segments using the MSCI Global Value and Growth methodology.

### *Classifying Securities under the Global Industry Classification Standard*

All securities in the Global Investable Equity Universe are assigned to the industry that best describes their business activities. To this end, MSCI has designed, in conjunction with Standard & Poor's, the Global Industry Classification Standard ("GICS"). The GICS entails four levels of classification: (1) sector; (2) industry groups; (3) industries; (4) sub-industries. Under the GICS, each company is assigned uniquely to one sub-industry according to its principal business activity. Therefore, a company can belong to only one industry grouping at each of the four levels of the GICS.



## Maintenance of the MSCI Indices

The MSCI Global Investable Market Indices are maintained with the objective of reflecting the evolution of the underlying equity markets and segments on a timely basis, while seeking to achieve index continuity, continuous investability of constituents and replicability of the indices, and index stability and low index turnover.

In particular, index maintenance involves:

- (i) Semi-Annual Index Reviews ("SAIRs") in May and November of the Size Segment and Global Value and Growth Indices which include:
  - Updating the indices on the basis of a fully refreshed Equity Universe.
  - Taking buffer rules into consideration for migration of securities across size and style segments.
  - Updating FIFs and Number of Shares ("NOS").

The objective of the SAIRs is to systematically reassess the various dimensions of the Equity Universe for all markets on a fixed semi-annual timetable. A SAIR involves a comprehensive review of the Size Segment and Global Value and Growth Indices.

(ii) Quarterly Index Reviews ("QIRs") in February and August of the Size Segment Indices aimed at:

- Including significant new eligible securities (such as IPOs that were not eligible for earlier inclusion) in the index.
- Allowing for significant moves of companies within the Size Segment Indices, using wider buffers than in the SAIR.
- Reflecting the impact of significant market events on FIFs and updating NOS.

QIRs are designed to ensure that the indices continue to be an accurate reflection of the evolving equity marketplace. This is achieved by a timely reflection of significant market driven changes that were not captured in the index at the time of their actual occurrence but are significant enough to be reflected before the next SAIR. QIRs may result in additions or deletions due to migration to another Size Segment Index, and changes in FIFs and in NOS. Only additions of significant new investable companies are considered, and only for the Standard Index. The buffer zones used to manage the migration of companies from one segment to another are wider than those used in the SAIR. The style classification is reviewed only for companies that are reassigned to a different size segment.

- (iii) Ongoing event-related changes. Ongoing event-related changes to the indices are the result of mergers, acquisitions, spin-offs, bankruptcies, reorganizations and other similar corporate events. They can also result from capital reorganizations in the form of rights issues, bonus issues, public placements and other similar corporate actions that take place on a continuing basis. These changes generally are reflected in the indices at the time of the event. Significantly large IPOs are included in the indices after the close of the company's tenth day of trading.

## Announcement Policy

The results of the SAIRs are announced at least two weeks in advance of their effective implementation dates as of the close of the last business day of May and November. The results of the QIRs are announced at least two weeks in advance of their effective implementation dates as of the close of the last business day of February and August. All changes resulting from corporate events are announced prior to their implementation.

The changes are typically announced at least ten business days prior to the changes becoming effective in the indices as an "expected" announcement, or as an "undetermined" announcement, when the effective dates are not known yet or when aspects of the event are uncertain. MSCI sends "confirmed" announcements at least two business days prior to events becoming effective in the indices, provided that all necessary public information concerning the event is available. The full list of all new and pending changes is delivered to clients on a daily basis, at 5:30 p.m., US Eastern Time through the Advance Corporate Events (ACE) File.

In exceptional cases, events are announced during market hours for same or next day implementation. Announcements made by MSCI during market hours are usually linked to late company disclosure of corporate events or unexpected changes to previously announced corporate events.

In the case of secondary offerings representing more than 5% of a security's number of shares for existing constituents, these changes will be announced prior to the end of the subscription period when possible and a subsequent announcement confirming the details of the event (including the date of implementation) will be made as soon as the results are available.

Both primary equity offerings and secondary offerings for U.S. securities, representing at least 5% of the security's number of shares, will be confirmed through an announcement during market hours for next day or shortly after implementation, as the completion of the events cannot be confirmed prior to the notification of the pricing.

Early deletions of constituents due to bankruptcy or other significant cases are announced as soon as practicable prior to their implementation.

***Early deletions of constituents due to bankruptcy or other significant cases are announced as soon as practicable prior to their implementation.***

## Index Calculation

### *Price Index Level*

The MSCI Indices are calculated using the Laspeyres' concept of a weighted arithmetic average together with the concept of chain-linking. As a general principle, today's index level is obtained by applying the change in the market performance to the previous period index level.

$$\begin{aligned} PriceIndexLevelUSD_t &= PriceIndexLevelUSD_{t-1} \times \frac{IndexAdjustedMarketCapUSD_t}{IndexInitialMarketCapUSD_t} \\ PriceIndexLevelLocal_t &= PriceIndexLevelLocal_{t-1} \times \frac{IndexAdjustedMarketCapForLocal_t}{IndexInitialMarketCapUSD_t} \end{aligned}$$

Where:

- $PriceIndexLevelUSD_{t-1}$  is the Price Index level in USD at time t-1
- $IndexAdjustedMarketCapUSD_t$  is the Adjusted Market Capitalization of the index in USD at time t
- $IndexInitialMarketCapUSD_t$  is the Initial Market Capitalization of the index in USD at time t
- $PriceIndexLevelLocal_{t-1}$  is the Price Index level in local currency at time t-1
- $IndexAdjustedMarketCapForLocal_t$  is the Adjusted Market Capitalization of the index in USD converted using FX rate as of t-1 and used for local currency index at time t

Note:  $IndexInitialMarketCapUSD$  was previously called  $IndexUnadjustedMarketCapPreviousUSD$

Security Price Index Level

$$SecurityPriceIndexLevel_t = SecurityPriceIndexLevel_{t-1} \times \frac{SecurityAdjustedMarketCapForLocal_t}{SecurityInitialMarketCapUSD_t}$$

$SecurityAdjustedMarketCapForLocal_t =$

$$\frac{IndexNumberOfShares_{t-1} \times PricePerShare_t \times InclusionFactor_t \times PAF_t}{FXrate_{t-1}} \times \frac{ICI_t}{ICI_{t-1}}$$

$$SecurityInitialMarketCapUSD_t = \frac{IndexNumberOfShares_{t-1} \times PricePerShare_{t-1} \times InclusionFactor_t}{FXrate_{t-1}}$$

Where:

- $SecurityPriceIndexLevel_{t-1}$  is Security Price Index level at time t-1
- $SecurityAdjustedMarketCapForLocal_t$  is the Adjusted Market Capitalization of security s in USD converted using FX rate as of t-1
- $SecurityInitialMarketCapUSD_t$  is the Initial Market Capitalization of security s in USD at time t
- $IndexNumberOfShares_{t-1}$  is the number of shares of security s at time t-1.
- $PricePerShare_t$  is the price per share of security s at time t.
- $PricePerShare_{t-1}$  is the price per share of security s at time t-1.
- $InclusionFactor_t$  is the inclusion factor of security s at time t. The inclusion factor can be one or the combination of the following factors: Foreign Inclusion Factor, Domestic Inclusion Factor, Growth Inclusion Factor, Value Inclusion Factor, Index Inclusion Factor.
- $PAF_t$  is the Price Adjustment Factor of security s at time t.

- $FXrate_{t-1}$  is the FX rate of the price currency of security s vs USD at time t-1. It is the value of 1 USD in foreign currency.
- $ICI_t$  is the Internal Currency Index of price currency at time t. The ICI is different than 1 when a country changes the internal value of its currency (e.g. from Turkish Lira to New Turkish Lira – ICI = 1,000,000).
- $ICI_{t-1}$  is the Internal Currency Index of price currency at time t-1.
- Index Market Capitalization

$IndexAdjustedMarketCapUSD_t =$

$$\sum_{s \in I, t} \frac{IndexNumberOfShares_{t-1} \times PricePerShare_t \times InclusionFactor_t \times PAF_t}{FXrate_t}$$

$IndexAdjustedMarketCapForLocal_t =$

$$\sum_{s \in I, t} \frac{IndexNumberOfShares_{t-1} \times PricePerShare_t \times InclusionFactor_t \times PAF_t}{FXrate_{t-1}} \times \frac{ICI_t}{ICI_{t-1}}$$

$IndexInitialMarketCapUSD_t =$

$$\sum_{s \in I, t} \frac{IndexNumberOfShares_{t-1} \times PricePerShare_t \times InclusionFactor_t}{FXrate_{t-1}}$$

Where:

- $IndexNumberOfShares_{t-1}$  is the number of shares of security s at time t-1.
- $PricePerShare_t$  is the price per share of security s at time t.
- $PricePerShare_{t-1}$  is the price per share of security s at time t-1.
- $InclusionFactor_t$  is the inclusion factor of security s at time t. The inclusion factor can be one or the combination of the following factors: Foreign Inclusion Factor, Domestic Inclusion Factor Growth Inclusion Factor, Value Inclusion Factor, Index Inclusion Factor.
- $PAF_t$  is the Price Adjustment Factor of security s at time t.
- $FXrate_t$  is the FX rate of the price currency of security s vs USD at time t. It is the value of 1 USD in foreign currency.
- $FXrate_{t-1}$  is the FX rate of the price currency of security s vs USD at time t-1. It is the value of 1 USD in foreign currency.
- $ICI_t$  is the Internal Currency Index of price currency at time t. The ICI is different than 1 when a country changes the internal value of its currency (e.g. from Turkish Lira to New Turkish Lira – ICI = 1,000,000).
- $ICI_{t-1}$  is the Internal Currency Index of price currency at time t-1.

## ***Corporate Events***

### ***Mergers and Acquisitions***

As a general principle, MSCI implements M&As as of the close of the last trading day of the acquired entity or merging entities (last offer day for tender offers), regardless of the status of the securities (index constituents or non-index constituents) involved in the event. MSCI uses market prices for implementation. This principle applies if all necessary information is available prior to the completion of the event and if the liquidity of the relevant constituent(s) is not expected to be significantly diminished on the day of implementation. Otherwise, MSCI will determine the most appropriate implementation method and announce it prior to the changes becoming effective in the indices.

### ***Tender Offers***

In tender offers, the acquired or merging security is generally deleted from the applicable MSCI Indices at the end of the initial offer period, when the offer is likely to be successful and / or if the free float of the security is likely to be substantially reduced (this rule is applicable even if the offer is extended), or once the results of the offer have been officially communicated and the offer has been successful and the security's free float has been substantially reduced, if all required information is not available in advance or if the offer's outcome is uncertain. The main factors considered by MSCI when assessing the outcome of a tender offer (not in order of importance) are: the announcement of the offer as friendly or hostile, a comparison of the offer price to the acquired security's market price, the recommendation by the acquired company's board of directors, the major shareholders' stated intention whether to tender their shares, the required level of acceptance, the existence of pending regulatory approvals, market perception of the transaction, official preliminary results if any, and other additional conditions for the offer.

In certain cases, securities may be deleted earlier than the last offer day. For example, in the case of tender offers in the United Kingdom, a security is typically deleted two business days after the offer is declared unconditional in all respects.

If a security is deleted from an index, the security will not be reinstated immediately after its deletion even when the tender offer is subsequently declared unsuccessful and/or the free float of the security is not substantially reduced. It may be reconsidered for index inclusion in the context of a quarterly index review or annual full country index review. MSCI uses market prices for implementation.

### ***Late Announcements of Completion of Mergers and Acquisitions***

When the completion of an event is announced too late to be reflected as of the close of the last trading day of the acquired or merging entities, implementation occurs as of the close of the following day or as soon as practicable thereafter. In these cases, MSCI uses a calculated price for the acquired or merging entities. The calculated price is determined using the terms of the transaction and the price of the acquiring or merged entity, or, if not appropriate, using the last trading day's market price of the acquired or merging entities.

### ***Conversions of Share Classes***

Conversions of a share class into another share class resulting in the deletion and/or addition of one or more classes of shares are implemented as of the close of the last trading day of the share class to be converted.

### *Spin-Offs*

On the ex-date of a spin-off, a PAF is applied to the price of the security of the parent company. The PAF is calculated based on the terms of the transaction and the market price of the spun-off security. If the spun-off entity qualifies for inclusion, it is included as of the close of its first trading day. If appropriate, MSCI may link the price history of the spun-off security to a security of the parent company.

In cases of spin-offs of partially-owned companies, the post-event free float of the spun-off entity is calculated using a weighted average of the existing shares and the spun-off shares, each at their corresponding free float. Any resulting changes to FIFs and/or DIFs are implemented as of the close of the ex-date.

When the spun-off security does not trade on the ex-date, a “detached” security is created to avoid a drop in the free float-adjusted market capitalization of the parent entity, regardless of whether the spun-off security is added or not. The detached security is included until the spun-off security begins trading, and is deleted thereafter. Generally, the value of the detached security is equal to the difference between the cum price and the ex price of the parent security.

### *Corporate Actions*

Corporate actions such as splits, bonus issues and rights issues, which affect the price of a security, require a price adjustment. In general, the PAF is applied on the ex-date of the event to ensure that security prices are comparable between the ex-date and the cum date. To do so, MSCI adjusts for the value of the right and/or the value of the special assets that are distributed. In general, corporate actions do not impact the free float of the securities because the distribution of new shares is carried out on a pro rata basis to all existing shareholders. Therefore, MSCI will generally not implement any pending number of shares and/or free float updates simultaneously with the event.

If a security does not trade for any reason on the ex-date of the corporate action, the event will be generally implemented on the day the security resumes trading.

### *Share Placements and Offerings*

Changes in number of shares and FIF resulting from primary equity offerings representing more than 5% of the security's number of shares are generally implemented as of the close of the first trading day of the new shares, if all necessary information is available at that time. Otherwise, the event is implemented as soon as practicable after the relevant information is made available. A primary equity offering involves the issuance of new shares by a company. Changes in number of shares and FIF resulting from primary equity offerings representing less than 5% of the security's number of shares are deferred to the next regularly scheduled Quarterly Index Review following the completion of the event. For public secondary offerings of existing constituents representing more than 5% of the security's number of shares, where possible, MSCI will announce these changes and reflect them shortly after the results of the subscription are known. Secondary public offerings that, given lack of sufficient notice, were not reflected immediately will be reflected at the next Quarterly Index Review. Secondary offerings involve the distribution of existing shares of current shareholders' in a listed company and are usually pre-announced by a company or by a company's shareholders and open for public subscription during a pre-determined period.

### *Debt-to-Equity Swaps*

In general, large debt-to-equity swaps involve the conversion of debt into equity originally not convertible at the time of issue. In this case, changes in numbers of shares and subsequent FIF and/or DIF changes are implemented as of the close of the first trading day of the newly issued shares, or shortly thereafter if all necessary information is available at the time of the swap. In general, shares issued in debt-to-equity swaps are assumed to be issued to strategic investors. As such, the post event free float is calculated on a pro forma basis assuming that all these shares are non-free float. Changes in numbers of shares and subsequent FIF and/or DIF changes due to conversions of convertible bonds or other convertible instruments, including periodical conversions of preferred stocks and small debt-to-equity swaps are implemented as part of the quarterly index review.

### *Suspensions and Bankruptcies*

MSCI will remove from the MSCI Indices as soon as practicable companies that file for bankruptcy, companies that file for protection from their creditors and/or are suspended and for which a return to normal business activity and trading is unlikely in the near future. When the primary exchange price is not available, MSCI will delete securities at an over the counter or equivalent market price when such a price is available and deemed relevant. If no over the counter or equivalent price is available, the security will be deleted at the smallest price (unit or fraction of the currency) at which a security can trade on a given exchange. For securities that are suspended, MSCI will carry forward the market price prior to the suspension during the suspension period.

### **The MSCI Indices Are Subject to Currency Exchange Risk**

Because the closing prices of the component securities of the MSCI Indices are converted into U.S. dollars for purposes of calculating the value of the MSCI Indices, investors in the notes will be exposed to currency exchange rate risk with respect to each of the currencies in which the component securities of the applicable MSCI Indices trade. Exposure to currency changes will depend on the extent to which such currencies strengthen or weaken against the U.S. dollar and the relative weight of the component securities in the applicable MSCI Indices denominated in each such currency. The devaluation of the U.S. dollar against the currencies in which the Component Securities trade will result in an increase in the value of the applicable MSCI Indices. Conversely, if the U.S. dollar strengthens against such currencies, the values of the applicable MSCI Indices will be adversely affected and may reduce or eliminate the payment at maturity, if any, on the notes. Fluctuations in currency exchange rates can have a continuing impact on the value of the applicable MSCI Indices, and any negative currency impact on such MSCI Indices may significantly decrease the value of the notes. The return on an index composed of the component securities of the applicable MSCI Indices where the closing price is not converted into U.S. dollars can be significantly different from the return on such MSCI Indices which is converted into U.S. dollars.

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## BACKGROUND ON THE CBOE VOLATILITY INDEX®

Payment on the notes linked to the J.P. Morgan Alternative Index Short Volatility US Strategy is linked to a synthetic long exposure to the performance of the CBOE Volatility Index®. We have derived all information contained in this product supplement regarding the CBOE Volatility Index® (the "VIX Index") including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information. Such information reflects the policies of, and is subject to change by, the Chicago Board Options Exchange, Incorporated ("CBOE".) We make no representation or warranty as to the accuracy or completeness of such information. The VIX Index was developed by the CBOE and is calculated, maintained and published by the CBOE. The CBOE has no obligation to continue to publish, and may discontinue the publication of, the VIX Index.

The VIX Index is reported by Bloomberg L.P. under the ticker symbol "VIX."

### Index Overview

The VIX Index is a benchmark index that measures the 30-day expected market volatility in the U.S. stock market as implied in the prices of put and call options on the S&P 500® Index. The VIX Index is designed to be a measure of implied volatility in the market based on option and market theories the general contention of which is that, during periods of time preceding market instability, the prices of options increase.

The calculation of the VIX Index involves a formula that uses the prices of a weighted series of out-of-the money put and call options on the performance of the S&P 500® Index ("SPX Options") with two adjacent expiry terms to derive a constant 30-day measure of expected market volatility. The VIX Index is calculated independent of any particular option pricing model.

### Calculation of the VIX Index Level

Although the VIX Index Level measures the 30-day expected volatility of the S&P 500® Index as implied by the SPX Options, 30-day options are not usually available. To arrive at the VIX Index Level, a broad range of out-of-the money SPX Options expiring on the two closest nearby months ("near term options" and "next term options," respectively) are selected. SPX Options having a maturity of less than eight days are excluded at the outset. The implied volatility of the near term options and next term options are then estimated on a price-weighted average basis in order to arrive at a single average implied volatility value for each month. The results of each of the two months are then interpolated (or extrapolated, if necessary) to arrive at a single value with a constant maturity of 30 days to expiration. The VIX Index Level is expressed in percentage points.

Stock indices, such as the S&P 500® Index, are calculated using the prices of their component stocks. Each index employs rules that govern the selection of component securities and a formula to calculate index values. The VIX Index is a volatility index comprised of options rather than stocks, with the price of each option reflecting the market's expectation of future volatility. Like conventional indices, the VIX Index employs rules for selecting component options and a formula to calculate index values.

The generalized formula used in the VIX Index Level calculation:

$$\sigma^2 = \frac{2}{T} \sum_i \frac{\Delta K_i}{K_i^2} e^{RT} Q(K_i) - \frac{1}{T} \left[ \frac{F}{K_0} - 1 \right]^2$$

where:

$\sigma$ is	VIX Index Level/100 $\Rightarrow$ VIX Index Level = $\sigma \times 100$
T	Time to expiration
F	Forward index level derived from index option prices
$K_0$	First strike below the forward index level, F
$K_i$	Strike price of $i^{\text{th}}$ out-of-the-money option; a call if $K_i > K_0$ and a put if $K_i < K_0$ ; both put and call if $K_i = K_0$ .
$\Delta K_i$	Interval between strike prices - half the distance between the strike on either side of $K_i$

$$\Delta K_i = \frac{K_{i+1} - K_{i-1}}{2}$$

(Note:  $\Delta K$  for the lowest strike is simply the difference between the lowest strike and the next higher strike. Likewise,  $\Delta K$  for the highest strike is the difference between the highest strike and the next lower strike.)

R	Risk-free interest rate to expiration
$Q(K_i)$	The midpoint of the bid-ask spread for each option with strike $K_i$

### Hypothetical Calculation of VIX Index Level

The following example illustrates how the VIX Index Level may be calculated in a hypothetical scenario.

#### ***Getting Started***

The VIX Index measures 30-day expected volatility of the S&P 500® Index. The components of the VIX Index are near- and next-term put and call options, usually in the first and second SPX Option contract months. "Near-term" options must have at least one week to expiration; a requirement intended to minimize pricing anomalies that might occur close to expiration. When the near-term options have less than a week to expiration, the VIX Index "rolls" to the second and third SPX Option contract months. For example, on the second Friday in June, the VIX Index would be calculated using SPX options expiring in June and July. On the following Monday, July would replace June as the "near-term" and August would replace July as the "next-term."

In this hypothetical example, the near-term and next-term options have 9 days and 37 days to expiration, respectively, and reflect prices observed at the open of trading – 8:30 a.m. Chicago time. For the purpose of calculating time to expiration, SPX Options are deemed to "expire" at the open of trading on SPX Option settlement day - the third Friday of the month.

Technically, the expiration date for the SPX Options is the "Saturday following the third Friday of the expiration month." In this example, however, expiration is deemed to take place at the determination of the exercise settlement value of the SPX Option, which is based on the opening prices of component securities of the S&P 500® Index.

The VIX Index calculation measures time to expiration, T, in calendar days and divides each day into minutes in order to replicate the precision that is commonly used by professional option and volatility traders. The time to expiration is given by the following expression:

$$T = \{M_{\text{Current day}} + M_{\text{Settlement day}} + M_{\text{Other days}}\} / \text{Minutes in a year}$$

where:

$M_{\text{Current day}}$  = number of minutes remaining until midnight of the current day

$M_{\text{Settlement day}}$  = number of minutes from midnight until 8:30 a.m. on SPX settlement day

$M_{\text{Other days}}$  = total number of minutes in the days between current day and settlement day

Using 8:30 a.m. as the time of the calculation, T for the near-term and next-term options, T1 and T2, respectively, is:

$$T1 = \{930 + 510 + 11,520\} / 525,600 = \mathbf{0.0246575}$$

$$T2 = \{930 + 510 + 51,840\} / 525,600 = \mathbf{0.1013699}$$

The risk-free interest rate, R, is the bond-equivalent yield of the U.S. T-bill maturing closest to the expiration dates of relevant SPX options. As such, the VIX Index calculation may use different risk-free interest rates for near- and next-term options. In this example, however, assume that R = 0.38% for both sets of options.

Since many of the interim calculations are repetitive, only representative samples appear below.

### ***Step 1 – Select the options to be used in the VIX Index Level calculation***

The selected options are out-of-the-money SPX calls and out-of-the-money SPX puts centered around an at-the-money strike price,  $K_0$ . Only SPX Options quoted with non-zero bid prices are used in the VIX Index Level calculation.

As volatility rises and falls, the strike price range of options with nonzero bids tends to expand and contract. As a result, the number of options used in the VIX Index Level calculation may vary from month-to-month, day-to-day and possibly, even minute-to-minute.

For each contract month:

- Determine the forward SPX level, F, by identifying the strike price at which the absolute difference between the call and put prices is smallest. The call and put prices in the following table reflect the average of each option's bid / ask quotation. As shown below, the difference between the call and put prices is smallest at the **920** strike for both the near- and next-term options.

Near Term Options				Next Term Options			
Strike Price	Call	Put	Absolute Difference	Strike Price	Call	Put	Absolute Difference
900	48.95	27.25	21.70	900	73.6	52.8	20.80
905	46.15	29.75	16.40	905	70.35	54.7	15.65

Near Term Options				Next Term Options			
Strike Price	Call	Put	Absolute Difference	Strike Price	Call	Put	Absolute Difference
910	42.55	31.70	10.85	910	67.35	56.75	10.60
915	40.05	33.55	6.50	915	64.75	58.9	5.85
<b>920</b>	<b>37.15</b>	<b>36.65</b>	<b>0.50</b>	<b>920</b>	<b>61.55</b>	<b>60.55</b>	<b>1.00</b>
925	33.30	37.70	4.40	925	58.95	63.05	4.10
930	32.45	40.15	7.70	930	55.75	65.4	9.65
935	28.75	42.70	13.95	935	53.05	67.35	14.30
940	27.50	45.30	17.80	940	50.15	69.8	19.65

Using the 920 call and put options in each contract month and the formula,

$$F = \text{Strike Price} + e^{RT} \times (\text{Call Price} - \text{Put Price})$$

the forward index prices  $F_1$  and  $F_2$ , for the near-term and next-term options, respectively, are:

$$F_1 = 920 + e^{(0.0038 \times 0.0246575)} \times (37.15 - 36.65) = \mathbf{920.50005}$$

$$F_2 = 920 + e^{(0.0038 \times 0.1013699)} \times (61.55 - 60.55) = \mathbf{921.00039}$$

- Next, determine  $K_0$  - the strike price immediately below the forward index level,  $F$  - for the near- and next-term options. In this example,  $K_{0,1} = 920$  and  $K_{0,2} = 920$ .
- Select out-of-the-money put options with strike prices  $< K_0$ . Start with the put strike immediately lower than  $K_0$  and move to successively lower strike prices. Exclude any put option that has a bid price equal to zero (i.e., no bid). As shown below, once two puts with consecutive strike prices are found to have zero bid prices, no puts with lower strikes are considered for inclusion.

Put Strike	Bid	Ask	Include?
200	0.00	0.05	<i>Not considered following two zero bids</i>
250	0.00	0.05	
300	0.00	0.05	
350	0.00	0.05	No
375	0.00	0.10	No
400	0.05	0.20	Yes
425	0.05	0.20	Yes
450	0.05	0.20	Yes

- Next, select out-of-the-money call options with strike prices  $> K_0$ . Start with the call strike immediately higher than  $K_0$  and move to successively higher strike prices, excluding call options that have a bid price of zero. As with the puts, once two consecutive call options are found to have zero bid prices, no calls with higher strikes are considered. (Note that the 1250 call option is not included despite having a nonzero bid price.)

Call Strike	Bid	Ask	Include?
1215	0.05	0.05	Yes
1220	0.05	1.00	Yes

Call Strike	Bid	Ask	Include?
1225	0.00	1.00	No
1230	0.00	1.00	No
1235	0.00	0.75	
1240	0.05	0.50	
1245	0.05	0.15	<i>Not considered following two zero bids</i>
<b>1250</b>	<b>0.05</b>	<b>0.10</b>	
1255	0.00	1.00	

- Finally, select both the put and call with strike price  $K_0$ . Notice that two options are selected at  $K_0$ , while a single option, either a put or a call, is used for every other strike price.

The following table contains the options used to calculate the VIX Index Level in this example. The VIX Index Level uses the average of quoted bid and ask, or mid-quote, prices for each option selected. The  $K_0$  put and call prices are averaged to produce a single value. The price used for the 920 strike in the near-term is, therefore,  $(37.15 + 36.65)/2 = 36.90$ ; and the price used in the next-term is  $(61.55 + 60.55)/2 = 61.05$ .

Near term Strike	Option Type	Mid-quote price	Next term Strike	Option Type	Mid-quote Price
400	Put	0.125	200	Put	0.325
425	Put	0.125	300	Put	0.30
450	Put	0.125	350	Put	0.50
-	-	-	-	-	-
910	Put	31.70	910	Put	56.75
915	Put	33.55	915	Put	58.90
<b>920</b>	<b>Put/Call Average</b>	<b>36.90</b>	<b>920</b>	<b>Put/Call Average</b>	<b>61.05</b>
925	Call	33.30	925	Call	58.95
930	Call	32.45	950	Call	55.75
-	-	-	-	-	-
1210	Call	0.275	1150	Call	0.825
1215	Call	0.275	1155	Call	0.725
1220	Call	0.525	1160	Call	0.60

**Step 2: Calculate the volatility for both near term and next term options**

Applying the VIX Index formula described under “—Calculation of the VIX Index Level” to the near-term and next-term options with time to expiration of  $T_1$  and  $T_2$ , respectively, yields:

$$\sigma^2_{T_1} = \frac{2}{T_1} \sum_i \frac{\Delta K_i}{K_i^2} e^{RT_1} Q(K_i) - \frac{1}{T_1} \left[ \frac{F_1}{K_0} - 1 \right]^2$$

$$\sigma^2_{T_2} = \frac{2}{T_2} \sum_i \frac{\Delta K_i}{K_i^2} e^{RT_2} Q(K_i) - \frac{1}{T_2} \left[ \frac{F_2}{K_0} - 1 \right]^2$$

The VIX Index is an amalgam of the information reflected in the prices of all of the selected options. The contribution of a single option to the VIX Index value is proportional to  $\Delta K$  and the price of that option, and inversely proportional to the square of the option's strike price.

Generally,  $\Delta K_i$  is half the distance between the strike prices on either side of  $K_i$ . For example,  $\Delta K$  for the next-term 300 Put is 75:  $\Delta K_{300 \text{ Put}} = (350 - 200)/2$ . At the upper and lower edges of any given strip of options,  $\Delta K_i$  is simply the difference between  $K_i$  and the adjacent strike price. In this example, the 400 Put is the lowest strike in the strip of near-term options and 425 is the adjacent strike price. Therefore,  $\Delta K_{400 \text{ Put}} = 25$  (i.e.,  $425 - 400$ ).

The contribution of the near-term 400 Put is given by:

$$\frac{\Delta K_{400 \text{ Put}}}{K_{400 \text{ Put}}^2} e^{RT_1} Q(400 \text{ Put})$$

$$\frac{\Delta K_{400 \text{ Put}}}{K_{400 \text{ Put}}^2} e^{RT_1} Q(400 \text{ Put}) = \frac{25}{400^2} e^{(0.0038 \times 0.0246575)} (0.125) = 0.0000195$$

A similar calculation is performed for each option. The resulting values for the near-term options are then summed and multiplied by  $2/T_1$ . Likewise, the resulting values for the next-term options are summed and multiplied by  $2/T_2$ . The table below summarizes the results for each strip of options in our example:

Near term Strike	Option Type	Mid-quote Price	Contribution by Strike	Next term Strike	Option Type	Mid-quote Price	Contribution by Strike
400	Put	0.125	0.0000195	200	Put	0.325	0.0008128
425	Put	0.125	0.0000173	300	Put	0.300	0.0002501
450	Put	0.125	0.0000139	350	Put	0.500	0.0001531
-	-	-	-	-	-	-	-
910	Put	31.70	0.0001914	910	Put	56.75	0.0003428
915	Put	33.55	0.0002004	915	Put	58.90	0.0003519
<b>920</b>	<b>Put/Call Average</b>	<b>36.90</b>	<b>0.0002180</b>	<b>920</b>	<b>Put/Call Average</b>	<b>61.05</b>	<b>0.0003608</b>
925	Call	33.30	0.0001946	925	Call	58.95	0.0003446
930	Call	32.45	0.0001876	930	Call	55.75	0.0003224
-	-	-	-	-	-	-	-
1210	Call	0.275	0.0000009	1150	Call	0.825	0.0000031
1215	Call	0.275	0.0000009	1155	Call	0.725	0.0000027
1220	Call	0.525	0.0000018	1160	Call	0.600	0.0000022
$\frac{2}{T} \sum_i \frac{\Delta K_i}{K_i^2} e^{RT} Q(K_i) = 0.4727799$				$\frac{2}{T} \sum_i \frac{\Delta K_i}{K_i^2} e^{RT} Q(K_i) = 0.3668297$			

Next, calculate  $\frac{1}{T} \left[ \frac{F}{K_0} - 1 \right]^2$  for the near term ( $T_1$ ) and next term ( $T_2$ ):

$$\frac{1}{T_1} \left[ \frac{F_1}{K_0} - 1 \right]^2 = \frac{1}{0.0246575} \left[ \frac{920.50005}{920} - 1 \right]^2 = 0.0000120$$

$$\frac{1}{T_2} \left[ \frac{F_2}{K_0} - 1 \right]^2 = \frac{1}{0.1013699} \left[ \frac{921.00039}{920} - 1 \right]^2 = 0.0000117$$

Now calculate  $\sigma^2_1$  and  $\sigma^2_2$ :

$$\sigma^2_1 = \frac{2}{T_1} \sum_i \frac{\Delta K_i}{K_i^2} e^{RT_1} Q(K_i) - \frac{1}{T_1} \left[ \frac{F_1}{K_0} - 1 \right]^2 = 0.4727799 - 0.0000120 = \mathbf{0.4727679}$$

$$\sigma^2_2 = \frac{2}{T_2} \sum_i \frac{\Delta K_i}{K_i^2} e^{RT_2} Q(K_i) - \frac{1}{T_2} \left[ \frac{F_2}{K_0} - 1 \right]^2 = 0.3668297 - 0.0000117 = \mathbf{0.3668180}$$

**Step 3: Calculate the 30-day weighted average of  $\sigma^2_1$  and  $\sigma^2_2$ . Then take the square root of that value and multiply by 100 to get the VIX Index Level**

$$VIX \text{ Index Level} = 100 \times \sqrt{\left\{ T_1 \sigma^2_1 \left[ \frac{N_{T_2} - N_{30}}{N_{T_2} - N_{T_1}} \right] + T_2 \sigma^2_2 \left[ \frac{N_{30} - N_{T_1}}{N_{T_2} - N_{T_1}} \right] \right\} \times \frac{N_{365}}{N_{30}}}$$

When the near-term options have less than 30 days to expiration and the next-term options have more than 30 days to expiration, the resulting VIX Index value reflects an interpolation of  $\sigma^2_1$  and  $\sigma^2_2$ ; i.e., each individual weight is less than or equal to 1 and the sum of the weights equals 1.

At the time of the VIX Index "roll," both the near-term and next-term options have more than 30 days to expiration. The same formula is used to calculate the 30-day weighted average, but the result is an extrapolation of  $\sigma^2_1$  and  $\sigma^2_2$ ; i.e., the sum of the weights is still 1, but the near-term weight is greater than 1 and the next-term weight is negative (e.g., 1.25 and -0.25).

Returning to the example...

$N_{T_1}$  = number of minutes to expiration of the near term options (12,960)

$N_{T_2}$  = number of minutes to expiration of the next term options (53,280)

$N_{30}$  = number of minutes in 30 days (30 x 1,440 = 43,200)

$N_{365}$  = number of minutes in a 365-day year (365 x 1,440 = 525,600)

VIX Index Level =

$$100 \times \sqrt{\left\{ 0.0246575 \times 0.4727679 \times \left[ \frac{53,280 - 43,200}{53,280 - 12,960} \right] + 0.1013699 \times 0.3668180 \times \left[ \frac{43,200 - 12,960}{53,280 - 12,960} \right] \right\} \times \frac{525,600}{43,200}}$$

$$VIX \text{ Index Level} = 100 \times 0.612179986 = 61.22$$

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## BACKGROUND ON THE S&P 500® INDEX

Payment on the notes linked to the J.P. Morgan Alternative Index US Equity Momentum Strategy, the J.P. Morgan Alternative Index Equity Small Cap Carry Strategy, the J.P. Morgan Alternative Index Mean Reversion US Strategy (each strategy linked to the J.P. Morgan US Equity Futures (G) Tracker, which is directly linked to the S&P 500® Index) and the J.P. Morgan Alternative Index Short Volatility US Strategy are linked to a synthetic exposure to the performance of the S&P 500® Index. We have derived all information contained in this product supplement regarding the S&P 500® Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information. Such information reflects the policies of, and is subject to change by, Standard & Poor's, a division of The McGraw-Hill Companies, Inc. ("S&P"). We make no representation or warranty as to the accuracy or completeness of such information. The S&P 500® Index was developed by S&P and is calculated, maintained and published by S&P. S&P has no obligation to continue to publish, and may discontinue the publication of, the S&P 500® Index.

The S&P 500® Index is reported by Bloomberg L.P. under the ticker symbol "SPX."

The S&P 500® Index is intended to provide a performance benchmark for the U.S. equity markets. The calculation of the level of the S&P 500® Index (discussed below in further detail) is based on the relative value of the aggregate Market Value (as defined below) of the common stocks of 500 companies (the "S&P Component Stocks") as of a particular time as compared to the aggregate average Market Value of the common stocks of 500 similar companies during the base period of the years 1941 through 1943. Historically, the "Market Value" of any S&P Component Stock was calculated as the product of the market price per share and the number of the then-outstanding shares of such S&P Component Stock. As discussed below, on March 21, 2005, S&P began to use a new methodology to calculate the Market Value of the S&P Component Stocks and on September 16, 2005, S&P completed its transition to the new calculation methodology. The 500 companies are not the 500 largest companies listed on the New York Stock Exchange (the "NYSE") and not all 500 companies are listed on such exchange. S&P chooses companies for inclusion in the S&P 500® Index with the objective of achieving a distribution by broad industry groupings that approximates the distribution of these groupings in the common stock population of the U.S. equity market. S&P may from time to time, in its sole discretion, add companies to, or delete companies from, the S&P 500® Index to achieve the objectives stated above. Relevant criteria employed by S&P include the viability of the particular company, the extent to which that company represents the industry group to which it is assigned, the extent to which the company's common stock is widely-held and the Market Value and trading activity of the common stock of that company.

On March 21, 2005, S&P began to calculate the S&P 500® Index based on a half float-adjusted formula, and on September 16, 2005, the S&P 500® Index became fully float-adjusted. S&P's criteria for selecting stocks for the S&P 500® Index was not changed by the shift to float adjustment. However, the adjustment affects each company's weight in the S&P 500® Index (*i.e.*, its Market Value).

Under float adjustment, the share counts used in calculating the S&P 500® Index reflect only those shares that are available to investors, not all of a company's outstanding shares. S&P defines three groups of shareholders whose holdings are subject to float adjustment:

- holdings by other publicly traded corporations, venture capital firms, private equity firms, strategic partners, or leveraged buyout groups;
- holdings by government entities, including all levels of government in the United States or foreign countries; and
- holdings by current or former officers and directors of the company, founders of the company or family trusts of officers, directors or founders, as well as holdings of trusts, foundations, pension funds, employee stock ownership plans, or other investment vehicles associated with and controlled by the company.

However, treasury stock, stock options, restricted shares, equity participation units, warrants, preferred stock, convertible stock and rights are not part of the float. In cases where holdings in a group exceed 10% of the outstanding shares of a company, the holdings of that group will be excluded from the float-adjusted count of shares to be used in the S&P 500® Index calculation. Mutual funds, investment advisory firms, pension funds or foundations not associated with the company and investment funds in insurance companies, shares of a U.S. company traded in Canada as “exchangeable shares,” shares that trust beneficiaries may buy or sell without difficulty or significant additional expense beyond typical brokerage fees, and, if a company has multiple classes of stock outstanding, shares in an unlisted or non-traded class if such shares are convertible by shareholders without undue delay and cost, are also part of the float.

For each stock, an investable weight factor (“IWF”) is calculated by dividing the available float shares, defined as the total shares outstanding less shares held in one or more of the three groups listed above where the group holdings exceed 10% of the outstanding shares, by the total shares outstanding. (On March 21, 2005, the S&P 500® Index moved halfway to float adjustment, meaning that if a stock has an IWF of 0.80, the IWF used to calculate the S&P 500® Index between March 21, 2005 and September 16, 2005 was 0.90. On September 16, 2005, S&P began to calculate the S&P 500® Index on a fully float-adjusted basis, meaning that if a stock has an IWF of 0.80, the IWF used to calculate the S&P 500® Index on and after September 16, 2005 is 0.80.) The float-adjusted Index is calculated by dividing the sum of the IWF multiplied by both the price and the total shares outstanding for each stock by the Index Divisor. For companies with multiple classes of stock, S&P calculates the weighted average IWF for each stock using the proportion of the total company market capitalization of each share class as weights.

As of the date of this product supplement, the S&P 500® Index is calculated using a base-weighted aggregate methodology: the level of the S&P 500® Index reflects the total Market Value of all 500 S&P Component Stocks relative to the S&P 500® Index’s base period of 1941–43 (the “Base Period”).

An indexed number is used to represent the results of this calculation in order to make the value easier to work with and track over time.

The actual total Market Value of the S&P Component Stocks during the Base Period has been set equal to an indexed value of 10. This is often indicated by the notation 1941–43=10. In practice, the daily calculation of the S&P 500® Index is computed by dividing the total Market Value of the S&P Component Stocks by a number called the Index Divisor. By itself, the Index Divisor is an arbitrary number. However, in the context of the calculation of the S&P 500® Index, it is the only link to the original Base Period level of the S&P 500® Index. The Index Divisor keeps the S&P 500® Index comparable over time and is the manipulation point for all adjustments to the S&P 500® Index (“Index Maintenance”).

Index Maintenance includes monitoring and completing the adjustments for company additions and deletions, share changes, stock splits, stock dividends and stock price adjustments due to company restructurings or spin-offs.

To prevent the level of the S&P 500® Index from changing due to corporate actions, all corporate actions which affect the total Market Value of the S&P 500® Index require an Index Divisor adjustment. By adjusting the Index Divisor for the change in total Market Value, the level of the S&P 500® Index remains constant. This helps maintain the level of the S&P 500® Index as an accurate barometer of stock market performance and ensures that the movement of the S&P 500® Index does not reflect the corporate actions of individual companies in the S&P 500® Index. All Index Divisor adjustments are made after the close of trading and after the calculation of the closing levels of the S&P 500® Index. Some corporate actions, such as stock splits and stock dividends, require simple changes in the common shares outstanding and the stock prices of the companies in the S&P 500® Index and do not require Index Divisor adjustments.

The table below summarizes the types of Index maintenance adjustments and indicates whether or not an Index Divisor adjustment is required.

Type of Corporate Action	Comments	Divisor Adjustment
Company added/deleted	Net change in market value determines divisor adjustment.	Yes
Change in shares outstanding	Any combination of secondary issuance, share repurchase or buy back – share counts revised to reflect change.	Yes
Stock split	Share count revised to reflect new count. Divisor adjustment is not required since the share count and price changes are offsetting.	No
Spin-off	If spun-off company is not being added to the index, the divisor adjustment reflects the decline in index market value ( <i>i.e.</i> , the value of the spun-off unit).	Yes
Spin-off	Spun-off company added to the index, another company removed to keep number of names fixed. Divisor adjustment reflects deletion.	Yes
Change in IWF due to a corporate action or a purchase or sale by an inside holder.	Increasing (decreasing) the IWF increases (decreases) the total market value of the index. The divisor change reflects the change in market value caused by the change to an IWF.	Yes
Special dividend	When a company pays a special dividend the share price is assumed to drop by the amount of the dividend; the divisor adjustment reflects this drop in index market value.	Yes
Rights offering	Each shareholder receives the right to buy a proportional number of additional shares at a set (often discounted) price. The calculation assumes that the offering is fully subscribed. Divisor adjustment reflects increase in market cap measured as the shares issued multiplied by the price paid.	Yes

Stock splits and stock dividends do not affect the Index Divisor, because following a split or dividend, both the stock price and number of shares outstanding are adjusted by S&P so that there is no change in the Market Value of the S&P Component Stock. All stock split and dividend adjustments are made after the close of trading on the day before the ex-date.

Each of the corporate events exemplified in the table requiring an adjustment to the Index Divisor has the effect of altering the Market Value of the S&P Component Stock and consequently of altering the aggregate Market Value of the S&P Component Stocks (the “Post-Event Aggregate Market Value”). In order that the level of the S&P 500® Index (the “Pre-Event Index Value”) not be affected by the altered Market Value (whether increase or decrease) of the affected Component Stock, a new Index Divisor (“New Divisor”) is derived as follows:

$$\frac{\text{Post-Event Aggregate Market Value}}{\text{New Divisor}} = \text{Pre-Event Index Value}$$

$$\text{New Divisor} = \frac{\text{Post-Event Aggregate Market Value}}{\text{Pre-Event Index Value}}$$

A large part of the index maintenance process involves tracking the changes in the number of shares outstanding of each of the S&P 500® Index companies. Four times a year, on a Friday close to the end of each calendar quarter, the share totals of companies in the S&P 500® Index are updated as required by any changes in the number of shares outstanding. After the totals are updated, the Index Divisor is adjusted to compensate for the net change in the total Market Value of the S&P 500® Index. In addition, any changes over 5% in the current common shares outstanding for the S&P 500® Index companies are carefully reviewed on a weekly basis, and when appropriate, an immediate adjustment is made to the Index Divisor.

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## **BACKGROUND ON THE EURO STOXX 50® INDEX**

Payment on the notes linked to the J.P. Morgan Alternative Index European Equity Momentum Strategy and the J.P. Morgan Alternative Index Mean Reversion Europe Strategy are linked to a synthetic exposure to the performance of the J.P. Morgan European Equity Futures (G) Tracker, which is directly linked to the EURO STOXX 50® Index. We have derived all information contained in this product supplement regarding the EURO STOXX 50® Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information. Such information reflects the policies of, and is subject to change by, STOXX Limited. We make no representation or warranty as to the accuracy or completeness of such information. The EURO STOXX 50® Index is calculated, maintained and published by STOXX Limited. STOXX Limited has no obligation to continue to publish, and may discontinue publication of, the EURO STOXX 50® Index.

The EURO STOXX 50® Index is reported by Bloomberg L.P. under the ticker symbol "SX5E."

The EURO STOXX 50® Index was created by STOXX Limited, a joint venture between Deutsche Börse AG and SIX Group AG. Publication of the EURO STOXX 50® Index began on February 26, 1998, based on an initial EURO STOXX 50® Index value of 1,000 at December 31, 1991. The EURO STOXX 50® Index is published in The Wall Street Journal and disseminated on the STOXX Limited website: <http://www.stoxx.com>, which sets forth, among other things, the country and industrial sector weightings of the securities included in the EURO STOXX 50® Index and updates these weightings at the end of each quarter. Information contained in the STOXX Limited website is not incorporated by reference in, and should not be considered a part of, this product supplement or any terms supplement.

On March 1, 2010, STOXX Limited announced the removal of the "Dow Jones" prefix from all of its indices, including the Dow Jones EURO STOXX 50® Index.

### **EURO STOXX 50® Index Composition and Maintenance**

The EURO STOXX 50® Index is composed of 50 component stocks of market sector leaders from within the 19 EURO STOXX® Supersector indices, which represent the Eurozone portion of the STOXX Europe 600® Supersector indices. The STOXX Europe 600® Supersector indices contain the 600 largest stocks traded on the major exchanges of 18 European countries.

The composition of the EURO STOXX 50® Index is reviewed annually, based on the closing stock data on the last trading day in August. The component stocks are announced the first trading day in September. Changes to the component stocks are implemented on the third Friday in September and are effective the following trading day. Changes in the composition of the EURO STOXX 50® Index are made to ensure that the EURO STOXX 50® Index includes the 50 market sector leaders from within the EURO STOXX® Index. A current list of the issuers that comprise the EURO STOXX 50® Index is available on the STOXX Limited website: <http://www.stoxx.com>. Information contained in the STOXX Limited website is not incorporated by reference in, and should not be considered a part of, this product supplement or any terms supplement.

The free float factors for each component stock used to calculate the EURO STOXX 50® Index, as described below, are reviewed, calculated and implemented on a quarterly basis and are fixed until the next quarterly review.

The EURO STOXX 50® Index is also reviewed on an ongoing basis. Corporate actions (including initial public offerings, mergers and takeovers, spin-offs, delistings and bankruptcy) that affect the EURO STOXX 50® Index composition are immediately reviewed. Any changes are announced, implemented and effective in line with the type of corporate action and the magnitude of the effect.

## EURO STOXX 50® Index Calculation

The EURO STOXX 50® Index is calculated with the “Laspeyres formula,” which measures the aggregate price changes in the component stocks against a fixed base quantity weight. The formula for calculating the EURO STOXX 50® Index value can be expressed as follows:

$$\text{Index} = \frac{\text{free float market capitalization of the EURO STOXX 50® Index}}{\text{adjusted base date market capitalization of the EURO STOXX 50® Index}} \times 1,000$$

The “free float market capitalization of the EURO STOXX 50® Index” is equal to the sum of the products of the closing price, market capitalization and free float factor for each component stock as of the time the EURO STOXX 50® Index is being calculated.

The EURO STOXX 50® Index is also subject to a divisor, which is adjusted to maintain the continuity of EURO STOXX 50® Index values despite changes due to corporate actions. The following is a summary of the adjustments to any component stock made for corporate actions and the effect of such adjustment on the divisor, where shareholders of the component stock will receive “B” number of shares for every “A” share held (where applicable).

<p>(1) <i>Split and reverse split:</i></p> <p>Adjusted price = closing price * A/B</p> <p>New number of shares = old number of shares * B/A</p> <p>Divisor: no change</p>	<p>(2) <i>Rights offering:</i></p> <p>Adjusted price = (closing price * A + subscription price * B) / (A + B)</p> <p>New number of shares = old number of shares * (A + B) / A</p> <p>Divisor: increases</p>
<p>(3) <i>Stock dividend:</i></p> <p>Adjusted price = closing price * A / (A + B)</p> <p>New number of shares = old number of shares * (A + B) / A</p> <p>Divisor: no change</p>	<p>(4) <i>Stock dividend of another company:</i></p> <p>Adjusted price = (closing price * A - price of other company * B) / A</p> <p>Divisor: decreases</p>
<p>(5) <i>Return of capital and share consideration:</i></p> <p>Adjusted price = (closing price - dividend announced by company * (1 - withholding tax)) * A / B</p> <p>New number of shares = old number of shares * B / A</p> <p>Divisor: decreases</p>	<p>(6) <i>Repurchase shares / self tender:</i></p> <p>Adjusted price = ((price before tender * old number of shares) - (tender price * number of tendered shares)) / (old number of shares - number of tendered shares)</p> <p>New number of shares = old number of shares - number of tendered shares</p> <p>Divisor: decreases</p>
<p>(7) <i>Spin-off:</i></p> <p>Adjusted price = (closing price * A - price of spun-off shares * B) / A</p> <p>Divisor: decreases</p>	
<p>(8) <i>Combination stock distribution (dividend or split) and rights offering:</i></p>	

<p>For this corporate action, the following additional assumptions apply:  Shareholders receive B new shares from the distribution and C new shares from the rights offering for every A share held.  If A is not equal to one share, all the following "new number of shares" formulae need to be divided by A:</p>	
<p><i>- If rights are applicable after stock distribution (one action applicable to other):</i></p> <p>Adjusted price = (closing price * A + subscription price * C * (1 + B / A)) / ((A + B) * (1 + C / A))</p> <p>New number of shares = old number of shares * ((A + B) * (1 + C / A)) / A</p> <p>Divisor: increases</p>	<p><i>- If stock distribution is applicable after rights (one action applicable to other):</i></p> <p>Adjusted price = (closing price * A + subscription price * C) / ((A + C) * (1 + B / A))</p> <p>New number of shares = old number of shares * ((A + C) * (1 + B / A))</p> <p>Divisor: increases</p>
<p><i>- Stock distribution and rights (neither action is applicable to the other):</i></p> <p>Adjusted price = (closing price * A + subscription price * C) / (A + B + C)</p> <p>New number of shares = old number of shares * (A + B + C) / A</p> <p>Divisor: increases</p>	

### License Agreement with STOXX Limited

We have entered into an agreement with STOXX Limited ("STOXX") providing us and certain of our affiliates or subsidiaries identified in that agreement with a non-exclusive license and, for a fee, with the right to use the EURO STOXX 50® Index, which is owned and published by STOXX Limited, in connection with certain securities, including the notes.

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- The accuracy or completeness of the EURO STOXX 50® Index and its data;
- The merchantability and the fitness for a particular purpose or use of the EURO STOXX 50® Index (Ticker: SX5E) and its data;
- STOXX and its Licensors will have no liability for any errors, omissions or interruptions in the EURO STOXX 50® Index (Ticker: SX5E) or its data;
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The licensing agreement between JPMorgan Chase & Co. and STOXX is solely for their benefit and not for the benefit of the holders of the notes or any other third parties.



## BACKGROUND ON THE NIKKEI 225 INDEX

Payment on the notes linked to the J.P. Morgan Alternative Index Japan Equity Momentum Strategy and the J.P. Morgan Alternative Index Mean Reversion Japan Strategy are linked to a synthetic exposure to the performance of the J.P. Morgan Japanese Equity Futures (G) Tracker, which is directly linked to the Nikkei 225 Index. We have derived all information contained in this product supplement regarding the Nikkei 225 Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information. Such information reflects the policies of, and is subject to change by Nikkei Inc. We make no representation or warranty as to the accuracy or completeness of such information. The Nikkei 225 Index was developed by Nikkei Inc. and is calculated, maintained and published by Nikkei Inc. Nikkei Inc. has no obligation to continue to publish, and may discontinue the publication of, the Nikkei 225 Index.

The Nikkei 225 Index is reported by Bloomberg L.P. under the ticker symbol “NKY.”

The Nikkei 225 Index is a stock index that measures the composite price performance of selected Japanese stocks. The Nikkei 225 Index, as of the date of this product supplement, is based on 225 underlying stocks (the “Nikkei Underlying Stocks”) trading on the Tokyo Stock Exchange (“TSE”) representing a broad cross-section of Japanese industries.

All 225 Nikkei Underlying Stocks are stocks listed in the First Section of the TSE. Stocks listed in the First Section of the TSE are among the most actively traded stocks on the TSE. Nikkei Inc. rules require that the 75 most liquid issues (one-third of the component count of the Nikkei 225 Index) be included in the Nikkei 225 Index.

The 225 companies included in the Nikkei 225 Index are divided into six sector categories: Technology, Financials, Consumer Goods, Materials, Capital Goods/Others and Transportation and Utilities. These six sector categories are further divided into 36 industrial classifications as follows:

- Technology — Pharmaceuticals, Electrical Machinery, Automobiles, Precision Machinery, Telecommunications;
- Financials — Banks, Miscellaneous Finance, Securities, Insurance;
- Consumer Goods — Marine Products, Food, Retail, Services;
- Materials — Mining, Textiles, Paper and Pulp, Chemicals, Oil, Rubber, Ceramics, Steel, Nonferrous Metals, Trading House;
- Capital Goods/Others — Construction, Machinery, Shipbuilding, Transportation Equipment, Miscellaneous Manufacturing, Real Estate; and
- Transportation and Utilities — Railroads and Buses, Trucking, Shipping, Airlines, Warehousing, Electric Power, Gas.

The Nikkei 225 Index is a modified, price-weighted index (i.e., a Nikkei Underlying Stock’s weight in the index is based on its price per share rather than the total market capitalization of the issuer) which is calculated by (i) multiplying the per share price of each Nikkei Underlying Stock by the corresponding weighting factor for such Nikkei Underlying Stock (a “Weight Factor”), (ii) calculating the sum of all these products and (iii) dividing such sum by a divisor (the “Divisor”). The Divisor was initially set at 225 for the date of May 16, 1949 using historical numbers from May 16, 1949, the date on which the TSE was reopened. The Divisor was 24.718 as of January 22, 2010 and is subject to periodic adjustments as set forth below. Each Weight Factor is computed by dividing ¥50 by the par value of the relevant Nikkei Underlying Stock, so that the share price of each Nikkei Underlying Stock when multiplied by its Weight Factor corresponds to a share price based on a uniform par value of ¥50. The stock prices used in the calculation of the Nikkei 225 Index are those reported by a primary market for the Nikkei Underlying Stocks (currently the TSE). The level of the Nikkei 225 Index is calculated once per minute during TSE trading hours.

In order to maintain continuity in the Nikkei 225 Index in the event of certain changes due to non-market factors affecting the Nikkei Underlying Stocks, such as the addition or deletion of stocks, substitution of stocks, stock splits or distributions of assets to stockholders, the Divisor used in calculating the Nikkei 225 Index is adjusted in a manner designed to prevent any instantaneous change or discontinuity in the level of the Nikkei 225 Index. Thereafter, the Divisor remains at the new value until a further adjustment is necessary as the result of another change. As a result of such change affecting any Nikkei Underlying Stock, the Divisor is adjusted in such a way that the sum of all share prices immediately after such change multiplied by the applicable Weight Factor and divided by the new Divisor (i.e., the level of the Nikkei 225 Index immediately after such change) will equal the level of the Nikkei 225 Index immediately prior to the change.

A Nikkei Underlying Stock may be deleted or added by Nikkei Inc. Any stock becoming ineligible for listing in the First Section of the TSE due to any of the following reasons will be deleted from the Nikkei Underlying Stocks: (i) bankruptcy of the issuer, (ii) merger of the issuer with, or acquisition of the issuer by, another company, (iii) delisting of such stock, (iv) transfer of such stock to the "Seiri-Post" because of excess debt of the issuer or because of any other reason or (v) transfer of such stock to the Second Section. In addition, a component stock transferred to the "Kanri-Post" (Posts for stocks under supervision) is in principle a candidate for deletion. Nikkei Underlying Stocks with relatively low liquidity, based on trading value and rate of price fluctuation over the past five years, may be deleted by Nikkei Inc. Upon deletion of a stock from the Nikkei Underlying Stocks, Nikkei Inc. will select a replacement for such deleted Nikkei Underlying Stock in accordance with certain criteria. In an exceptional case, a newly listed stock in the First Section of the TSE that is recognized by Nikkei Inc. to be representative of a market may be added to the Nikkei Underlying Stocks. In such a case, an existing Nikkei Underlying Stock with low trading volume and deemed not to be representative of a market will be deleted by Nikkei Inc.

A list of the issuers of the Nikkei Underlying Stocks constituting the Nikkei 225 Index is available from the Nikkei Economic Electronic Databank System and from the Stock Market Indices Data Book published by Nikkei Inc. Nikkei Inc. may delete, add or substitute any stock underlying the Nikkei 225 Index. Nikkei Inc. first calculated and published the Nikkei 225 Index in 1970.

#### **License Agreement with Nikkei Inc. and Disclaimers**

We expect to enter into an agreement with Nikkei Inc. that would provide us and certain of our affiliates or subsidiaries identified in that agreement with a non-exclusive license and, for a fee, with the right to use the Nikkei 225 Index, which is owned and published by Nikkei Inc., in connection with certain securities, including the notes.

Our license agreement with Nikkei Inc. will provide that Nikkei Inc. will assume no obligation or responsibility for use of the Nikkei 225 Index by us or our affiliates.

The Nikkei 225 Index is an intellectual property of Nikkei Inc. Nikkei Inc. was formerly known as Nihon Keizai Shimbun, Inc. The name was changed on January 1, 2007. "Nikkei," "Nikkei Stock Average," and "Nikkei 225" are the service marks of Nikkei Inc. Nikkei Inc. reserves all the rights, including copyright, to the index. Nikkei Digital Media, Inc., a wholly owned subsidiary of Nikkei Inc., calculates and disseminates the Nikkei 225 Index under exclusive agreement with Nikkei Inc. Nikkei Inc. and Nikkei Digital Media Inc. are collectively referred to as the "Nikkei 225 Index Sponsor."

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In addition, the Nikkei 225 Index Sponsor gives no assurance regarding any modification or change in any methodology used in calculating the Nikkei 225 Index and is under no obligation to continue the calculation, publication and dissemination of the Nikkei 225 Index.

### **The Tokyo Stock Exchange**

The TSE is one of the world's largest securities exchanges in terms of market capitalization. Trading hours are currently from 9:00 a.m. to 11:00 a.m. and from 12:30 p.m. to 3:00 p.m., Tokyo time, Monday through Friday.

Due to the time zone difference, on any normal trading day the TSE will close prior to the opening of business in New York City on the same calendar day. Therefore, the closing level of the Nikkei 225 Index on a trading day will generally be available in the United States by the opening of business on the same calendar day.

The TSE has adopted certain measures, including daily price floors and ceilings on individual stocks, intended to prevent any extreme short-term price fluctuations resulting from order imbalances. In general, any stock listed on the TSE cannot be traded at a price lower than the applicable price floor or higher than the applicable price ceiling. These price floors and ceilings are expressed in absolute Japanese yen, rather than percentage limits based on the closing price of the stock on the previous trading day. In addition, when there is a major order imbalance in a listed stock, the TSE posts a "special bid quote" or a "special asked quote" for that stock at a specified higher or lower price level than the stock's last sale price in order to solicit counter-orders and balance supply and demand for the stock. Prospective investors should also be aware that the TSE may suspend the trading of individual stocks in certain limited and extraordinary circumstances, including, for example, unusual trading activity in that stock. As a result, changes in the Nikkei 225 Index may be limited by price limitations or special quotes, or by suspension of trading, on individual stocks that make up the Nikkei 225 Index, and these limitations, in turn, may adversely affect the value of the notes.

## BACKGROUND ON THE RUSSELL 2000® INDEX

Payment on the notes linked to the J.P. Morgan Alternative Index Equity Small Cap Carry Strategy is linked to a synthetic exposure to the performance of the J.P. Morgan US Small Cap Equity Futures (G) Tracker, which is directly linked to the Russell 2000® Index. We have derived all information contained in this product supplement regarding the Russell 2000® Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information. Such information reflects the policies of, and is subject to change by, Russell Investments ("Russell"). We make no representation or warranty as to the accuracy or completeness of such information. The Russell 2000® Index was developed by Russell Investment Group (formerly, Frank Russell Company) and is calculated, maintained and published by Russell, a subsidiary of Russell Investment Group. Russell has no obligation to publish, and may discontinue the publication of, the Russell 2000® Index.

The Russell 2000® Index is reported by Bloomberg L.P. under the ticker symbol "RTY."

The Russell 2000® Index measures the capitalization-weighted price performance of the small-cap stocks included in the Russell 2000® Index (the "Russell 2000 Component Stocks") and is designed to track the performance of the small capitalization segment of the U.S. equity market. All stocks included in the Russell 2000® Index are traded on a major U.S. exchange. The companies included in the Russell 2000® Index are the middle 2,000 of the companies that form the Russell 3000E™ Index, which is composed of the 4,000 largest U.S. companies as determined by market capitalization and represents approximately 99% of the U.S. equity market. The Russell 3000E™ Index is not the same as the Russell 3000® Index, which is a subset of the Russell 3000E™ Index.

*Selection of stocks underlying the Russell 2000® Index.* The Russell 2000® Index is a sub-index of the Russell 3000E™ Index. To be eligible for inclusion in the Russell 3000E™ Index, and, consequently, the Russell 2000® Index, a company's stocks must be listed on the last trading day in May of a given year and Russell must have access to documentation verifying the company's eligibility for inclusion. Beginning September 2004, eligible initial public offerings are added to Russell U.S. indexes at the end of each calendar quarter, based on total market capitalization rankings within the market-adjusted capitalization breaks established during the most recent reconstitution. To be added to any Russell U.S. index during a quarter outside of reconstitution, initial public offerings must meet additional eligibility criteria.

U.S.-incorporated companies are eligible for inclusion in the Russell 3000E™ Index and, consequently, the Russell 2000® Index. Companies incorporated in the following countries/regions are also reviewed for eligibility: Anguilla, Antigua, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Channel Islands, Cook Islands, Faroe Islands, Gibraltar, Isle of Man, Liberia, Marshall Islands, Netherlands Antilles, Panama and Turks and Caicos Islands. However, not all companies incorporated in these regions are eligible for inclusion in the Russell 3000E™ Index, and, consequently, the Russell 2000® Index. Companies incorporated in these regions are specifically considered eligible for the Russell 2000® Index only if the company meets one of the following criteria: (i) the company headquarters are in the U.S. or (ii) the company headquarters are also in the designated region/country, and the primary exchange for local shares is in the United States. ADRs are not eligible for inclusion in the Russell 3000E™ Index, and, consequently, the Russell 2000® Index.

The following securities are specifically excluded from the Russell 2000® Index: (i) stocks that are not traded on a major U.S. exchange; (ii) preferred stock, convertible preferred stock, redeemable shares, participating preferred stock, warrants, rights; and trust receipts; (iii) royalty trusts, limited liability companies, OTC Bulletin Board companies, pink sheets, over-the-counter traded securities, closed-end investment companies (business development companies or BDCs are eligible), blank check companies, special purpose acquisition companies (SPACs) and limited partnerships. The exclusion of blank check companies and SPACs became effective with the first quarter of 2008, but existing members were grandfathered until the 2008 annual reconstitution. In addition, Berkshire Hathaway is excluded as a special exception.

The primary criteria used to determine the initial list of securities eligible for the Russell 3000E™ Index is total market capitalization, which is defined as the price of the shares times the total number of available shares. All common stock share classes are combined in determining market capitalization. If multiple share classes have been combined, the price of the primary trading vehicle (usually the most liquid) is used in the calculations. In cases where the common stock share classes act independently of each other (*e.g.*, tracking stocks), each class is considered for inclusion separately. Stocks must trade at or above \$1.00 (on their primary exchange) on the last trading day in May of each year to be eligible for inclusion in the Russell 2000® Index. In order to reduce unnecessary turnover, if an existing Russell 2000® Component Stock's closing price is less than \$1.00 on the last trading day in May, it will be considered eligible if the average of the daily closing prices (from its primary exchange) during the month of May is equal to or greater than \$1.00. Nonetheless, a Russell 2000® Component Stock's close price (on its primary exchange) on the last trading day in May will be used to calculate market capitalization and index membership. Quarterly IPO additions must have a close price at or above \$1.00 on the last day of their eligibility period in order to qualify for index inclusion. If a stock, new or existing, does not have a close price at or above \$1.00 (on its primary exchange) on the last trading day in May, but does have a close price at or above \$1.00 on another major U.S. exchange, the stock will be eligible for inclusion but the lowest price from a non-primary exchange will be used to calculate market capitalization and index membership.

Companies with only a small portion of their shares available in the marketplace are not eligible for inclusion in the Russell 3000E™ Index and, consequently, the Russell 2000® Index. Large capitalization companies with 1% or less float, and small capitalization companies with 5% or less, will be removed from eligibility.

The Russell 2000® Index is reconstituted annually to reflect changes in the marketplace. The list of companies is ranked based on total market capitalization as of May 31<sup>st</sup>, with the actual reconstitution effective on the first trading day following the final Friday of June each year, except that if the last Friday of June of any year is the 28<sup>th</sup>, 29<sup>th</sup> or 30<sup>th</sup>, reconstitution will occur on the preceding Friday. Changes in the constituents are pre-announced and subject to change if any corporate activity occurs or if any new information is received prior to release.

*Capitalization Adjustments.* As a capitalization-weighted index, the Russell 2000® Index reflects changes in the capitalization, or market value, of the Russell 2000 Component Stocks relative to the capitalization on a base date. The current Russell 2000® Index value is calculated by adding the market values of the Russell 2000 Component Stocks, which are derived by multiplying the price of each stock by the number of available shares, to arrive at the total market capitalization of the 2,000 stocks. The total market capitalization is then divided by a divisor, which represents the "adjusted" capitalization of the Russell 2000® Index on the base date of December 31, 1986. To calculate the Russell 2000® Index, last sale prices will be used for exchange-traded and NASDAQ stocks. If a Russell 2000 Component Stock is not open for trading, the most recently traded price for that security will be used in calculating the Russell 2000® Index. In order to provide continuity for the Russell 2000® Index's value, the divisor is adjusted periodically to reflect events including changes in the number of common shares outstanding for Russell 2000 Component Stocks, company additions or deletions, corporate restructurings and other capitalization changes.

Available shares are assumed to be shares available for trading. Exclusion of capitalization held by other listed companies and large holdings of private investors (10% or more) is based on information recorded in SEC corporate filings. Other sources are used in cases of missing or questionable data.

The following types of shares are considered unavailable for the purposes of capitalization determinations:

ESOP or LESOP shares – corporations that have Employee Stock Ownership Plans that comprise 10% or more of the shares outstanding are adjusted;

Corporate cross-owned shares – corporate cross-ownership occurs when shares of a company in the Russell 2000® Index are held by another member of a Russell index (including Russell Global Indexes). Any percentage held in this class will be adjusted;

Large private and corporate shares – large private and corporate holdings are defined as those shares held by an individual, a group of individuals acting together or a corporation not in the Russell 2000® Index that own 10% or more of the shares outstanding. However, not to be included in this class are institutional holdings, which are: investment companies, partnerships, insurance companies, mutual funds, banks or venture capital funds;

Unlisted share classes – classes of common stock that are not traded on a U.S. securities exchange;

Initial public offering lock-ups – shares locked-up during an initial public offering are not available to the public and will be excluded from the market value at the time the initial public offering enters the Russell 2000® Index; and

Government Holdings:

- Direct government holders: Those holdings listed as “government of” are considered unavailable and will be removed entirely from available shares;
- Indirect government holders: Shares held by government investment boards and/or investment arms will be treated similar to large private holdings and removed if the holding is greater than 10%; and
- Government pensions: Any holding by a government pension plan is considered institutional holdings and will not be removed from available shares.

*Corporate Actions Affecting the Russell 2000® Index.* The following summarizes the types of Russell 2000® Index maintenance adjustments and indicates whether or not a Russell 2000® Index adjustment is required.

“No Replacement” Rule – Securities that leave the Russell 2000® Index, between reconstitution dates, for any reason (*e.g.*, mergers, acquisitions or other similar corporate activity) are not replaced. Thus, the number of securities in the Russell 2000® Index over a year will fluctuate according to corporate activity.

Rules for Deletions – When a stock is acquired, delisted or moves to the pink sheets or bulletin boards on the floor of a U.S. securities exchange, the stock is deleted from the Russell 2000® Index at the market close on the effective date or when the stock is no longer trading on the exchange if the corporate action is considered to be final prior to 2:00 p.m. Eastern Standard Time, or the following day if the corporate action is considered to be final after 2:00 p.m. Eastern Standard Time. Companies that file for a Chapter 7 liquidation bankruptcy will be removed from the Russell 2000® Index at the time of the bankruptcy filing; whereas, companies filing for a Chapter 11 reorganization bankruptcy will remain a member of the Russell 2000® Index, unless the company is de-listed from the primary exchange, in which case normal de-listing rules apply. Members of the Russell 2000® Index that are re-incorporated in another country are deleted when the re-incorporation is final.

**Rules for Additions** – The only additions between reconstitution dates are as a result of spin-offs, reincorporations and initial public offerings. Spin-off companies are added to the parent company's index and capitalization tier of membership, *if* the spin-off company is sufficiently large. To be eligible, the spun-off company's total market capitalization must be greater than the market-adjusted total market capitalization of the smallest security in the Russell 3000E™ Index at the latest reconstitution. If a U.S. spin-off occurs from a Russell Global ex-U.S. Index member, the spun-off company will be placed in the parent's index and capitalization tier of the Russell Global Index. A member of the Russell Global Index that is reincorporating to the United States or one of the eligible countries/regions described above will be added to the Russell 3000E™ Index when the reincorporation is final.

**Merger and Acquisition** – When mergers or acquisitions occur, changes to the membership and weighting of members within the Russell 2000® Index occur. In the event a merger or acquisition occurs between members of the Russell 2000® Index, the acquired company is deleted and its market capitalization moves to the acquiring stock according to the terms of the merger, hence, mergers have no effect on the Russell 2000® Index total capitalization. Shares are updated for the acquiring stock at the time the transaction is final. If the acquiring company is a member of the Russell 2000® Index, but the acquired company is not, the shares for the acquiring stock are adjusted at month-end. If the acquiring company is not a member of any of the Russell Indexes, there are two possibilities:

**Reverse Merger** – If the acquiring company is a private, non-publicly traded company or OTC company, Russell will review the action to determine if it is considered a reverse merger, defined as a transaction that results in a publicly traded company that meets all requirements for inclusion in a Russell Index. If it is determined that an action is a reverse merger, the newly formed entity will be placed in the appropriate market capitalization index after the close of the day following the completion of the merger. The acquired company will be removed from the current index simultaneously.

**Standard Action** – The acquired company is deleted after the action is final.

**De-listed Stocks** – When stocks from the Russell 2000® Index are deleted as a result of exchange de-listing or reconstitution, the price used will be the closing primary exchange price on the day of deletion, or the following day using the closing OTC bulletin board price. However, there may be corporate events, such as mergers or acquisitions, that result in the lack of current market price for the deleted security and in such an instance the latest primary exchange closing price available will be used.

**Rule for Re-Classification and Re-Incorporation** – For re-classification of shares, adjustments will be made at the open of the ex-date using previous day closing prices. For re-incorporations, deleted entities will be removed either after the close of the current day using the last traded price, if the re-incorporation achieves final status prior to 2:00 p.m. Eastern Standard Time, or after the close of the following day at the last traded price, if the re-incorporation achieves final status after 2:00 p.m. Eastern Standard Time.

*Updates to Share Capital Affecting the Russell 2000® Index.* Each month, the Russell 2000® Index is updated for changes to shares outstanding as companies report changes in share capital to the SEC. Effective April 30, 2002, only cumulative changes to shares outstanding greater than 5% are reflected in the Russell 2000® Index. This does not affect treatment of major corporate events, which are effective on the ex-date.

*Pricing of Securities Included in the Russell 2000® Index.* Effective on January 1, 2002, primary exchange closing prices are used in the daily Russell 2000® Index calculations. FT Interactive data is used as the primary source for U.S. security prices, income, and total shares outstanding. Prior to January 1, 2002, composite closing prices, which are the last trade price on any U.S. exchange, were used in the daily Russell 2000® Index calculations.

*Disclaimers.* The notes are not sponsored, endorsed, sold, or promoted by Russell or any successor thereto or index owner and neither Russell nor any party hereto makes any representation or warranty whatsoever, whether express or implied, to the owners of the notes or any member of the public regarding the advisability of investing in securities generally or in the notes particularly or the ability of the Russell 2000® Index to track general stock market performance or a segment of the same. Russell's publication of the Russell 2000® Index in no way suggests or implies an opinion by Russell as to the advisability of investment in any or all of the securities upon which the Russell 2000® Index is based. Russell's only relationship to JPMorgan Chase & Co. and its affiliates is the licensing of certain trademarks and trade names of Russell and of the Russell 2000® Index which is determined, composed and calculated by Russell without regard to JPMorgan Chase & Co. and its affiliates or the notes. Russell is not responsible for and has not reviewed the notes or any associated literature or publications and Russell makes no representation or warranty express or implied as to their accuracy or completeness, or otherwise. Russell reserves the right, at any time and without notice, to alter, amend, terminate or in any way change the Russell 2000® Index. Russell has no obligation or liability in connection with the administration, marketing or trading of the notes.

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## GENERAL TERMS OF NOTES

### Note 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 an affiliate of ours. J.P. Morgan Securities Inc., or JPMSI, which is referred to in this product supplement as the “note 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 the Multi-Strategy Index. For more information on the Index Calculation Agent see “The J.P. Morgan Alternative Index Multi-Strategy 5 (USD) — The Index Calculation Agent; Amendment of Rules; Limitation of Liability” elsewhere in this product supplement.

The note calculation agent will determine, among other things, the Initial Index Value, the Strike Value, if applicable, the Ending Index Value, the Index Return or Index Strike Return, as applicable, the amount we will pay you at maturity, the Index closing value on each Initial Averaging Date, if applicable, and the Index closing value on each Index Valuation Date, including, if applicable, whether a Knock-Out Event has occurred (for notes with a Knock-Out Level), whether the Ending Index Value is equal to or greater than the Initial Index Value (or Strike Value, if applicable) and, if the notes bear interest, the amount of interest payable, if any, on any Interest Payment Date. In addition, the note calculation agent will determine whether there has been a market disruption event or a discontinuation of the Index, the Option Value of your notes on the commodity hedging disruption date in the event of a commodity hedging disruption event, whether there has been a material change in the method of calculating the Index and, if the notes bear interest, whether a day is an Interest Payment Date. All determinations made by the note calculation agent will be at the sole discretion of the note 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 note calculation agent from time to time after the date of the original issue of the notes without your consent and without notifying you.

The note 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 and each Interest Payment Date, if applicable, on or prior to 11:00 a.m., New York City time, on the business day preceding the maturity date and each Interest Payment Date, if applicable.

All calculations with respect to the Initial Index Value, the Strike Value, if applicable, the Ending Index Value, the Index Return or Index Strike Return, as applicable, or any Index closing value 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 Additional Amount payable 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 Index closing value on any Initial Averaging Date, if applicable, or Index Valuation Date and consequently the Index Return or Index Strike Return, as applicable, and the Additional Amount, if any, that we will pay to you at maturity. These events may include failure of the Index Calculation Agent to publish the value of the Multi-Strategy Index, as well as disruptions or suspensions of trading in the 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 any of the Strategies. In the case of such an event we have the right, but not the obligation, to determine the Option Value of your notes on the commodity hedging disruption date and the value of the Additional Amount payable at maturity as described below under “Consequences of a Commodity Hedging Disruption Event.” We refer to each of these events described in the following paragraph individually as a “market disruption event.”

With respect to the Index (or any Successor Index), a “market disruption event,” unless otherwise specified in the relevant terms supplement, means:

- (1) any suspension of, or limitation on, trading imposed by the relevant exchange for any Strategy (other than the FX Strategies and the Rates Carry Strategies) (including any relevant successor Strategy); or
- (2) any other event has occurred that disrupts or impairs the ability of market participants in general to effect transactions in, or obtain market values for any securities, futures contracts or other components, as applicable, that comprise 20% or more of the level of the relevant Strategy (including any relevant successor Strategy);
- (3) the closure of any relevant exchange for any Strategy (other than the FX Strategies and the Rates Carry Strategies) (including any relevant successor Strategy) prior to its scheduled closing time unless such earlier closing time is announced at least one hour prior to the actual closing time;
- (4) the failure of any relevant exchange with respect to any Strategy (other than the FX Strategies and the Rates Carry Strategies) (including any relevant successor Strategy) to open;
- (5) the closure of a material number of leading commercial banks in The City of New York prior to their scheduled weekday closing time;
- (6) the failure of the WM Company or Reuters (or any other relevant entity) to publish the relevant currency exchange rates or interest or swap rates used in the calculation of the FX Strategies and the Rates Carry Strategies (including any relevant successor Strategy),
- (7) the failure of the index calculation agent to calculate and publish the official closing value of the Index,
- (8) an FX disruption event, or
- (9) a commodity hedging disruption event,

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

- in the case of an event described in clause (1), (2), (3), (4), (5), (6), (7) or (8) above, a determination by the note calculation agent in its sole discretion that the applicable 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 with respect to the Index and any relevant Successor Index if the limitation results from an announced change in the regular business hours of the relevant exchange or market.

With respect to an FX Strategy, an “FX disruption event” means:

(a) an event in relation to any relevant currency for such FX Strategy which the note calculation agent determines has the effect of preventing, restricting or delaying:

- (i) the convertibility of the currency into USD through customary legal channels; or
- (ii) the convertibility of the currency into USD at a rate at least as favorable as the rate for domestic institutions located in the country whose lawful currency is the currency (for the purposes of this definition, the “Relevant Country”); or

(iii) the delivery of the currency from accounts inside the Relevant Country to accounts outside the Relevant Country; or

(iv) the delivery of the currency between accounts inside the Relevant Country or to a party that is a non-resident of the Relevant Country; or

(b) the imposition by the Relevant Country (or any political or regulatory authority thereof) of any capital controls, or the publication of any notice of an intention to do so, which the note calculation agent determines is likely to materially affect one or more market participants' ability to obtain reliable spot exchange rate(s) for the currency from a recognized financial source; or

(c) the implementation by the Relevant Country (or any political or regulatory authority thereof) or the publication of any notice of an intention to implement any changes to the laws or regulations relating to foreign investment in the Relevant Country (including, but not limited to, changes in tax laws and/or laws relating to capital markets and corporate ownership), which the note calculation agent determines are likely to materially affect the ability of one or more market participants to obtain reliable spot exchange rate(s) for the currency from a recognized financial information source.

A "commodity hedging disruption event" means that:

(a) due to (i) the adoption of, or any change in, any applicable law, regulation, rule or order (including, without limitation, any tax law); or (ii) the promulgation of, or any change in, the interpretation, application, exercise or operation by any court, tribunal, regulatory authority, exchange or trading facility or any other relevant entity with competent jurisdiction of any applicable law, rule, regulation, order, decision or determination (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 note calculation agent determines in good faith that it is contrary (or upon adoption, it will be contrary) to such law, rule, regulation, order, decision or determination for us 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 our obligations under the notes (in the aggregate on a portfolio basis or incrementally on a trade by trade basis) ("hedge positions"), including (without limitation) if such hedge positions (in whole or in part) 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 note 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 note 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 certain Strategies are subject to legal and regulatory regimes that may change in ways that could affect our ability to hedge our obligations under the notes and/or could lead to the early determination of the Additional Amount for your notes, either of which would impact the value of your payment at maturity." 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 adjust your payment at maturity based on determinations made by the note calculation agent described below. If we choose to exercise this right, in making such adjustment, on the date on which the note calculation agent determines that a commodity hedging disruption event has occurred (such date, a "commodity hedging disruption date"), the note calculation agent will determine, in good faith and in a commercially reasonable manner, the forward price of the embedded option representing the Additional Amount payable on the notes at maturity (the "Option Value"). The commodity hedging disruption event may occur prior to the Observation Date or the final Ending Averaging Date, as applicable. We will provide, or cause the note calculation agent to provide, written notice of our election to exercise such right to the trustee at its New York office. We (or the note calculation agent) will deliver this notice as promptly as possible and in no event later than the fifth (5th) business day immediately following the commodity hedging disruption date. Additionally, we will specify in such notice the Option Value as determined on the commodity hedging disruption date.

If a commodity hedging disruption event occurs and we decide to exercise our right to adjust your payment at maturity and, in doing so, cause the note calculation agent to determine the Option Value of your notes, such Option Value will be a fixed amount representing the Additional Amount payable at maturity; *provided* that such Additional Amount will not be less than zero (or, if applicable, the Minimum Return).

Notwithstanding the foregoing, the amount due and payable per \$1,000 principal amount note will not be less than \$1,000 for each \$1,000 principal amount note (unless the relevant terms supplement specifies a Partial Principal Protection Percentage, in which case the amount due and payable per \$1,000 principal amount note will not be less than \$1,000 x Partial Principal Protection Percentage) and will be due and payable only at maturity. If we choose to exercise our right to determine the Option Value, for each \$1,000 principal amount note, we will pay you at maturity, instead of the amounts set forth under "Description of Notes — Payment at Maturity," an amount equal to:

(1) an Additional Amount equal to the Option Value; *provided* that such Additional Amount will not be less than zero (or, if applicable, the Minimum Return); plus

(2) \$1,000, or, if the relevant terms supplement specifies a Partial Principal Protection Percentage, \$1,000 x Partial Principal Protection Percentage.

For the avoidance of doubt, the determination set forth above is only applicable to the amount due with respect to an early determination of the Additional Amount as a result of a commodity hedging disruption event.

## Discontinuation of the Index; Alteration of Method of Calculation

If the Index Calculation Agent discontinues calculation or publication of the Index and JPMSL or another entity publishes a successor or substitute index that the note calculation agent determines, in its sole discretion, to be comparable to the discontinued Index (such index being referred to herein as a "Successor Index"), then the Index closing value on any relevant Determination Date or any other relevant date on which the Index closing value is to be determined will be determined by reference to the value of such Successor Index at the time of daily final publication on such day.

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

If the Index Calculation Agent discontinues publication of the Index prior to, and such discontinuation is continuing on, a Determination Date or any other relevant date on which the Index closing value is to be determined, and the note calculation agent determines, in its sole discretion, that no Successor Index is available at such time, or the note 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 Determination Date or other relevant date, then the note calculation agent will determine the Index closing value for such date. The Index closing value will be computed by the note calculation agent in accordance with the formula for and method of calculating the Index or Successor Index, as applicable, last in effect prior to such discontinuation, using the closing levels of the Strategies (or, if the closing level for a Strategy is not published, the note calculation agent's good faith estimate of the closing level) at the close of the principal trading session on such date on the relevant exchange or market of each Strategy most recently composing the Index or Successor Index, as applicable. Notwithstanding these alternative arrangements, discontinuation of the publication of the Index or its Successor Index, as applicable, may adversely affect the value of the notes.

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

## **Events of Default**

Under the heading "Description of Debt Securities — Events of Default and Waivers" in the accompanying prospectus is a description of events of default relating to debt securities including the notes.

## **Alternate Additional Amount Calculation in Case of 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 equal to \$1,000 (or a portion of \$1,000 if there is a Partial Principal Protection Percentage set forth in the relevant terms supplement), plus the Additional Amount, which will be calculated as if the date of acceleration were the final Index Valuation Date, plus, if applicable, any accrued and unpaid interest on the notes. If the notes have more than one Index Valuation Date, then for each Index 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 Index Valuation Dates in excess of one) will be the corresponding Index Valuation Dates, unless otherwise specified in the relevant terms supplement. Upon any acceleration of the notes, any interest will be calculated on the basis of a 360-day year of twelve 30-day months and the actual number of days elapsed from and including the previous Interest Payment Date for which interest was paid.

If the maturity of the notes is accelerated because of an event of default as described above, we shall, or shall cause the note 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.

For the avoidance of doubt, the determination set forth above is only applicable to the amount due and with respect to an acceleration of the notes as a result of an event of default.

### **Modification**

Under the heading “Description of Debt Securities — Modification of the Indenture” 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 Mellon in The City of New York.

The Bank of New York Mellon or one of its affiliates will act as registrar and transfer agent for the notes. The Bank of New York Mellon 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 Mellon, but upon payment (with the giving of such indemnity as The Bank of New York Mellon 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 ownership and disposition of the notes. This summary applies to you if you are an initial holder of a note purchasing the note at its issue price for cash and if you hold the note as a capital asset 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 that may be relevant to you in light of your particular circumstances or if you are a holder of a note who is subject to special treatment under the U.S. federal income tax laws, such as:

- one of certain financial institutions;
- a "regulated investment company" as defined in Code Section 851;
- a "real estate investment trust" as defined in Code Section 856;
- 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 person holding a note as part of a hedging transaction, "straddle," conversion transaction or integrated transaction, or who has entered into a "constructive sale" with respect to a note;
- 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. As the law applicable to the U.S. federal income taxation of instruments such as the notes is technical and complex, the discussion below necessarily represents only a general summary. Moreover, the effects of any applicable state, local or foreign tax laws are not discussed. **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.**

The following discussion does not apply to notes with a Fixed Payment. Prospective holders of these notes will be provided with a supplemental disclosure statement in the relevant term sheet, describing the tax consequences relating to them.

### Tax Treatment of the Notes

The tax treatment of the notes will depend upon the facts at the time of the relevant offering. Generally, for U.S. federal income tax purposes, we expect to treat the notes as indebtedness, and notes with a term of more than one year as "contingent payment debt instruments." We expect to seek an opinion from Davis Polk & Wardwell LLP, our special tax counsel, regarding this treatment. The relevant terms supplement will describe Davis Polk & Wardwell LLP's level of comfort on this issue, which will depend on the facts of the particular offering, its receipt of certain factual representations from us at the time of the relevant offering and any additional considerations that may be relevant to the particular offering. The following discussion describes the treatment of the notes assuming that for U.S. federal income tax purposes the notes are indebtedness and, in the case of notes with a term of more than one year, are "contingent payment debt instruments."

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

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

- a citizen or resident of the United States;
- 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.

### **Notes with a Term of Not More than One Year**

If the term of the notes (including either the issue date or the last possible date that the notes could be outstanding, but not both) is not more than one year, the following discussion applies. No statutory, judicial or administrative authority directly addresses the treatment of these notes or instruments similar thereto for U.S. federal income tax purposes, and no ruling will be requested from the IRS with respect to the notes. As a result, certain aspects of the U.S. federal income tax consequences of an investment in these notes are uncertain.

#### ***Tax Treatment Prior to Maturity***

Because the term of these notes is not more than one year, they will be treated as short-term debt obligations. A short-term debt obligation is treated for U.S. federal income tax purposes as issued at a discount equal to the difference between the payments due thereon and the instrument's issue price. In general, this discount is treated as interest income when received or accrued, in accordance with the holder's method of tax accounting. However, because the amount of discount that will be paid on the notes is uncertain, several aspects of the tax treatment of the notes are not clear.

If you are a cash-method holder, you will not be required to recognize income with respect to the notes prior to maturity, other than with respect to amounts received as stated interest, if any, or received pursuant to a sale or exchange, as described below. However, you may elect to accrue discount into income on a current basis, in which case you would generally be treated as an accrual-method holder, as described below. In addition, you could be required to defer deductions with respect to any interest paid on indebtedness incurred to purchase or carry your notes, to the extent of accrued discount that you have not yet included in income, until you dispose of the notes in a taxable transaction. You should consult your tax adviser regarding these issues.

Although accrual-method holders and certain other holders (including electing cash-method holders) are generally required to accrue into income discount on short-term indebtedness on a straight-line basis, the amount of discount that must ultimately be accrued with respect to the notes is uncertain, and it is therefore not clear how these accruals should be determined. If the amount of discount that will be received has become fixed (or the likelihood of this amount not being a fixed amount has become "remote") prior to maturity, it is likely that the amount of discount to be accrued will be determined based on the fixed amount. You should consult your tax adviser regarding the application of these rules with respect to your notes.



### ***Sale, Exchange or Redemption of a Note***

Upon a sale or exchange of a short-term note (including redemption at maturity), you should recognize gain or loss in an amount equal to the difference between the amount you receive and your adjusted basis in the note. Your adjusted basis in the note should equal the issue price of the note, increased by any discount that you have previously included in income. The amount of any resulting loss will be treated as a capital loss, which may be subject to special reporting requirements if the loss exceeds certain thresholds. Gain resulting from redemption at maturity should be treated as ordinary interest income. It is not clear, however, whether or to what extent gain from a sale or exchange prior to maturity should be treated as capital gain or ordinary interest income. If the amount of discount that will be received at maturity has become fixed (or the likelihood of this amount not being a fixed amount has become "remote") prior to sale or exchange, it is likely that the portion of gain on the sale or exchange that should be treated as accrued discount (and, therefore, taxed as ordinary income) will be determined based on the fixed amount. You should consult your tax adviser regarding the proper treatment of any gain or loss recognized upon a sale or exchange of a note.

### **Notes with a Term of More than One Year**

If the term of the notes (including either the issue date or the last possible date that the notes could be outstanding, but not both) is more than one year, we generally expect that the notes will be treated as "contingent payment debt instruments" for U.S. federal income tax purposes, and the remainder of this discussion so assumes. These notes will generally be subject to the original issue discount ("OID") provisions of the Code and the Treasury regulations issued thereunder, and you will be required to accrue as interest income the OID on the notes as described below.

We are required to determine a "comparable yield" for the notes. The "comparable yield" is the yield at which we could issue a fixed-rate debt instrument with terms similar to those of the notes, including the level of subordination, term, timing of payments and general market conditions, but excluding any adjustments for the riskiness of the contingencies or the liquidity of the notes. Solely for purposes of determining the amount of interest income that you will be required to accrue, we are also required to construct a "projected payment schedule" in respect of the notes representing a payment or a series of payments the amount and timing of which would produce a yield to maturity on the notes equal to the comparable yield.

Unless otherwise provided in the relevant terms supplement, we will provide, and you may obtain, the comparable yield for a particular offering of notes, and the related projected payment schedule, in the final terms supplement for these notes, which we will file with the SEC.

**Neither the comparable yield nor the projected payment schedule constitutes a representation by us regarding the actual amount, if any, that we will pay on the notes.**

For U.S. federal income tax purposes, you are required to use our determination of the comparable yield and projected payment schedule in determining interest accruals and adjustments in respect of your notes, unless you timely disclose and justify the use of other estimates to the IRS. Regardless of your accounting method, you will be required to accrue as interest income OID on your notes at the comparable yield, adjusted upward or downward to reflect the difference, if any, between the actual and the projected amount of the contingent payment(s) on the notes (as described below).

In addition to interest accrued based upon the comparable yield as described above, you will be required to recognize interest income equal to the amount of any net positive adjustment, *i.e.*, the excess of actual payments over projected payments, in respect of a note for a taxable year. A net negative adjustment, *i.e.*, the excess of projected payments over actual payments, in respect of a note for a taxable year:

- will first reduce the amount of interest in respect of the note that you would otherwise be required to include in income in the taxable year; and
- to the extent of any excess, will give rise to an ordinary loss, but only to the extent that the amount of all previous interest inclusions under the note exceeds the total amount of your net negative adjustments treated as ordinary loss on the note in prior taxable years.

A net negative adjustment is not subject to the limitation imposed on miscellaneous itemized deductions under Section 67 of the Code. Any net negative adjustment in excess of the amounts described above will be carried forward to offset future interest income in respect of the note or to reduce the amount realized on a sale or exchange of the note (including redemption at maturity).

Upon a sale or exchange of a note (including redemption at maturity), you generally will recognize taxable income or loss equal to the difference between the amount received from the sale, exchange or redemption and your adjusted tax basis in the note. Your adjusted tax basis in the note will equal the cost thereof, increased by the amount of interest income previously accrued by you in respect of the note (determined without regard to any of the positive or negative adjustments to interest accruals described above) and decreased by the amount of any prior projected payments in respect of the note. You generally must treat any income as interest income and any loss as ordinary loss to the extent of previous interest inclusions (reduced by the total amount of net negative adjustments previously taken into account as ordinary losses), and the balance as capital loss. These losses are not subject to the limitation imposed on miscellaneous itemized deductions under Section 67 of the Code. The deductibility of capital losses, however, is subject to limitations. Additionally, if you recognize a loss above certain thresholds, you may be required to file a disclosure statement with the IRS. You should consult your tax adviser regarding these limitations and reporting obligations.

Special rules might apply if the Additional Amount becomes fixed prior to maturity. The applicability of these rules, and their potential consequences, will depend upon, among other things, the specific terms of the relevant offering. Depending upon those terms, additional details regarding this issue may be provided in the relevant terms supplement. You should consult your tax adviser regarding the possible application of these rules.

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

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

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

You are not a “Non-U.S. Holder” for purposes of this discussion 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 or exchange of a note (including redemption at maturity).

Income and gain from a note will be exempt from U.S. federal income tax (including withholding tax) provided, generally, that you have certified on IRS Form W-8BEN, under penalties of perjury, that you are not a United States person and provided your name and address or otherwise satisfied applicable documentation requirements, and that these amounts are not effectively connected with your conduct of a U.S. trade or business.

If you are engaged in a U.S. trade or business and if the income or gain from a note is effectively connected with your conduct of that trade or business, although exempt from the withholding tax referred to above, you generally will be subject to U.S. income tax on this income or gain in the same manner as if you were a U.S. Holder, except that in lieu of the certificate described in the preceding paragraph, 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 notes, including the possible imposition of a 30% branch profits tax if you are a corporation.

If you are an individual, your notes will not be included in your estate for U.S. federal estate tax purposes, provided that your income from the notes is not then effectively connected with your conduct of a U.S. trade or business.

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

Interest (including OID) accrued or paid on your notes and the proceeds received from a sale or exchange of your notes (including redemption at maturity) will be subject to information reporting if you are not an "exempt recipient" (such as a domestic corporation) and may also be subject to backup withholding at the rates specified in the Code if you fail to provide certain identifying information (such as an accurate taxpayer identification number, if you are a U.S. Holder) or meet certain other conditions. If you are a Non-U.S. Holder and you comply with the identification procedures described in the preceding section, you will generally establish an exemption from backup withholding. 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.

## PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

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"), JPMSI has agreed and any additional Agents will agree to use reasonable efforts to solicit offers to purchase the principal amount of notes set forth in the cover page of the relevant terms supplement. We will have the sole right to accept offers to purchase the notes and may reject any offer in whole or in part. Each Agent may reject, in whole or in part, any offer it solicited to purchase notes. We will pay an Agent, in connection with sales of these notes resulting from a solicitation that Agent made or an offer to purchase the Agent received, a commission as set forth in the relevant terms supplement. An Agent 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.

We may also sell notes to an Agent as principal for its own account at discounts to be agreed upon at the time of sale as disclosed in the relevant terms supplement. That Agent may resell notes to investors and other purchasers at a fixed offering price or at prevailing market prices, or prices related thereto at the time of resale or otherwise, as that Agent determines and as we will specify in the relevant terms supplement. An Agent may offer the notes it has purchased as principal to other dealers. That Agent may sell the notes to any dealer at a discount and, unless otherwise specified in the relevant terms supplement, the discount allowed to any dealer will not be in excess of the discount that Agent will receive from us. After the initial public offering of notes that the Agent is to resell on a fixed public offering price basis, the Agent may change the public offering price, concession and discount.

We own, directly or indirectly, all of the outstanding equity securities of JPMSI. The net proceeds received from the sale of the notes will be used, in part, by JPMSI or one of its affiliates in connection with hedging our obligation under the notes. The underwriting arrangements for this offering will 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, neither JPMSI nor any other affiliated Agent of ours may make sales in this offering to any of its discretionary accounts 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. 186-A-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. 186-A-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. 186-A-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. 186-A-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. 186-A-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. 186-A-I and the 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. 186-A-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.

### 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. 186-A-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. 186-A-I, 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. 186-A-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. 186-A-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 of 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. 186-A-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. 186-A-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. 186-A-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. 186-A-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. 186-A-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. 186-A-I or 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. 186-A-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. 186-A-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.

## APPENDIX 1

# J.P. Morgan Alternative Index Series

## Index Rules

**J.P.Morgan**

January 2010 (amended 8 March 2010)

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APP-1



## PART A

### General Rules

#### 1. This Document

##### 1.1 Introduction

This document comprises the rules of the J.P. Morgan Alternative Index Series, a family of notional rule-based proprietary indices.

The table below sets out each Index comprised in the J.P. Morgan Alternative Index Series (other than the J.P. Morgan Alternative Index Commodity Carry Strategy) and relevant Parts and Modules of this document that comprise the Index Rules for each Index:

Index	Index Rules – applicable Parts and Module
J.P. Morgan Alternative Index Multi-Strategy 2.5 (USD)	Part A, Part B and Module 1.0
J.P. Morgan Alternative Index Multi-Strategy 5 (USD)	Part A, Part B and Module 1.0
J.P. Morgan Alternative Index Multi-Strategy 10 (USD)	Part A, Part B and Module 1.0
J.P. Morgan Alternative Index Multi-Strategy 2.5 (EUR)	Part A, Part B and Module 2.0
J.P. Morgan Alternative Index Multi-Strategy 5 (EUR)	Part A, Part B and Module 2.0
J.P. Morgan Alternative Index Multi-Strategy 10 (EUR)	Part A, Part B and Module 2.0
J.P. Morgan Alternative Index Multi-Strategy 2.5 (JPY)	Part A, Part B and Module 3.0
J.P. Morgan Alternative Index Multi-Strategy 5 (JPY)	Part A, Part B and Module 3.0
J.P. Morgan Alternative Index Multi-Strategy 10 (JPY)	Part A, Part B and Module 3.0
J.P. Morgan Alternative Index US Equity Momentum Strategy	Part A, Part C and Module 1.0
J.P. Morgan Alternative Index European Equity Momentum Strategy	Part A, Part C and Module 2.0
J.P. Morgan Alternative Index Japan Equity Momentum Strategy	Part A, Part C and Module 3.0
J.P. Morgan Alternative Index Money Market Momentum US Strategy	Part A, Part C and Module 4.0
J.P. Morgan Alternative Index Money Market Momentum Europe Strategy	Part A, Part C and Module 5.0
J.P. Morgan Alternative Index Money Market Momentum Japan Strategy	Part A, Part C and Module 6.0
J.P. Morgan Alternative Index EURUSD FX Momentum Strategy	Part A, Part D and Module 1.0
J.P. Morgan Alternative Index USDJPY FX Momentum Strategy	Part A, Part D and Module 2.0
J.P. Morgan Alternative Index EURJPY FX Momentum Strategy	Part A, Part D and Module 3.0
J.P. Morgan Alternative Index USDCAD FX Momentum Strategy	Part A, Part D and Module 4.0
J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy	Part A, Part D and Module 5.0
J.P. Morgan Alternative Index EURGBP FX Momentum Strategy	Part A, Part D and Module 6.0
J.P. Morgan Alternative Index Commodity Momentum Energy Strategy	Part A, Part C and Module 7.0
J.P. Morgan Alternative Index Commodity Momentum Non Energy Strategy	Part A, Part C and Module 8.0
J.P. Morgan Alternative Index Equity Value Carry Strategy	Part A, Part E and Module 1.0
J.P. Morgan Alternative Index Equity Small Cap Carry Strategy	Part A, Part E and Module 2.0
J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy	Part A, Part F and Module 1.0
J.P. Morgan Alternative Index Bond 2Y Long-Short Carry Strategy	Part A, Part G and Module 1.0
J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy	Part A, Part F and Module 2.0
J.P. Morgan Alternative Index Bond 10Y Long-Short Carry Strategy	Part A, Part G and Module 2.0
J.P. Morgan Alternative Index G10 FX Carry Strategy	Part A, Part H and Module 1.0
J.P. Morgan Alternative Index Mean reversion US Strategy	Part A, Part I and Module 1.0
J.P. Morgan Alternative Index Mean reversion Europe Strategy	Part A, Part I and Module 2.0
J.P. Morgan Alternative Index Mean reversion Japan Strategy	Part A, Part I and Module 3.0
J.P. Morgan Alternative Index Short Volatility US Strategy	Part A, Part J and Module 1.0

This Part A sets out the general rules applicable to each Index. The other applicable Part for the Index:

- (a) sets out the rules of the strategy applicable to the Index; and
- (b) contains the Applicable Module that sets out the specific information pertaining to the Index such as (among other information): (1) the name of the Index and Bloomberg ticker; (2) the Underlying Constituent(s) of the Index; and (3) other specific rules (if any) applicable to the Index.

The J.P. Morgan Alternative Index Commodity Carry Strategy also forms part of the J.P. Morgan Alternative Index Series, however, the index rules for such J.P. Morgan Alternative Index are contained in a separate document which is attached as Annex A to this document.

## **1.2 Publication and availability of the Index Rules**

The Index Rules are published by J.P. Morgan Securities Ltd. of 125 London Wall, London EC2Y 5AJ, UK in its capacity as Index Calculation Agent of the Indices.

The Index Calculation Agent may, in its discretion, publish only the Index Rules applicable to one or more of the Indices by removing the Parts and Modules from this document that do not apply to such Indices.

Copies of the Index Rules may be obtained by holders of investments linked to one or more Indices free of charge on request to the Index Calculation Agent.

## **1.3 Amendments**

The Index Rules for an Index may be amended from time to time at the discretion of the Index Calculation Agent and will be re-published (in a manner determined by the Index Calculation Agent from time to time) no later than one calendar month following such amendment.

Although the Index Rules are intended to be comprehensive, ambiguities may arise. If so, the Index Calculation Agent will resolve such ambiguities and, if necessary, amend the Index Rules to reflect such resolution.

## **1.4 No offer of securities**

The Index Rules neither constitute an offer to purchase or sell securities nor specific advice of whatever form (tax, legal, accounting or regulatory) in respect of any investment strategy or investment that may be linked to an Index.

# **2. Synthetic strategies, no Underlying Constituents nor assets held**

The Indices are constructed on “notional” Underlying Constituent(s) because there is no actual portfolio of underlying constituents nor assets to which any person is entitled or in which any person has any ownership interest. The Indices merely identify certain Underlying Constituent(s) and rules-based trading strategies, the performance of which are used as a reference point for the purposes of calculating the level of each respective Index.

# **3. Index Calculation Agent**

## **3.1 Identity**

J.P. Morgan Securities Ltd or any affiliate or subsidiary designated by it will act as calculation agent in connection with each Index (the “**Index Calculation Agent**”).

## **3.2 Index Calculation Agent standards**

The Index Calculation Agent shall act in good faith and in a commercially reasonable manner in respect of determinations made by it pursuant to the Index Rules.

## **3.3 Index Calculation Agent determinations**

All determinations of the Index Calculation Agent pursuant to the Index Rules in respect of an Index and interpretation of the Index Rules shall be final, conclusive and binding and no person shall be entitled to make any claim against the Index Calculation Agent or any of the Relevant Persons in respect thereof. Neither the Index Calculation Agent nor any Relevant Person shall:

- (a) be under any obligation to revise any determination or calculation made or action taken for any reason in connection with the Index Rules or an Index; or
- (b) have any responsibility to any person (whether as a result of negligence or otherwise) for any determinations made or anything done (or omitted to be determined or done) in respect of any Index or in respect of the publication of any Index Level (or failure to publish such level) or any use to which any person may put an Index or the Index Levels.

## 4. Calculation of Index Levels

### 4.1 Start Level and Start Date

The Start Level and Start Date of an Index are specified in the Applicable Module.

### 4.2 Publication of Index Levels

Subject to section 4.3 below, in respect of each Index, the Index Calculation Agent shall calculate and publish (in a manner determined by the Index Calculation Agent from time to time) the level of the Index (the “**Index Level**”) in respect of each Index Business Day. All Index Levels are rounded to 2 decimal places before being published and calculated in the Currency of the Index.

### 4.3 Market Disruption Events

- (a) If any Index Business Day (including a Rebalancing Date) of an Index (other than a Multi-Strategy Index or Equity Carry Strategy Index) is a Disrupted Day for any Underlying Constituent (each such Underlying Constituent, an “**Affected Constituent**”), the Index Calculation Agent, acting in good faith and a commercially reasonable manner, may (but is not obliged to) either:
  - (i) calculate and publish its good faith estimate of the Index Level for such Index Business Day, using its good faith estimate of the level of the Affected Constituent(s) or any other variable relevant to the calculation of the Index Level; or
  - (ii) not calculate the Index Level for such Index Business Day and suspend the calculation and publication of the Index Level until the first succeeding Index Business Day which is not a Disrupted Day for any Underlying Constituent of the Index. The relevant Disrupted Day shall not be an Index Business Day for the purposes of the Index if the Index Calculation Agent makes a determination pursuant to this paragraph (ii).
- (b) If any Index Business Day (including a Rebalancing Date) of a Multi-Strategy Index or Equity Carry Strategy Index is a Disrupted Day for any Underlying Constituent of the Index (each such Underlying Constituent, an “**Affected Constituent**”), then for the purposes of determining the Index Level for such Index Business Day, the Closing Level for each Affected Constituent in respect of such Disrupted Day shall be deemed to be:
  - (i) where the Affected Constituent is not the AI Commodity Carry Strategy, the Closing Level for the Affected Constituent as of the first following Index Business Day on which the Closing Level of the Affected Constituent is published and is not a Disrupted Day for the Affected Constituent, unless the five Index Business Days immediately following the original Index Business Day are Disrupted Days for such Affected Constituent, in which case the Index Calculation Agent shall determine the Closing Level of the Affected Constituent acting in good faith and using such information and/or methods as it determines, in its reasonable discretion, are appropriate; or
  - (ii) where the Affected Constituent is the AI Commodity Carry Strategy, the Final Adjusted Index Level (as defined in the rules of the AI Commodity Carry Strategy) published for the Affected Constituent in respect of the original Index Business Day, unless no Final Adjusted Index Level is published in respect of such day on or before the day that is six Dealing Days (as defined in the rules of the AI Commodity Carry Strategy) immediately following the original Index Business Day, in which case the Index Calculation Agent shall determine the Closing Level of such Affected Constituent acting in good faith and using such information and/or methods as it determines, in its reasonable discretion, are appropriate.
- (c) If an Inconvertibility Event or FX Disruption Event (that the Index Calculation Agent determines is material) or a Price Source Disruption occurs on any Index Business Day in respect of a Currency relevant to an Index, the Index Calculation Agent may (but is not obliged to) adjust any variable relevant to calculation of the Index Level on such Index Business Day that it deems appropriate.

## 5. Corrections in respect of Indices

If, in respect of an Index:

- (a) the level or price of any Underlying Constituent, variable, input or other matter which is used for any calculation relevant to the Index Level for any Index Business Day is subsequently corrected and the correction is published by the relevant Underlying Constituent Sponsor or relevant publication source; or

- (b) the Index Calculation Agent identifies an error or omission in any of its calculations or determinations in respect of the Index Level for any Index Business Day,

then, the Index Calculation Agent may, if practicable and it considers such correction material, adjust or correct the published Index Level for such day and/or each subsequent Index Business Day and publish (in such manner determined by the Index Calculation Agent) such corrected Index Level(s) as soon as reasonably practicable.

## **6. Extraordinary Events**

### **6.1 Extraordinary Events for Index/Tracker Underlying Constituents**

- (a) If any Index/Tracker Underlying Constituent is (a) not calculated and announced by the Underlying Constituent Sponsor for the relevant Index/Tracker Underlying Constituent, but is calculated and announced by a successor sponsor acceptable to the Index Calculation Agent, or (b) replaced by a successor index or tracker using, in the determination of the Index Calculation Agent, the same or substantially similar formula for and method of calculation as used in the calculation of that Index/Tracker Underlying Constituent, then that Index/Tracker Underlying Constituent will be deemed to be the successor index or tracker so calculated and announced by that successor sponsor or that successor underlying constituent, as the case may be with effect from a date determined by the Index Calculation Agent who may make such adjustment to the Index Rules, as it determines in good faith is appropriate, to account for such change.
- (b) If on or prior to any Index Business Day, any Underlying Constituent Sponsor makes a material change in the formula for or the method of calculating an Index/Tracker Underlying Constituent or in any other way materially modifies that Index/Tracker Underlying Constituent (other than a modification prescribed in that formula or method to maintain that Index/Tracker Underlying Constituent in the event of changes in constituent stock and capitalisation and other routine events), then the Index Calculation Agent shall either (i) calculate the Index Level using, in lieu of a published level for that Index/Tracker Underlying Constituent the level for that Underlying Constituent as at that Index Business Day as determined by the Index Calculation Agent in accordance with the formula for and method of calculating that Index/Tracker Underlying Constituent last in effect prior to that change, but using only those components that comprised that Index/Tracker Underlying Constituent immediately prior to that change (and if the components are futures contracts, any futures contracts required to roll any expiring futures contract in accordance with the method of calculating that Index/Tracker Underlying Constituent) or (ii) select a replacement Underlying Constituent, acting in good faith and a commercially reasonable manner, that possesses similar characteristics to the Index/Tracker Underlying Constituent that is being replaced in its sole and absolute discretion.
- (c) If on or prior to any Index Business Day, any Underlying Constituent Sponsor permanently cancels any Index/Tracker Underlying Constituent that is an index or tracker, and no successor index or tracker exists, the Index Calculation Agent shall, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation methodology, valuation terms or any other rule in relation to the relevant Index to account for such cancellation which may include, without limitation, selecting a replacement constituent for the Index/Tracker Underlying Constituent that is to be replaced.

### **6.2 Currency Extraordinary Events**

If any Currency relevant to an Index is lawfully eliminated, converted, redenominates or exchanges into a new currency ("Successor Currency") then such Currency affected by such elimination, conversion, redenomination or exchange shall be deemed replaced by such Successor Currency with effect from a date determined by the Index Calculation Agent who may make such adjustment to these Index Rules, as it determines in good faith to account for such event.

To the extent that any such elimination, conversion, redenomination or exchange results in any Currency Pair for an Index being the same, the Index Calculation Agent shall, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation methodology, valuation terms or any other rule in relation to the relevant Index to account for such event including without limitation determining that the Index shall cease to exist.

### **6.3 Cancellation of Underlying Constituent licence**

If in respect of an Index, at any time, the licence granted (if required) to the Index Calculation Agent (or its affiliates) to use any Underlying Constituent for the purposes of the Index terminates, or the Index Calculation Agent's rights to use the Underlying Constituent for the purpose of the Index is otherwise

disputed, impaired or ceases (for any reason), the Index Calculation Agent may remove such Underlying Constituent from the Index or replace such Underlying Constituent and may make such adjustments to the Index Rules, each as it determines in good faith to be appropriate to account for such event on such dates as selected by the Index Calculation Agent.

#### **6.4 Alteration of Underlying Constituents**

Without prejudice to the ability of the Index Calculation Agent to amend the Index Rules, the Index Calculation Agent may in respect of an Index, acting in good faith and in a commercially reasonable manner exclude or substitute any Underlying Constituent following the occurrence (and/or continuation) of a Change in Law, and if it excludes or substitutes any Underlying Constituent, then the Index Calculation Agent may adjust the Index Rules as it determines in good faith to be appropriate to account for such exclusion or substitution on such date(s) selected by the Index Calculation Agent.

### **7. Definitions**

Capitalised terms defined below shall have the following meanings in the Index Rules for each Index:

**“AIS Index”** means (a) each index within the Alternative Index Series specified in the table in section 1.1 above; and (b) the AI Commodity Carry Strategy;

**“AI Commodity Carry Strategy”** means the J.P. Morgan Alternative Index Commodity Carry Strategy;

**“Applicable Module”** means, in respect of an Index, the Module which is applicable to the Index as specified in the table in section 1.1 above;

**“Applicable Parts / Module”** means, in respect of an Index, the Parts and Module which are applicable to the Index as specified in the table in section 1.1 above;

**“Bond Disruption Event”** means, in respect of the relevant Underlying Constituent, swap rates are not published on the relevant Reuters Page;

**“Change in Law”** means:

(a) due to:

- (i) the adoption of, or any change in, any applicable law, regulation or rule (including, without limitation, any tax law); 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 U.S. Commodity and Futures Trading Commission or any exchange or trading facility),

in either case, the Index Calculation Agent determines in good faith that (x) it is contrary to such law, rule, regulation or order for any market participants that are brokers or financial intermediaries (individually or collectively) to hold, acquire or dispose of (in whole or in part) any Underlying Constituent of the relevant Index, any transaction referencing the Underlying Constituent or any component of the Underlying Constituent or, (y) holding a position in any Underlying Constituent of the relevant Index, any transaction referencing the Underlying Constituent or any component of the Underlying Constituent is (or, but for the consequent disposal or termination thereof, would otherwise be) in excess of any allowable position limit(s) applicable to any market participants that are brokers or financial intermediaries (individually or collectively) under any such law, rule, regulation in relation to such Underlying Constituent, transaction referencing the Underlying Constituent or component of the Underlying Constituent traded on any exchange(s) or other trading facility (including, without limitation, any relevant exchange); or

(b) the occurrence or existence of any:

- (i) suspension or limitation imposed on trading futures contracts (relating to any Underlying Constituent, any transaction referencing the Underlying Constituent or any component of the Underlying Constituent) including without limitation, commodities futures contracts; or
- (ii) any other event that causes trading in futures contracts (relating to any Underlying Constituent, any transaction referencing the Underlying Constituent or any component of the Underlying Constituent) to cease including without limitation, commodities futures contracts;

**“Closing Level”** in respect of an Index, has the meaning given in the Applicable Parts / Module.

**“Currency”** means, in respect of an Index, the Currency of the Index and each currency that forms part of a Currency Pair (if any) of the Index.

**“Currency of the Index”** means, in respect of an Index, the currency specified as such in the Applicable Module.

**“Currency Pair”** means, in respect of an Index, each Currency Pair (as defined in the Applicable Parts / Module for the Index) notionally comprised in the Index (if any) and each currency pair which is utilised to calculate an FX Rate or FX Forward Points for the Index.

**“Disrupted Day”** means, in respect of an Index Business Day, the occurrence or existence of a Market Disruption Event in respect of an Underlying Constituent for such Index Business Day;

**“Equity Carry Strategy Index”** has the meaning given in Part E.

**“FX Disruption Event”** means:

- (a) an event in relation to any relevant Currency for the Index which the Index Calculation Agent determines has the effect of preventing, restricting or delaying:
  - (i) the convertibility of the Currency into USD through customary legal channels; or
  - (ii) the convertibility of the Currency into USD at a rate at least as favourable as the rate for domestic institutions located in the country whose lawful currency is the Currency (for the purposes of this definition, the **“Relevant Country”**); or
  - (iii) the delivery of the Currency from accounts inside the Relevant Country to accounts outside the Relevant Country; or
  - (iv) the delivery of the Currency between accounts inside the Relevant Country or to a party that is a non-resident of the Relevant Country; or
- (b) the imposition by the Relevant Country (or any political or regulatory authority thereof) of any capital controls, or the publication of any notice of an intention to do so, which the Index Calculation Agent determines is likely to materially affect one or more market participants' ability to obtain reliable spot exchange rate(s) for the Currency from a recognised financial source; or
- (c) the implementation by the Relevant Country (or any political or regulatory authority thereof) or the publication of any notice of an intention to implement any changes to the laws or regulations relating to foreign investment in the Relevant Country (including, but not limited to, changes in tax laws and/or laws relating to capital markets and corporate ownership), which the Index Calculation Agent determines are likely to materially affect the ability of one or more market participants to obtain reliable spot exchange rate(s) for the Currency from a recognised financial information source.

**“FX Rate”** in respect of an Index, has the meaning given in the Applicable Parts / Module.

**“J.P. Morgan Futures Tracker”** means, in respect of an Index, each Underlying Constituent which is a futures tracker for which J.P. Morgan Securities Ltd is the sponsor. The rules of the J.P. Morgan Futures Trackers are attached as Annex B to this document.

**“Inconvertibility Event”** means any event which the Index Calculation Agent determines affects the convertibility of any relevant Currency for the Index into USD on any date and/or at any relevant time;

**“Index Business Day”** in respect of an Index, the index business days specified as such in the Applicable Module, subject to adjustment in accordance with the Index Rules;

**“Index Calculation Agent”** means J.P. Morgan Securities Ltd or any affiliate or subsidiary designated by it in accordance with section 3.1 of this Part A;

**“Index”** means each Index specified in the table in section 1.1 above;

**“Index Level”** has the meaning given in section 4.2 of this Part A;

**“Index Rules”** means, in respect of an Index, the relevant Parts and Modules of the document that comprise the Index Rules for the Index as specified in the table in section 1.1 above;

**“Index/Tracker Underlying Constituent”** means, in respect of an Index, each Underlying Constituent of the Index which is (i) an AIS Index; (ii) a Non-Proprietary Index; or (iii) a J.P. Morgan Futures Tracker.

**“Market Disruption Event”** means, in respect of an Index Business Day, any of the following events occurs:

- (a) where the Underlying Constituent is a Currency Pair, the occurrence or existence of an Inconvertibility Event or FX Disruption Event that the Index Calculation Agent determines is material or a Price Source Disruption;
- (b) where the Underlying Constituent is a notional position in a synthetic bond, the occurrence or existence of a Bond Disruption Event that the Index Calculation Agent determines is material or a Price Source Disruption;
- (c) where the Underlying Constituent is a Non-Proprietary Index, either (i) a failure by the sponsor of the Underlying Constituent to calculate and publish the Closing Level for the Underlying Constituent in respect of such day; or (ii) an event that, in the determination of the Index Calculation Agent, disrupts or impairs the ability of one or more market participants to effect transactions in or obtain market values for any securities or other components of the Underlying Constituent that comprise 20 per cent or more of the level of the Underlying Constituent;
- (d) where the Underlying Constituent is an AIS Index (other than the AI Commodity Carry Strategy) or a J.P. Morgan Futures Tracker, a failure by the sponsor of the index or tracker to calculate and publish the Closing Level for the Underlying Constituent in respect of such day; or
- (e) where the Underlying Constituent is the AI Commodity Carry Strategy, a failure by the sponsor of the index to calculate and publish the level for the Underlying Constituent in respect of such day or the occurrence of a Market Disruption Event (as defined in the rules of the AI Commodity Carry Strategy) in respect of such day.

**“Module”** means, in respect of each Index, the Module of this document applicable to the Index as specified in the table in section 1.1 above.

**“Multi-Strategy Index”** has the meaning given in Part B.

**“Non-Proprietary Index”** means, an Underlying Constituent which is a index (other than an AIS-Index) and includes as at November 2009, the following indices: (i) in respect of the J.P. Morgan Alternative Index Equity Value Carry Strategy, the MSCI Daily Value Total Return Gross World Index and MSCI Daily Total Return Gross World Index, (iii) in respect of the J.P. Morgan Alternative Index Commodity Momentum Energy Strategy, the S&P GSCI Energy Excess Return Index; (iv) in respect of the J.P. Morgan Alternative Index Commodity Momentum Non Energy Strategy, the S&P GSCI Non Energy Excess Return Index; and (v) in respect of the J.P. Morgan Alternative Index Short Volatility US Strategy, the S&P 500 Index;

**“Part”** means, in respect of each Index, the Parts of this document applicable to the Index as specified in the table in section 1.1 above.

**“Price Source Disruption”** means, in respect of any Index Business Day and an FX Rate, FX Forward Points or a relevant interest rate, the Index Calculation Agent determines that it is impossible or practically difficult after using commercially reasonable efforts for one or more market participants to obtain reliable quotes for the relevant FX Rate, FX Forward Points or interest rate (as the case may be).

**“Relevant Persons”** means any affiliate or subsidiary of the Index Calculation Agent or their respective directors, officers, employees, representatives, delegates or agents;

**“Reuters Page”** means the Reuters Page specified in the Applicable Parts / Module for the relevant Index and, in the event that any such page shall cease to exist or be unavailable, shall include such replacement services or pages as determined by the Index Calculation Agent acting in good faith;

**“Start Date”** in respect of an Index, as specified in the Applicable Parts / Module;

**“Start Level”** in respect of an Index, as specified in the Applicable Parts / Module;

**“TARGET”** means the Trans-European Automated Real-time Gross settlement Express Transfer system;

**“Underlying Constituent”** in respect of an Index, each constituent specified as such in the Applicable Parts / Module;

**“Underlying Constituent Sponsor”** means the sponsor or any successor sponsor of the Underlying Constituent, as may be specified in the Module for the relevant Index.

## **Risk Factors**

**The following list of risk factors does not purport to be a complete enumeration or explanation of all the risks associated with the Indices.**

### **Proprietary and rules-based Indices**

The Indices follow notional rules-based proprietary trading strategies that operate on the basis of pre-defined rules. Accordingly, potential investors in investment products linked to the performance of one or more Indices should determine whether the applicable rules-based proprietary trading strategies (as described in the Index Rules for the Index) are appropriate in light of their individual circumstances and investment objectives.

**No assurance can be given that any synthetic investment strategy on which an Index is based will be successful or that any Index will outperform any alternative strategy that might be employed in respect of the Underlying Constituent(s) of the Index.**

### **Notional Exposure**

The Indices are constructed on “notional” Underlying Constituent(s) because there is no actual portfolio of underlying constituents or assets to which any person is entitled or in which any person has any ownership interest. Each Index merely identifies certain Underlying Constituent(s) and a notional rules-based proprietary trading strategy, the performance of which are used as a reference point for the purposes of calculating the level of the Index. Consequently, investors in investment products which are linked to the performance of one or more Indices will not have any claim against any of the Underlying Constituents which are comprised in the relevant Indices.

### **Lack of Operating History**

The Indices are only recently established and therefore have no history to evaluate their likely performance. Any back-testing or similar analysis performed by any person in respect of an Index must be considered illustrative only and may be based on estimates or assumptions not used by the Index Calculation Agent when determining the Index Level.

Past performance should not be considered indicative of future performance.

### **The Indices are “excess return” indices**

The Indices are “excess return” indices which means that they measure the returns accrued from notionally investing in uncollateralized assets (e.g. futures and swaps). It doesn't reflect the synthetic return you might receive on cash you don't need to post as collateral for such notional investment.

### **Index Level**

The levels of the Underlying Constituents and rules-based proprietary trading strategies can be volatile and move dramatically over short periods of time. There can be no assurance that the relevant synthetic exposures will not be subject to substantial negative returns. Positive returns on the Indices may therefore be reduced or eliminated entirely due to movements in any of these market parameters.

### **Market Risks**

The performance of an Index is dependent on the performance of the Underlying Constituents of the Index and the relevant notional rules-based proprietary trading strategy. As a consequence, investors in investment products linked to one or more Indices should appreciate that their investment is exposed to the performance of the Underlying Constituents and such rules-based strategies. **For a description of the risks associated with the notional rules-based strategy of an Index, refer to the “Risk Factors” section in the Applicable Parts / Module.**

### **Complex nature of construction of Index**

The publication of the Index Level depends on maintenance of requisite index licences, the continued exchange trading of the applicable futures contracts or other assets that are notionally comprised in certain Underlying Constituents and publication of the levels of the Underlying Constituents and any disturbance or discontinuation of any of these actions may adversely affect the ability of the Index Calculation Agent to continue with the calculation and publication of the Index Level.



## **Extraordinary Events**

Following the occurrence of certain extraordinary events as described in Section 6 of Part A (*Extraordinary Events*) of the Index Rules with respect to an Underlying Constituent, the affected Underlying Constituent may be replaced by a substitute Underlying Constituent.

## **Index Calculation Agent Discretion**

The Index Rules of each Index confer on the Index Calculation Agent discretion in making certain determinations and calculations from time to time. The exercise of such discretion in the making of calculations and determinations may adversely affect the performance of the Indices. Without limitation to the generality of the foregoing, the Index Calculation Agent has a discretion in relation to the calculation of the Index Level in the event of (amongst other events) a Market Disruption Event in respect of an Underlying Constituent.

## **Foreign Exchange Rate Risk**

The level of an Underlying Constituent of an Index which is not denominated in the Currency of the Index will be notionally converted into the Currency of the Index at the prevailing FX Rate for such currency. Such Indices will therefore be exposed to fluctuations in the rate of exchange between currency of the Underlying Constituent and the Currency of the Index. Such FX Rates therefore, have an impact (either positive or negative) on the performance of such Indices.

In addition, it should be noted that Underlying Constituents may contain synthetic exposure to assets which are not denominated in the currency of such Underlying Constituent. In these circumstances there will also be exposure to exchange rate risk within such Underlying Constituents.

Exchange rates can be volatile and move dramatically over short periods of time.

## **Potential Conflicts of Interest**

Potential conflicts of interest may exist in the structure and operation of an Index and the course of the normal business activities of the Index Calculation Agent and any Relevant Person.

During the course of their normal business, the Index Calculation Agent and each Relevant Person may enter into or promote, offer or sell transactions or investments (structured or otherwise) linked to the Indices. In addition, the Index Calculation Agent and any Relevant Person may have, or may have had, interests or positions, or may buy, sell or otherwise trade positions in or relating to the Indices, or may invest or engage in transactions with other persons, or on behalf of such persons relating to any of these items. Such activity may or may not have an impact on the Index Level of an Index but all persons reading this document should be aware that a conflict of interest could arise where anyone is acting in more than one capacity, and such conflict may have an impact, positive or negative on the Index Level. Neither the Index Calculation Agent nor any Relevant Person has any duty to consider the circumstances of any person when participating in such transactions or to conduct themselves in a manner that is favourable to anyone with exposure to the Indices.

**The foregoing list of risk factors is not intended to be exhaustive. All persons should seek such advice as they consider necessary from their professional advisors, legal, tax or otherwise, without reliance on the Index Calculation Agent or any of its affiliates or subsidiaries or any of their respective directors, officers, employees, representatives, delegates or agents.**

## **Notices, Disclaimers and Conflicts**

These Index Rules have been developed with the possibility of the Index Calculation Agent or any of the Relevant Persons entering into or promoting, offering or selling transactions or investments (structured or otherwise) linked to one or more Indices and the hedging such transactions or investments in any manner that they see fit. Accordingly, it should be assumed that these Index Rules have and will be analyzed from this point of view.

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## PART B

### J.P. Morgan Alternative Index Multi-Strategies

#### 1. Introduction

The multi-strategy rules set out in this Part B apply to each of the Indices in the Modules to this Part B (each a “**Multi-Strategy Index**” or “**Index**” and together the “**Multi-Strategy Indices**” or “**Indices**”). The Index Rules of each Multi-Strategy Index are comprised of Part A, this Part B and the Applicable Module to this Part B.

Each Multi-Strategy Index tracks exposure to various strategies (including momentum, carry and satellite strategies) over four different assets classes in different geographic regions. The exposure is provided by referencing the Underlying Constituents which encompass the relevant strategies, asset classes and geographic regions. The Underlying Constituents of each Multi-Strategy Index are rebalanced on each Rebalancing Date. The Underlying Constituents are comprised of proprietary indices comprised in the J.P. Morgan Alternative Index Series, the Index Rules<sup>1</sup> of which are contained in other sections of this document.

Each Multi-Strategy Index seeks to cap the expected volatility of that strategy at the “Target Volatility” set out in the Applicable Module.

For each Multi-Strategy Index, the Applicable Module sets out (among other things) the:

- name of the Index and Bloomberg ticker;
- Index Business Days of the Index;
- Rebalancing Selection Dates and Rebalancing Dates of the Index;
- Underlying Constituents of the Index and their Scaling Weights;
- Number of Underlying Constituents notionally comprised in the Index;
- Adjustment Factor of the Index;
- Leverage Limit of the Index;
- Target Volatility of the Index; and
- FX Reference Rates for the Underlying Constituents.

#### 2. Rebalancing of Underlying Constituents

##### 2.1 Rebalancing Selection Dates and Rebalancing Dates

In respect of each Rebalancing Selection Date, the Index Calculation Agent will determine the weight (“**Weight**”) to be assigned to each Underlying Constituent on the immediately following Rebalancing Date in accordance with the methodology described in sections 2.2 to 2.4 below. The effective Weight of each Underlying Constituent within a Multi-Strategy Index may fluctuate from one Rebalancing Date to the next Rebalancing Date due to movements in the levels of the Underlying Constituents.

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<sup>1</sup> Other than in respect of the J.P. Morgan Alternative Index Commodity Carry Strategy.

## 2.2 First Step: Calculate the Volatility of each Underlying Constituent

In respect of each Rebalancing Selection Date  $k$ , the Index Calculation Agent will determine the volatility of each Underlying Constituent  $i$  (“**Underlying Constituent Volatility**” and denoted as “**UC Vol<sub>i,k</sub>**”) by reference to the maximum historical 1 year volatility (denoted as “**1Y Vol<sub>i,t</sub>**”) observed on each weekday of the 5 years prior to and including the Rebalancing Selection Date in accordance with the following formulae:

$$1Y Vol_{i,t} = \sqrt{260 \times \left\{ \frac{259 \times \sum_{n=t-258}^t R_{i,n}^2 - \left( \sum_{n=t-258}^t R_{i,n} \right)^2}{259 \times 258} \right\}}$$

where:

$t$  is each weekday of the 5 years prior to and including the Rebalancing Selection Date;

$$R_{i,n} = \ln \left( \frac{S_{i,n}}{S_{i,n-1}} \right)$$

$S_{i,n}$  means the Closing Level of Underlying Constituent  $i$  on weekday  $n$ ;

$S_{i,n-1}$  means the Closing Level of Underlying Constituent  $i$  on weekday  $n-1$ ;

**Closing Level** means, in respect of any day, the official closing level of the Underlying Constituent on such day or if there is no official closing level for the Underlying Constituent on such day the most recently published closing level prior to such day.

The Underlying Constituent Volatility of each Underlying Constituent is then calculated as:

$$UC Vol_{i,k} = \text{Maximum}_{k-1299 \leq t \leq k} (1Y Vol_{i,t})$$

where:

$k$  is Rebalancing Selection Date  $k$ .

## 2.3 Second Step: Calculate the Preliminary Weight of each Underlying Constituent

Immediately after determining the Underlying Constituent Volatility of each Underlying Constituent in respect of Rebalancing Selection Date  $k$ , the Index Calculation Agent shall calculate the preliminary weight of each Underlying Constituent (“**Preliminary Weight**” and denoted as “**PW<sub>i,k</sub>**”) in accordance with the following formula:

$$PW_{i,k} = \frac{\text{Target Volatility} \times \text{Scaling Weight}_i}{UC Vol_{i,k}}$$

where:

**Target Volatility** means the Target Volatility of the Index as specified in the Applicable Module;

**Scaling Weight  $i$**  means the Scaling Weight of the Underlying Constituent as specified in the Applicable Module.

## 2.4 Final Step: Calculate the final Weights of each Underlying Constituent

Immediately after determining the Preliminary Weight of each Underlying Constituent in respect of Rebalancing Selection Date  $k$ , the Index Calculation Agent shall calculate the final Weight to be assigned to each Underlying Constituent (denoted as “**W<sub>i,k</sub>**”) on the Rebalancing Date immediately following the Rebalancing Selection Date in accordance with the following formula.

$$W_{i,k} = \text{MIN} \left( \frac{\text{Leverage Limit}}{\text{Sum Weights}_k}, \frac{\text{Target Volatility}}{\text{Portfolio Vol}_k} \right) \times PW_{i,k}$$

where:

**Leverage Limit** means the Leverage Limit of the Index as specified in the Applicable Module;

**Portfolio Vol  $k$**  means the portfolio volatility as determined by the Index Calculation Agent by reference to the maximum standard deviation of historic daily returns (i.e. volatility) over a period of 1 year of a basket of the Underlying Constituents (based on the Preliminary Weights) observed on each weekday of the 5 years prior to and including the Rebalancing Selection Date.

**Target Volatility** means the Target Volatility of the Index as specified in the Applicable Module;

**Sum Weights $_k$**  means the sum of all Preliminary Weights of the Underlying Constituents as of Rebalancing Selection Date  $k$ , calculated as

$$\text{Sum Weights}_k = \sum_{i=1}^N \text{PW}_{i,k}$$

**$N$**  means the Number of Underlying Constituents comprised in the Index as specified in the Applicable Module.

### 3. Calculation of Index Levels

Subject to section 4.3 of Part A (Market Disruption Events), the Index Level for each Multi-Strategy Index shall be calculated in respect of each Index Business Day from but excluding each Rebalancing Date  $t_k$  to and including Rebalancing Date  $t_{k+1}$  as follows:

$$\text{Index}_{k,t} = \text{Index}_k \times (1 + \text{Return}_{k,t})$$

where:

**Index $_{k,t}$**  means the Index Level on Index Business Day  $t$ ;

**Index $_k$**  means the Index Level on Rebalancing Date  $k$ ;

$$\text{Return}_{k,t} = \sum_{i=1}^N \left( \frac{S_{k,t}^i}{S_k^i} - 1 \right) \times W_{i,k} \times \frac{FX_k^i}{FX_{k,t}^i} - A \times \frac{(t-k)}{360}$$

where:

**$N$**  means the Number of Underlying Constituents comprised in the Index as specified in the Applicable Module;

**$S_{k,t}^i$**  means the Closing Level of Underlying Constituent  $i$  on Index Business Day  $t$ ;

**$S_k^i$**  means the Closing Level of Underlying Constituent  $i$  on Rebalancing Date  $k$ ;

**Closing Level** means, subject to section 4.3 of Part A (Market Disruption Events), the official closing level of the Underlying Constituent;

**$FX_{k,t}^i$**  means the FX Rate on Index Business Day  $t$  of Underlying Constituent  $i$ ;

**$FX_k^i$**  means the FX Rate on Rebalancing Date  $k$  of Underlying Constituent  $i$ ;

**FX Rate** means, in respect of an Underlying Constituent, the spot exchange rate of the currency of the Underlying Constituent and the Currency of the Index (each as specified in the Applicable Module) determined by the Index Calculation Agent from the daily fixes published on the Bloomberg page for the WMS references (FX Reference Rate) specified in the Applicable Module, expressed as the number of the Currency of the Underlying Constituent per one (1) Currency of the Index on the relevant date. If the relevant rate is not published on the relevant date (or such other page as may replace that page on that service, or such other service as may be nominated as the information vendor, for the purpose of displaying rates or prices comparable to that rate), the “**FX Rate**” shall be the rate determined by the Index Calculation Agent taking into account all information that in good faith it deems relevant.

**$W_{i,k}$**  means the final Weight assigned to Underlying Constituent  $i$  on Rebalancing Date  $k$  in accordance with section 2 above;

**$A$**  means the notional Adjustment Factor as specified in the Module for the Index; and

**(t-k)** means the number of calendar days from (but excluding) Rebalancing Date k to (and including) Index Business Day t.

#### **4. Risk Factors**

##### **4.1 Target Volatility Strategy and Multiple underlying strategies**

Each Multi-Strategy Index (1) tracks exposure to various strategies (including momentum, carry and satellite strategies) over four different assets classes in different geographic regions - the exposure is provided by referencing the Underlying Constituents which encompass the relevant strategies, asset classes and geographic regions; and (2) seeks to cap the expected volatility of the Multi-Strategy Index at the "Target Volatility" set out in the Applicable Module.

**No assurance can be given that the investment strategy used to construct the Multi-Strategy Indices will be successful or that the Multi-Strategy Indices will outperform any alternative strategy that might be constructed from the Underlying Constituents of the relevant Multi-Strategy Index.**

##### **4.2 Leverage**

###### **Futures contracts and use of leverage**

The notional components of the Underlying Constituent may include highly leveraged instruments (e.g. futures contracts) and their use as components of any Underlying Constituent of a Multi-Strategy Index may potentially result in higher volatility than in the absence of the usage of such instruments.

###### **Leveraged exposure**

Some of the underlying Multi-Strategy Indices may use leverage to increase the return from any Underlying Constituent. However, the use of leverage also increases the potential risk of negative returns of such Multi-Strategy Index. Any event which adversely affects the value of the notional components of an Underlying Constituent will be magnified to the extent the Underlying Constituent is leveraged.

##### **4.3 Other Risk Factors**

Also see the "Risk Factors" section contained in Part A for other risk factors applicable to the Multi-Strategy Indices.

**Module B1.0:****J.P. Morgan Alternative Index Multi-Strategy 2.5 (USD)****J.P. Morgan Alternative Index Multi-Strategy 5 (USD)****J.P. Morgan Alternative Index Multi-Strategy 10 (USD)**

This Module B1.0 sets out the specific information pertaining to the following Indices:

- J.P. Morgan Alternative Index Multi-Strategy 2.5 (USD);
- J.P. Morgan Alternative Index Multi-Strategy 5 (USD); and
- J.P. Morgan Alternative Index Multi-Strategy 10 (USD).

**Specific information pertaining to the J.P. Morgan Alternative Index Multi-Strategy 2.5 (USD)**

Name of Index	J.P. Morgan Alternative Index Multi-Strategy 2.5 (USD) (Bloomberg ticker AIJPM2UE)
Target Volatility	2.5%
Leverage Limit	100%
Adjustment Factor	0.40%

**Specific information pertaining to the J.P. Morgan Alternative Index Multi-Strategy 5 (USD)**

Name of Index	J.P. Morgan Alternative Index Multi-Strategy 5 (USD) (Bloomberg ticker AIJPM5UE)
Target Volatility	5%
Leverage Limit	200%
Adjustment Factor	0.80%

**Specific information pertaining to the J.P. Morgan Alternative Index Multi-Strategy 10 (USD)**

Name of Index	J.P. Morgan Alternative Index Multi-Strategy 10 (USD) (Bloomberg ticker AIJP1TUE)
Target Volatility	10%
Leverage Limit	400%
Adjustment Factor	1.60%

**Specific information pertaining to EACH of the:**

- J.P. Morgan Alternative Index Multi-Strategy 2.5 (USD);
- J.P. Morgan Alternative Index Multi-Strategy 5 (USD); and
- J.P. Morgan Alternative Index Multi-Strategy 10 (USD).

Currency of the Index:	US Dollar
Index Business Days:	Each day (other than a Saturday or Sunday) on which (a) commercial banks in London, New York and Tokyo are open generally for business (including for dealings in foreign exchange and foreign currency deposits) and (b) TARGET is open.
Rebalancing Selection Dates:	Each day that is one Index Business Day prior to each scheduled Rebalancing Date.
Rebalancing Dates:	The first Index Business Day of each month.
Start Date:	3 August 2009
Start Level:	100.00
Number of Underlying Constituents:	26 (as at the Start Date)

i	Underlying Constituents	Bloomberg Ticker	Currency	FX Reference Rate	Investment Strategy	Asset Class	Geographic Region	Scaling Weight	See Module
1	J.P. Morgan Alternative Index US Equity Momentum Strategy	AIJPMUU	USD	NA	Momentum	Equities	US	3.750%	C1.0
2	J.P. Morgan Alternative Index European Equity Momentum Strategy	AIJPMEEE	EUR	EUR WMCO	Momentum	Equities	Europe	3.750%	C2.0
3	J.P. Morgan Alternative Index Japan Equity Momentum Strategy	AIJPMEEJ	JPY	JPY WMCO	Momentum	Equities	Japan	3.750%	C3.0
4	J.P. Morgan Alternative Index Money Market Momentum US Strategy	AIJPMUU	USD	NA	Momentum	Rates	US	3.750%	C4.0
5	J.P. Morgan Alternative Index Money Market Momentum Europe Strategy	AIJPMEEE	EUR	EUR WMCO	Momentum	Rates	Europe	3.75%	C5.0
6	J.P. Morgan Alternative Index Money Market Momentum Japan Strategy	AIJPMEEJ	JPY	JPY WMCO	Momentum	Rates	Japan	3.750%	C6.0
7	J.P. Morgan Alternative Index EURUSD FX Momentum Strategy	AIJPMF1U	USD	NA	Momentum	FX	Global	1.875%	D1.0
8	J.P. Morgan Alternative Index USDJPY FX Momentum Strategy	AIJPMF2U	USD	NA	Momentum	FX	Global	1.875%	D2.0
9	J.P. Morgan Alternative Index EURJPY FX Momentum Strategy	AIJPMF3U	USD	NA	Momentum	FX	Global	1.875%	D3.0
10	J.P. Morgan Alternative Index USDCAD FX Momentum Strategy	AIJPMF4U	USD	NA	Momentum	FX	Global	1.875%	D4.0
11	J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy	AIJPMF5U	USD	NA	Momentum	FX	Global	1.875%	D5.0
12	J.P. Morgan Alternative Index EURGBP FX Momentum Strategy	AIJPMF6U	USD	NA	Momentum	FX	Global	1.875%	D6.0
13	J.P. Morgan Alternative Index Commodity Momentum Energy Strategy	AIJPMCEU	USD	NA	Momentum	Commodities	Global	5.625%	C7.0
14	J.P. Morgan Alternative Index Commodity Momentum Non Energy Strategy	AIJPMCNU	USD	NA	Momentum	Commodities	Global	5.625%	C8.0
15	J.P. Morgan Alternative Index Equity Value Carry Strategy	AIJPCE1U	USD	NA	Carry	Equities	Global	5.625%	E1.0
16	J.P. Morgan Alternative Index Equity Small Cap Carry Strategy	AIJPCE2U	USD	NA	Carry	Equities	US	5.625%	E2.0
17	J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy	AIJPCB1U	USD	NA	Carry	Rates	Global	2.8125%	F1.0
18	J.P. Morgan Alternative Index Bond 2Y Long-Short Carry Strategy	AIJPCB2U	USD	NA	Carry	Rates	Global	2.8125%	H1.0
19	J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy	AIJPCB3U	USD	NA	Carry	Rates	Global	2.8125%	F2.0
20	J.P. Morgan Alternative Index Bond 10Y Long-Short Carry Strategy	AIJPCB4U	USD	NA	Carry	Rates	Global	2.8125%	H2.0
21	J.P. Morgan Alternative Index G10 FX Carry Strategy	AIJPCF1U	USD	NA	Carry	FX	Global	11.250%	I1.0
22	J.P. Morgan Alternative Index Commodity Carry Strategy	AIJPCC1U	USD	NA	Carry	Commodities	Global	11.250%	N/A*
23	J.P. Morgan Alternative Index Mean reversion US Strategy	AIJPSR1U	USD	NA	Mean Reversion	Equities	US	1.6667%	J1.0
24	J.P. Morgan Alternative Index Mean reversion Europe Strategy	AIJPSR1E	EUR	EUR WMCO	Mean Reversion	Equities	Europe	1.6667%	J2.0
25	J.P. Morgan Alternative Index Mean reversion Japan Strategy	AIJPSR1J	JPY	NA	Mean Reversion	Equities	Japan	1.6667%	J3.0
26	J.P. Morgan Alternative Index Short volatility US Strategy	AIJPSV1U	USD	NA	Short Volatility	Equities	US	5.000%	K1.0

\*This document does not contain the index rules for the J.P. Morgan Alternative Index Commodity Carry Strategy. The index rules for such Underlying Constituent are contained in a separate document which may be obtained by investors of investment products linked to a Multi-Strategy Index on request, free of charge, to the Index Calculation Agent.



**Module B2.0:****J.P. Morgan Alternative Index Multi-Strategy 2.5 (EUR)****J.P. Morgan Alternative Index Multi-Strategy 5 (EUR)****J.P. Morgan Alternative Index Multi-Strategy 10 (EUR)**

This Module B2.0 sets out the specific information pertaining to the following Indices:

- J.P. Morgan Alternative Index Multi-Strategy 2.5 (EUR);
- J.P. Morgan Alternative Index Multi-Strategy 5 (EUR); and
- J.P. Morgan Alternative Index Multi-Strategy 10 (EUR).

**Specific information pertaining to the J.P. Morgan Alternative Index Multi-Strategy 2.5 (EUR)**

Name of Index	J.P. Morgan Alternative Index Multi-Strategy 2.5 (EUR) (Bloomberg ticker AIJPM2EE)
Target Volatility	2.5%
Leverage Limit	100%
Adjustment Factor	0.40%

**Specific information pertaining to the J.P. Morgan Alternative Index Multi-Strategy 5 (EUR)**

Name of Index	J.P. Morgan Alternative Index Multi-Strategy 5 (EUR) (Bloomberg ticker AIJPM5EE)
Target Volatility	5%
Leverage Limit	200%
Adjustment Factor	0.80%

**Specific information pertaining to the J.P. Morgan Alternative Index Multi-Strategy 10 (EUR)**

Name of Index	J.P. Morgan Alternative Index Multi-Strategy 10 (EUR) (Bloomberg ticker AIJP1TEE)
Target Volatility	10%
Leverage Limit	400%
Adjustment Factor	1.60%

**Specific information pertaining to EACH of the:**

- J.P. Morgan Alternative Index Multi-Strategy 2.5 (EUR);
- J.P. Morgan Alternative Index Multi-Strategy 5 (EUR); and
- J.P. Morgan Alternative Index Multi-Strategy 10 (EUR).

Currency of the Index:	Euro
Index Business Days:	Each day (other than a Saturday or Sunday) on which (a) commercial banks in London, New York and Tokyo are open generally for business (including for dealings in foreign exchange and foreign currency deposits) and (b) TARGET is open.
Rebalancing Selection Dates:	Each day that is one Index Business Day prior to each scheduled Rebalancing Date.
Rebalancing Dates:	The first Index Business Day of each month.
Start Date:	3 August 2009
Start Level:	100.00
Number of Underlying Constituents:	26 (as at the Start Date)

i	Underlying Constituents	Bloomberg Ticker	Currency	FX Reference Rate	Investment Strategy	Asset Class	Geographic Region	Scaling Weight	See Module
1	J.P. Morgan Alternative Index US Equity Momentum Strategy	AIJPMUU	USD	NA	Momentum	Equities	US	3.750%	C1.0
2	J.P. Morgan Alternative Index European Equity Momentum Strategy	AIJPMEEE	EUR	EUR WMCO	Momentum	Equities	Europe	3.750%	C2.0
3	J.P. Morgan Alternative Index Japan Equity Momentum Strategy	AIJPMEEJ	JPY	JPY WMCO	Momentum	Equities	Japan	3.750%	C3.0
4	J.P. Morgan Alternative Index Money Market Momentum US Strategy	AIJPMUU	USD	NA	Momentum	Rates	US	3.750%	C4.0
5	J.P. Morgan Alternative Index Money Market Momentum Europe Strategy	AIJPMEEE	EUR	EUR WMCO	Momentum	Rates	Europe	3.75%	C5.0
6	J.P. Morgan Alternative Index Money Market Momentum Japan Strategy	AIJPMEEJ	JPY	JPY WMCO	Momentum	Rates	Japan	3.750%	C6.0
7	J.P. Morgan Alternative Index EURUSD FX Momentum Strategy	AIJPMF1U	USD	NA	Momentum	FX	Global	1.875%	D1.0
8	J.P. Morgan Alternative Index USDJPY FX Momentum Strategy	AIJPMF2U	USD	NA	Momentum	FX	Global	1.875%	D2.0
9	J.P. Morgan Alternative Index EURJPY FX Momentum Strategy	AIJPMF3U	USD	NA	Momentum	FX	Global	1.875%	D3.0
10	J.P. Morgan Alternative Index USDCAD FX Momentum Strategy	AIJPMF4U	USD	NA	Momentum	FX	Global	1.875%	D4.0
11	J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy	AIJPMF5U	USD	NA	Momentum	FX	Global	1.875%	D5.0
12	J.P. Morgan Alternative Index EURGBP FX Momentum Strategy	AIJPMF6U	USD	NA	Momentum	FX	Global	1.875%	D6.0
13	J.P. Morgan Alternative Index Commodity Momentum Energy Strategy	AIJPMCEU	USD	NA	Momentum	Commodities	Global	5.625%	C7.0
14	J.P. Morgan Alternative Index Commodity Momentum Non Energy Strategy	AIJPMCNU	USD	NA	Momentum	Commodities	Global	5.625%	C8.0
15	J.P. Morgan Alternative Index Equity Value Carry Strategy	AIJPCE1U	USD	NA	Carry	Equities	Global	5.625%	E1.0
16	J.P. Morgan Alternative Index Equity Small Cap Carry Strategy	AIJPCE2U	USD	NA	Carry	Equities	US	5.625%	E2.0
17	J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy	AIJPCB1U	USD	NA	Carry	Rates	Global	2.8125%	F1.0
18	J.P. Morgan Alternative Index Bond 2Y Long-Short Carry Strategy	AIJPCB2U	USD	NA	Carry	Rates	Global	2.8125%	H1.0
19	J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy	AIJPCB3U	USD	NA	Carry	Rates	Global	2.8125%	F2.0
20	J.P. Morgan Alternative Index Bond 10Y Long-Short Carry Strategy	AIJPCB4U	USD	NA	Carry	Rates	Global	2.8125%	H2.0
21	J.P. Morgan Alternative Index G10 FX Carry Strategy	AIJPCF1U	USD	NA	Carry	FX	Global	11.250%	I1.0
22	J.P. Morgan Alternative Index Commodity Carry Strategy	AIJPCC1U	USD	NA	Carry	Commodities	Global	11.250%	N/A*
23	J.P. Morgan Alternative Index Mean reversion US Strategy	AIJPSR1U	USD	NA	Mean Reversion	Equities	US	1.6667%	J1.0
24	J.P. Morgan Alternative Index Mean reversion Europe Strategy	AIJPSR1E	EUR	EUR WMCO	Mean Reversion	Equities	Europe	1.6667%	J2.0
25	J.P. Morgan Alternative Index Mean reversion Japan Strategy	AIJPSR1J	JPY	NA	Mean Reversion	Equities	Japan	1.6667%	J3.0
26	J.P. Morgan Alternative Index Short volatility US Strategy	AIJPSV1U	USD	NA	Short Volatility	Equities	US	5.000%	K1.0

\*This document does not contain the index rules for the J.P. Morgan Alternative Index Commodity Carry Strategy. The index rules for such Underlying Constituent are contained in a separate document which may be obtained by investors of investment products linked to a Multi-Strategy Index on request, free of charge, to the Index Calculation Agent.

**Module B3.0:****J.P. Morgan Alternative Index Multi-Strategy 2.5 (JPY)****J.P. Morgan Alternative Index Multi-Strategy 5 (JPY)****J.P. Morgan Alternative Index Multi-Strategy 10 (JPY)**

This Module B2.0 sets out the specific information pertaining to the following Indices:

- J.P. Morgan Alternative Index Multi-Strategy 2.5 (JPY);
- J.P. Morgan Alternative Index Multi-Strategy 5 (JPY); and
- J.P. Morgan Alternative Index Multi-Strategy 10 (JPY).

**Specific information pertaining to the J.P. Morgan Alternative Index Multi-Strategy 2.5 (JPY)**

Name of Index	J.P. Morgan Alternative Index Multi-Strategy 2.5 (JPY) (Bloomberg ticker AIJPM2JE)
Target Volatility	2.5%
Leverage Limit	100%
Adjustment Factor	0.40%

**Specific information pertaining to the J.P. Morgan Alternative Index Multi-Strategy 5 (JPY)**

Name of Index	J.P. Morgan Alternative Index Multi-Strategy 5 (JPY) (Bloomberg ticker AIJPM5JE)
Target Volatility	5%
Leverage Limit	200%
Adjustment Factor	0.80%

**Specific information pertaining to the J.P. Morgan Alternative Index Multi-Strategy 10 (JPY)**

Name of Index	J.P. Morgan Alternative Index Multi-Strategy 10 (JPY) (Bloomberg AIJP1TJE)
Target Volatility	10%
Leverage Limit	400%
Adjustment Factor	1.60%

**Specific information pertaining to EACH of the:**

- J.P. Morgan Alternative Index Multi-Strategy 2.5 (JPY);
- J.P. Morgan Alternative Index Multi-Strategy 5 (JPY); and
- J.P. Morgan Alternative Index Multi-Strategy 10 (JPY).

Currency of the Index:	JPY
Index Business Days:	Each day (other than a Saturday or Sunday) on which (a) commercial banks in London, New York and Tokyo are open generally for business (including for dealings in foreign exchange and foreign currency deposits) and (b) TARGET is open.
Rebalancing Selection Dates:	Each day that is one Index Business Day prior to each scheduled Rebalancing Date.
Rebalancing Dates:	The first Index Business Day of each month.
Start Date:	3 August 2009
Start Level:	100.00
Number of Underlying Constituents:	26 (as at the Start Date)

i	Underlying Constituents	Bloomberg Ticker	Currency	FX Reference Rate	Investment Strategy	Asset Class	Geographic Region	Scaling Weight	See Module
1	J.P. Morgan Alternative Index US Equity Momentum Strategy	AIJPMUU	USD	NA	Momentum	Equities	US	3.750%	C1.0
2	J.P. Morgan Alternative Index European Equity Momentum Strategy	AIJPMEEE	EUR	EUR WMCO	Momentum	Equities	Europe	3.750%	C2.0
3	J.P. Morgan Alternative Index Japan Equity Momentum Strategy	AIJPMEEJ	JPY	JPY WMCO	Momentum	Equities	Japan	3.750%	C3.0
4	J.P. Morgan Alternative Index Money Market Momentum US Strategy	AIJPMUU	USD	NA	Momentum	Rates	US	3.750%	C4.0
5	J.P. Morgan Alternative Index Money Market Momentum Europe Strategy	AIJPMEEE	EUR	EUR WMCO	Momentum	Rates	Europe	3.75%	C5.0
6	J.P. Morgan Alternative Index Money Market Momentum Japan Strategy	AIJPMEEJ	JPY	JPY WMCO	Momentum	Rates	Japan	3.750%	C6.0
7	J.P. Morgan Alternative Index EURUSD FX Momentum Strategy	AIJPMF1U	USD	NA	Momentum	FX	Global	1.875%	D1.0
8	J.P. Morgan Alternative Index USDJPY FX Momentum Strategy	AIJPMF2U	USD	NA	Momentum	FX	Global	1.875%	D2.0
9	J.P. Morgan Alternative Index EURJPY FX Momentum Strategy	AIJPMF3U	USD	NA	Momentum	FX	Global	1.875%	D3.0
10	J.P. Morgan Alternative Index USDCAD FX Momentum Strategy	AIJPMF4U	USD	NA	Momentum	FX	Global	1.875%	D4.0
11	J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy	AIJPMF5U	USD	NA	Momentum	FX	Global	1.875%	D5.0
12	J.P. Morgan Alternative Index EURGBP FX Momentum Strategy	AIJPMF6U	USD	NA	Momentum	FX	Global	1.875%	D6.0
13	J.P. Morgan Alternative Index Commodity Momentum Energy Strategy	AIJPMCEU	USD	NA	Momentum	Commodities	Global	5.625%	C7.0
14	J.P. Morgan Alternative Index Commodity Momentum Non Energy Strategy	AIJPMCNU	USD	NA	Momentum	Commodities	Global	5.625%	C8.0
15	J.P. Morgan Alternative Index Equity Value Carry Strategy	AIJPCE1U	USD	NA	Carry	Equities	Global	5.625%	E1.0
16	J.P. Morgan Alternative Index Equity Small Cap Carry Strategy	AIJPCE2U	USD	NA	Carry	Equities	US	5.625%	E2.0
17	J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy	AIJPCB1U	USD	NA	Carry	Rates	Global	2.8125 %	F1.0
18	J.P. Morgan Alternative Index Bond 2Y Long-Short Carry Strategy	AIJPCB2U	USD	NA	Carry	Rates	Global	2.8125 %	H1.0
19	J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy	AIJPCB3U	USD	NA	Carry	Rates	Global	2.8125 %	F2.0
20	J.P. Morgan Alternative Index Bond 10Y Long-Short Carry Strategy	AIJPCB4U	USD	NA	Carry	Rates	Global	2.8125 %	H2.0
21	J.P. Morgan Alternative Index G10 FX Carry Strategy	AIJPCF1U	USD	NA	Carry	FX	Global	11.250 %	I1.0
22	J.P. Morgan Alternative Index Commodity Carry Strategy	AIJPCC1U	USD	NA	Carry	Commodities	Global	11.250 %	N/A*
23	J.P. Morgan Alternative Index Mean reversion US Strategy	AIJPSR1U	USD	NA	Mean Reversion	Equities	US	1.6667 %	J1.0
24	J.P. Morgan Alternative Index Mean reversion Europe Strategy	AIJPSR1E	EUR	EUR WMCO	Mean Reversion	Equities	Europe	1.6667 %	J2.0
25	J.P. Morgan Alternative Index Mean reversion Japan Strategy	AIJPSR1J	JPY	NA	Mean Reversion	Equities	Japan	1.6667 %	J3.0
26	J.P. Morgan Alternative Index Short volatility US Strategy	AIJPSV1U	USD	NA	Short Volatility	Equities	US	5.000%	K1.0

\*This document does not contain the index rules for the J.P. Morgan Alternative Index Commodity Carry Strategy. The index rules for such Underlying Constituent are contained in a separate document which may be obtained by investors of investment products linked to a Multi-Strategy Index on request, free of charge, to the Index Calculation Agent.

## PART C

### J.P. Morgan Alternative Index Momentum Strategies

#### 1. Introduction

The momentum strategy rules set out in this Part C apply to each of the Indices in the Modules to this Part C (each a “**Momentum Strategy Index**” or “**Index**” and together the “**Momentum Strategy Indices**” or “**Indices**”). The Index Rules of each Momentum Strategy Index are comprised of Part A of this document, this Part C and the Applicable Module to this Part C.

Each Momentum Strategy Index tracks the returns of either a notional long or short position in an Underlying Constituent depending on the difference from time to time between the short term average level (the “**Short Term Average**”) and the long term average level (the “**Long Term Average**”) of the Underlying Constituent of the Index. The Momentum Strategy Indices seek to capitalise on positive and negative trends in the price of the Underlying Constituent.

For each Momentum Strategy Index, the Applicable Module sets out (among other things) the:

- name of the Index and Bloomberg ticker;
- Index Business Days of the Index;
- Underlying Constituent of the Index;
- Short Term Window and Long Term Window for determining the Short Term Average and Long Term Average of the Underlying Constituent;
- Adjustment Factor and Rebalancing Adjustment Factor of the Index; and
- Leverage Factor of the Index.

#### 2. Rebalancing of the Underlying Constituent

##### 2.1 Rebalancing Events

The exposure to the Underlying Constituent of an Index can potentially be rebalanced (from long to short exposure or alternatively from short to long exposure) on each Index Business Day on the occurrence of a Rebalancing Event.

The Index Calculation Agent will determine whether a Rebalancing Event has occurred in respect of each Index Business Day. A “**Rebalancing Event**” is deemed to occur in respect of an Index Business Day  $t$  if either:

- (a) (i) the Short Term Average is greater than or equal to the Long Term Average on Index Business Day  $t$ ; and (ii) on Index Business Day  $t-1$  the Short Term Average was less than the Long Term Average; or
- (b) (i) the Short Term Average is less than the Long Term Average on Index Business Day  $t$ ; and (ii) on Index Business Day  $t-1$  the Short Term Average was greater than or equal to the Long Term Average.

##### 2.2 Calculation of Short Term Averages and Long Term Averages

The Short Term Average level of an Underlying Constituent in respect of an Index Business Day reflects the average level of the Underlying Constituent over a recent historical observation period (the “**Short Term Window**”) as specified in the Applicable Module. The Index Calculation Agent shall determine the Short Term Average of the Underlying Constituent in respect of each Index Business Day in accordance with the following formula:

$$\text{Short Term Average}_t = \frac{1}{n} \times \left( \sum_{k=t-n+1}^t UC_k \right)$$

where

$n$  is the number of days of the Short Term Window;

$UC_k$  is the Closing Level of the Underlying Constituent on weekday  $k$ .

The Long Term Average level of an Underlying Constituent in respect of an Index Business Day reflects the average level of the Underlying Constituent over a longer recent historical observation period (the “**Long Term Window**”) as specified in the Applicable Module. The Index Calculation Agent shall determine the Long Term Average of the Underlying Constituent in respect of each Index Business Day in accordance with the following formula:

$$Long\ Term\ Average_t = \frac{1}{m} \times \left( \sum_{k=t-m+1}^t UC_k \right)$$

where

$m$  is the number of days of the Long Term Window;

$UC_k$  is the Closing Level of the Underlying Constituent on weekday  $k$ ;

“**Closing Level**” for the above purposes means, in respect of any day, the official closing level of the Underlying Constituent in respect of such day or if there is no official closing level for the Underlying Constituent for such day the most recently published official closing level prior to such day.

### 2.3 Rebalancing Dates

The Index Business Day immediately after the Index Business Day in respect of which a Rebalancing Event occurs shall be a “**Rebalancing Date**”. This will result in a one day delay until the exposure to the Underlying Constituent is adjusted pursuant to section 2.4 below.

### 2.4 Rebalancing Exposure on the Rebalancing Date

The Exposure to the Underlying Constituent shall be rebalanced on the occurrence of a Rebalancing Event by adjusting the Exposure to the Underlying Constituent as follows:

- (a) where the Short Term Average is greater than or equal to the Long Term Average on the Index Business Day in respect of which the Rebalancing Event occurred, the Exposure from (but excluding) the relevant Rebalancing Date to (and including) the next Rebalancing Date shall be +100%; and
- (b) where the Short Term Average is less than the Long Term Average on the Index Business Day in respect of which the Rebalancing Event occurred, the Exposure from (but excluding) the relevant Rebalancing Date to (and including) the next Rebalancing Date shall be -100%.

## 3. Calculation of Index Levels

Subject to section 4.3 of Part A (Market Disruption Events), the Index Level for each Momentum Strategy Index shall be calculated in respect of each Index Business Day from and excluding each Rebalancing Date  $t_k$  to and including Rebalancing Date  $t_{k+1}$  as follows:

$$Index_{k,t} = Index_k \times (1 + Return_{k,t})$$

where:

$Index_{k,t}$  means the Index Level on Index Business Day  $t$ ;

$Index_k$  means the Index Level on Rebalancing Date  $k$ ;

$$Return_{k,t} = LF \times \left( E_k \times \left( \frac{S_{k,t}}{S_k} - 1 \right) - A \times \left( \frac{t-k}{360} \right) - R \right)$$

where:

$LF$  means the Leverage Factor as specified in the Applicable Module;

$S_{k,t}$  means the Closing Level of the Underlying Constituent on Index Business Day  $t$ ;

$S_k$  means the Closing Level of the Underlying Constituent on Rebalancing Date  $k$ ;

**Closing Level** means, subject to section 4.3 of Part A (Market Disruption Events), the official closing level of the Underlying Constituent;

$E_k$  means the Exposure to the Underlying Constituent from (but excluding) Rebalancing Date k determined in accordance with section 2 above;

$A$  means the notional Adjustment Factor as specified in the Applicable Module;

$R$  means: (a) in respect of each Index Business Day that is Rebalancing Date k+1 the notional Rebalancing Adjustment Factor as specified in the Applicable Module; and (b) in respect of all other Index Business Days, zero; and

$t-k$  means the number of calendar days from (but excluding) Rebalancing Date k to (and including) Index Business Day t.

## **4. Additional Risk Factors**

### **4.1 Momentum Investment Strategy**

The Momentum Strategy Indices are constructed using what is generally known as a momentum investment strategy. Momentum investing generally seeks to capitalise on positive and negative trends in the price of the assets. **No assurance can be given that the investment strategy used to construct the Momentum Strategy Indices will be successful or that the Momentum Strategy Indices will outperform any alternative strategy that might be constructed from the Underlying Constituent of the relevant Momentum Strategy Index.**

### **4.2 Leverage**

#### **Futures contracts and use of leverage**

The notional components of the Underlying Constituent may include highly leveraged instruments (e.g. futures contracts) and their use as components of any Underlying Constituent of a Momentum Strategy Index may potentially result in higher volatility than in the absence of the usage of such instruments.

#### **Leveraged exposure**

Some of the Momentum Strategy Indices may use leverage to increase the return from any Underlying Constituent. However, the use of leverage also increases the potential risk of negative returns of a Momentum Strategy Index.

### **4.3 Other Risk Factors**

Also see the "Risk Factors" section contained in Part A for other risk factors applicable to the Momentum Strategy Indices.

**Module C1.0: J.P. Morgan Alternative Index US Equity Momentum Strategy**

This Module C1.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index US Equity Momentum Strategy.

Name of Index	J.P. Morgan Alternative Index US Equity Momentum Strategy (Bloomberg ticker AIJPMEUU)
Currency of the Index	US Dollars
Underlying Constituent	The J.P. Morgan US Equity Futures (G) Tracker (Bloomberg ticker FTJGUSEE)
Underlying Constituent Sponsor	J.P. Morgan Securities Limited
Index Business Days	Each day (other than a Saturday or Sunday) on which (i) the Chicago Mercantile Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits)
Adjustment Factor	0.2%
Rebalancing Adjustment Factor	0.1%
Leverage Factor	1
Start Date	3 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days

**Module C2.0: J.P. Morgan Alternative Index European Equity Momentum Strategy**

This Module C2.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index European Equity Momentum Strategy.

Name of Index	J.P. Morgan Alternative Index European Equity Momentum Strategy (Bloomberg ticker AIJPMEEE)
Currency of the Index	Euro
Underlying Constituent	The J.P. Morgan European Equity Futures (G) Tracker (Bloomberg ticker FTJGEUEE)
Underlying Constituent Sponsor	J.P. Morgan Securities Limited
Index Business Days	Each day (other than a Saturday or Sunday) on which (i) the Eurex Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
Adjustment Factor	0.2%
Rebalancing Adjustment Factor	0.1%
Leverage Factor	1
Start Date	3 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days



### Module C3.0: J.P. Morgan Alternative Index Japan Equity Momentum Strategy

This Module C3.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Japan Equity Momentum Strategy.

Name of Index	J.P. Morgan Alternative Index Japan Equity Momentum Strategy (Bloomberg ticker AIJPMEJJ)
Currency of the Index	Japanese Yen
Underlying Constituent	The J.P. Morgan Japan Equity Futures (G) Tracker (Bloomberg ticker FTJGJPEE)
Underlying Constituent Sponsor	J.P. Morgan Securities Limited
Index Business Days	Each day (other than a Saturday or Sunday) on which (i) the Osaka Stock Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
Adjustment Factor	0.2%
Rebalancing Adjustment Factor	0.1%
Leverage Factor	1
Start Date	3 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days

### Module C4.0: J.P. Morgan Alternative Index Money Market Momentum US Strategy

This Module C4.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Money Market Momentum US Strategy.

Name of Index	J.P. Morgan Alternative Index Money Market Momentum US Strategy (Bloomberg ticker AIJPMUU)
Currency of the Index	US Dollar
Underlying Constituent	The J.P. Morgan US Money Market (G) Tracker (Bloomberg ticker RFJGUSME)
Underlying Constituent Sponsor	J.P. Morgan Securities Limited
Index Business Days	Each day (other than a Saturday or Sunday) which (i) the Chicago Mercantile Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
Adjustment Factor	0.04%
Rebalancing Adjustment Factor	0.01%
Leverage Factor	10
Start Date	3 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days

**Module C5.0: J.P. Morgan Alternative Index Money Market Momentum Europe Strategy**

This Module C5.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Money Market Momentum Europe Strategy.

Name of Index	J.P. Morgan Alternative Index Money Market Momentum Europe Strategy (Bloomberg ticker AIJPMME)
Currency of the Index	Euro
Underlying Constituent	The J.P. Morgan European Money Market (G) Tracker (Bloomberg ticker RFJGEUME)
Underlying Constituent Sponsor	J.P. Morgan Securities Limited
Index Business Days	Each day (other than a Saturday or Sunday) on which (i) the LIFFE Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
Adjustment Factor	0.04%
Rebalancing Adjustment Factor	0.01%
Leverage Factor	10
Start Date	3 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days

**Module C6.0: J.P. Morgan Alternative Index Money Market Momentum Japan Strategy**

This Module C6.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Money Market Momentum Japan Strategy.

Name of Index	J.P. Morgan Alternative Index Money Market Momentum Japan Strategy (Bloomberg ticker AIJPM MJJ)
Currency of the Index	Japanese Yen
Underlying Constituent	The J.P. Morgan Japanese Money Market (G) Tracker (Bloomberg ticker RFJGJPME)
Underlying Constituent Sponsor	J.P. Morgan Securities Limited
Index Business Days	Each day (other than a Saturday or Sunday) on which (i) the Tokyo Stock Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
Adjustment Factor	0.04%
Rebalancing Adjustment Factor	0.01%
Leverage Factor	10
Start Date	3 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days

## Module C7.0: J.P. Morgan Alternative Index Commodity Momentum Energy Strategy

This Module C7.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Commodity Momentum Energy Strategy.

Name of Index	J.P. Morgan Alternative Index Commodity Momentum Energy Strategy (Bloomberg ticker AIJPMCEU)
Currency of the Index	US Dollar
Underlying Constituent	The S&P GSCI Energy Excess Return Index (Bloomberg ticker SPGSENP)
Underlying Constituent Sponsor	Standard & Poor's
Index Business Days	Each day (other than a Saturday or Sunday) on which (i) the Chicago Mercantile Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
Adjustment Factor	0.35%
Rebalancing Adjustment Factor	0.0%
Leverage Factor	1
Start Date	3 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days

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## Module C8.0: J.P. Morgan Alternative Index Commodity Momentum Non Energy Strategy

This Module C8.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Commodity Momentum Non Energy Strategy.

Name of Index	J.P. Morgan Alternative Index Commodity Momentum Non Energy Strategy (Bloomberg ticker AIJPMCNU)
Currency of the Index	US Dollar
Underlying Constituent	The S&P GSCI Non Energy Excess Return Index (Bloomberg ticker SPGSNEP)
Underlying Constituent Sponsor	Standard & Poor's
Index Business Days	Each day (other than a Saturday or Sunday) on which (i) the Chicago Mercantile Exchange is scheduled to open for business; and (ii) commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
Adjustment Factor	0.35%
Rebalancing Adjustment Factor	0.0%
Leverage Factor	1
Start Date	3 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days

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## PART D

### J.P. Morgan Alternative Index FX Momentum Strategies

#### 1. Introduction

The foreign exchange momentum strategy rules set out in this Part D apply to each of the Indices in the Modules to this Part D (each a “**FX Momentum Strategy Index**” or “**Index**” and together the “**FX Momentum Strategy Indices**” or “**Indices**”). The Index Rules of each FX Momentum Strategy Index are comprised of Part A of this document, this Part D and the Applicable Module to this Part D.

Each FX Momentum Strategy Index tracks the returns of either a notional long or short position in an Underlying Constituent depending on the difference from time to time between the short term average level (the “**Short Term Average**”) and the long term average level (the “**Long Term Average**”) of the Currency Pair Observation Level.

For each FX Momentum Strategy Index, the Applicable Module sets out (among other things) the:

- name of the Index and Bloomberg ticker;
- Currency Pair of the Index (comprised of Currency One and Currency Two) which is an “**Underlying Constituent**” for the purposes of the Index Rules;
- Index Business Days of the Index;
- Short Term Window and Long Term Window for determining the Short Term Average and Long Term Average of the Currency Pair Observation Level; and
- Adjustment Factors for Currency One and Currency Two.

#### 2. Calculation of the Currency Pair Observation Level

The Index Calculation Agent shall calculate a Currency Pair Observation Level for the Currency Pair solely for the purposes of determining whether a Rebalancing Event has occurred in connection with an Index. The Currency Pair Observation Level for the Currency Pair of each FX Momentum Strategy Index shall be calculated by the Index Calculation Agent in respect of each Index Business Day as follows:

$$Observation\ Level_t = Observation\ Level_{t-1} \times (1 + Observation\ Return_t)$$

where:

*Observation Level<sub>t</sub>* means the Currency Pair Observation Level on Index Business Day t;

$$Observation\ Return_t = \left\{ (ObsSpotRatio1_t \times ObsFwdRatio1_t - 1) \times (1 + RUSD_t \times Daycount1_{t+1,t+2}) - (ObsSpotRatio2_t \times ObsFwdRatio2_t - 1) \times (1 + RUSD_t \times Daycount2_{t+1,t+2}) \right\}$$

If either of Currency One or Currency Two is USD, in respect of such Currency  $ObsSpotRatio_t = ObsFwdRatio_t = 1$  on any Index Business Day t and otherwise;

$$ObsSpotRatio1_t = \frac{ObsFX1_{t-1}}{ObsFX1_t}$$

$$ObsSpotRatio2_t = \frac{ObsFX2_{t-1}}{ObsFX2_t}$$

*ObsFwdRatio1<sub>t</sub>* means 1 if Index Business Day t is not a Currency Business Day for Currency One, otherwise:

$$ObsFwdRatio1_t = \frac{ObsFX1_t + ObsF1_t}{ObsFX1_t}$$

*ObsFwdRatio2<sub>t</sub>* means 1 if Index Business Day t is not a Currency Business Day for Currency Two, otherwise:

$$ObsFwdRatio2_t = \frac{ObsFX2_t + ObsF2_t}{ObsFX2_t}$$

$RUSD_t$  means the Overnight USD Rate on Index Business Day  $t$

$ObsFX1_t$  means the mid (calculated as the arithmetic average of the bid and offer sides) of the FX Rate for Currency One on Index Business Day  $t$ ;

$ObsFX1_{t-1}$  means the mid (calculated as the arithmetic average of the bid and offer sides) of the FX Rate for Currency One on Index Business Day  $t-1$ ;

$ObsF1_t$  means the mid (calculated as the arithmetic average of the bid and offer sides) of the FX Forward Points for Currency One on Index Business Day  $t$ ;

$ObsFX2_t$  means the mid (calculated as the arithmetic average of the bid and offer sides) of the FX Rate for Currency Two on Index Business Day  $t$ ;

$ObsFX2_{t-1}$  means the mid (calculated as the arithmetic average of the bid and offer sides) of the FX Rate for Currency Two on Index Business Day  $t-1$ ;

$ObsF2_t$  means the mid (calculated as the arithmetic average of the bid and offer sides) of the FX Forward Points for Currency Two on Index Business Day  $t$ ;

$Daycount1_{t+1,t+2}$  means 0 if Index Business Day  $t$  is not a Currency Business Day for Currency One, otherwise means the daycount fraction determined on the basis of “actual/360” where the numerator represents the actual number of calendar days from (and including) the Currency Business Day for Currency One that is one Currency One Currency Business Day after Index Business Day  $t$  to (but excluding) the next Currency Business Day for Currency One

$Daycount2_{t+1,t+2}$  means 0 if Index Business Day  $t$  is not a Currency Business Day for Currency Two, otherwise means the daycount fraction determined on the basis of “actual/360” where the numerator represents the actual number of calendar days from (and including) the Currency Business Day for Currency Two that is one Currency Two Currency Business Day after Index Business Day  $t$  to (but excluding) the next Currency Business Day for Currency Two

### 3. Rebalancing of the Currency Pair

#### 3.1 Rebalancing Events

The synthetic exposure to the Currency Pair of a FX Momentum Strategy Index can potentially be rebalanced (by adjusting the long or short exposure to Currency One and Currency Two of the Currency Pair, as applicable) on each Index Business Day on the occurrence of a Rebalancing Event.

The Index Calculation Agent will determine whether a Rebalancing Event has occurred in respect of each Index Business Day. A “**Rebalancing Event**” is deemed to occur in respect of an Index Business Day  $t$  if either:

- (a) (i) the Short Term Average of the Currency Pair Observation Level is greater than or equal to the Long Term Average on Index Business Day  $t$ ; and
  - (ii) on Index Business Day  $t-1$  the Short Term Average was strictly less than the Long Term Average; or
- (b) (i) the Short Term Average of the Currency Pair Observation Level is strictly less than the Long Term Average on Index Business Day  $t$ ; and
  - (ii) on Index Business Day  $t-1$  the Short Term Average was greater than or equal to the Long Term Average.

#### 3.2 Calculation of Short Term Averages and Long Term Averages

The Short Term Average level of the Currency Pair Observation Level in respect of an Index Business Day reflects the average rate of the Currency Pair Observation Level over a recent historical observation period (the “**Short Term Window**”) as specified in the Applicable Module. The Index Calculation Agent

shall determine the Short Term Average of the Currency Pair Observation Level in respect of each Index Business Day in accordance with the following formula:

$$Short\ Term\ Average_t = \frac{1}{n} \times \left( \sum_{k=t-n+1}^t Observation\ Level_k \right)$$

where:

“*n*” is the number of days of the Short Term Window;

*Observation Level<sub>k</sub>* is the Currency Pair Observation Level on Index Business Day *k* as determined in accordance with section 2 above.

The Long Term Average level of the Currency Pair Observation Level in respect of an Index Business Day reflects the average rate of the Currency Pair Observation Level over a longer recent historical observation period (the “**Long Term Window**”) as specified in the Applicable Module. The Index Calculation Agent shall determine the Long Term Average of the Currency Pair Observation Level in respect of each Index Business Day in accordance with the following formula:

$$Long\ Term\ Average_t = \frac{1}{m} \times \left( \sum_{k=t-m+1}^t Observation\ Level_k \right)$$

where

“*m*” is the number of days of the Long Term Window; and

*Observation Level<sub>k</sub>* is the Currency Pair Observation Level on Index Business Day *k* as determined in accordance with section 2 above.

### 3.3 Rebalancing Dates

The first Index Business Day immediately after the Index Business Day on which a Rebalancing Event occurs shall be a “**Rebalancing Date**”. This will result in a one day delay until the exposure to the Currency Pair is adjusted pursuant to 3.4 below.

### 3.4 Rebalancing Exposure on the Rebalancing Date

The Exposure to the Currency Pair shall be rebalanced on the occurrence of a Rebalancing Event by adjusting the Exposure to the Currency Pair as follows:

- (a) where the Short Term Average is greater than or equal to the Long Term Average on the Index Business Day in respect of which the Rebalancing Event occurred, the Exposure from (but excluding) the Rebalancing Date to (and including) the next Rebalancing Date shall be +100% (that is long Currency One and short Currency Two); and
- (b) where the Short Term Average is less than the Long Term Average on the Index Business Day in respect of which the Rebalancing Event occurred, the Exposure from (but excluding) the Rebalancing Date to (and including) the next Rebalancing Date shall be -100% (that is short Currency One and long Currency Two).

## 4. Calculation of Index Levels

Subject to section 4.3 of Part A (Market Disruption Events), the Index Level for each FX Momentum Strategy Index shall be calculated in respect of each Index Business Day as follows:

$$Index_t = Index_{t-1} \times (1 + Return_t)$$

where:

*Index<sub>t</sub>* means the Index Level on Index Business Day *t*;

$$Return_t = Exposure_{t-1} \times \left\{ (SpotRatio_{1,t} \times FwdRatio_{1,t} - 1) \times (1 + RUSD_t \times Daycount_{1,t+1,t+2}) - (SpotRatio_{2,t} \times FwdRatio_{2,t} - 1) \times (1 + RUSD_t \times Daycount_{2,t+1,t+2}) \right\}$$

*Exposure<sub>t</sub>* means the Exposure calculated for Index Business Day *t*, as determined by the Index Calculation Agent in accordance with section 3 above;

If a Currency of the Currency Pair is the USD, the  $SpotRatio_t = FwdRatio_t = 1$  on any Index Business Day  $t$  and otherwise;

$$SpotRatio1_t = \frac{FX1_{t-1}}{FX1_t}$$

$$SpotRatio2_t = \frac{FX2_{t-1}}{FX2_t}$$

$FwdRatio1_t$  means 1 if Index Business Day  $t$  is not a Currency Business Day for Currency One, otherwise:

$$FwdRatio1_t = \frac{FX1_t + F1_t + Adj1_t}{FX1_t}$$

$FwdRatio2_t$  means 1 if Index Business Day  $t$  is not a Currency Business Day for Currency Two, otherwise:

$$FwdRatio2_t = \frac{FX2_t + F2_t + Adj2_t}{FX2_t}$$

$RUSD_t$  means the Overnight USD Rate on Index Business Day  $t$

$FX1_t$  means the bid side (where  $Exposure_t = +100\%$ ) or offer side (where  $Exposure_t = -100\%$ ) of the FX Rate for Currency One on Index Business Day  $t$

$FX1_{t-1}$  means the bid side (where  $Exposure_{t-1} = +100\%$ ) or offer side (where  $Exposure_{t-1} = -100\%$ ) of the FX Rate for Currency One on Index Business Day  $t-1$

$F1_t$  means the bid side (where  $Exposure_{t-1} = +100\%$ ) or offer side (where  $Exposure_{t-1} = -100\%$ ) of the FX Forward Points for Currency One on Index Business Day  $t$

$Adj1_t$  is the adjustment factor for the FX Forward Points for Currency One and is equal to

$$- Exposure_{t-1} \times \max\left(\frac{1}{2} \times (F1_{t,Offer} - F1_{t,Bid}), A1 \times FX1_t \times Daycount1_{t+1,t+2}\right)$$

where :

$F1_{t,Offer}$  is the offer side of the FX Forward Points for Currency One on Index Business Day  $t$

$F1_{t,Bid}$  is the bid side of the FX Forward Points for Currency One on Index Business Day  $t$

$A1$  is the notional Adjustment Factor 1 as specified in the Applicable Module

$FX2_t$  means the bid side (where  $Exposure_t = -100\%$ ) or offer side (where  $Exposure_t = +100\%$ ) of the FX Rate for Currency Two on Index Business Day  $t$

$FX2_{t-1}$  means the bid side (where  $Exposure_{t-1} = -100\%$ ) or offer side (where  $Exposure_{t-1} = +100\%$ ) of the FX Rate for Currency Two on Index Business Day  $t-1$

$F2_t$  means the bid side (where  $Exposure_{t-1} = -100\%$ ) or offer side (where  $Exposure_{t-1} = +100\%$ ) of the FX Forward Points for Currency Two on Index Business Day  $t$

$Adj2_t$  is the adjustment factor for the FX Forward Points for Currency Two and is equal to

$$+ Exposure_{t-1} \times \max\left(\frac{1}{2} \times (F2_{t,Offer} - F2_{t,Bid}), A2 \times RollFX2_t \times Daycount2_{t+1,t+2}\right) \text{ where:}$$

$F2_{t,Offer}$  is the offer side of the FX Forward Points for Currency Two on Index Business Day  $t$



$F_{2,t,Bid}$  is the bid side of the FX Forward Points for Currency Two on Index Business Day  $t$   
 $A_2$  is the notional Adjustment Factor 2 as specified in the Applicable Module

$Daycount1_{t+1,t+2}$  means 0 if Index Business Day  $t$  is not a Currency Business Day for Currency One, otherwise means the daycount fraction determined on the basis of “actual/360” where the numerator represents the actual number of calendar days from (and including) the Currency Business Day for Currency One that is one Currency One Currency Business Day after Index Business Day  $t$  to (but excluding) the next Currency Business Day for Currency One

$Daycount2_{t+1,t+2}$  means 0 if Index Business Day  $t$  is not a Currency Business Day for Currency Two, otherwise means the daycount fraction determined on the basis of “actual/360” where the numerator represents the actual number of calendar days from (and including) the Currency Business Day for Currency Two that is one Currency Two Currency Business Day after Index Business Day  $t$  to (but excluding) the next Currency Business Day for Currency Two

If no Rebalancing Event occurs on Index Business Day  $t-1$  that is, if  $Exposure_{t-1} = Exposure_t$ , then  $SpotRatio1_t$  and  $SpotRatio2_t$  will reference the same side of the bid and offer in the numerator and denominator.

## 5. Definitions

Capitalised terms defined below shall have the following meanings in respect of each FX Momentum Strategy Index:

**“Currency”** means either Currency One or Currency Two of the Currency Pair (as the case may be).

**“Currency Business Day”** means, with respect to any Currency  $i$ , each day on which: (a) the WM Company is scheduled to publish spot and forward points for the pair comprised of USD and the Currency  $i$  and (b) the principal financial centre for the Currency  $i$  is open for dealings in foreign exchange and banking institutions in such primary local market are not otherwise authorised or required by law, regulation or executive order to close.

**“Currency One”** the currency specified as such in the Applicable Module;

**“Currency Pair”** the currency pair specified as such in the Applicable Module;

**“Currency Pair Observation Level”** means the level calculated in respect of the Currency Pair in accordance with section 2 above;

**“Currency Two”** the currency specified as such in the Applicable Module;

**“FX Forward Points”** means in respect of a Currency, the “FX Tom/Next” forward points expressed as number of Currency per one USD, and shall be calculated as:

(a) if the Currency is quoted in the market as number of Currency per one USD:

$$F_{Bid} = WMF_{Bid} \text{ and } F_{Offer} = WMF_{Offer}$$

(b) if the Currency is quoted in the market as number of USD per one Currency:

$$F_{Bid} = \frac{1}{WMS_{Offer} + WMF_{Offer}} - \frac{1}{WMS_{Offer}} \text{ and } F_{Offer} = \frac{1}{WMS_{Bid} + WMF_{Bid}} - \frac{1}{WMS_{Bid}}$$

Where:

WMS and WMF are the FX spot rates and FX forward points respectively, as published on the Bloomberg and Reuters pages set out in the Applicable Module. If the relevant rate is not published on such page (or successor page as the case may be), the FX spot rates and FX forward points shall be the rate determined by the Index Calculation Agent taking into consideration all information that in good faith it deems relevant (which may include, without limitation, Bloomberg composite pages).

**“FX Rate”** means in respect of a Currency and Index Business Day, the spot exchange rate of the Currency determined by the Calculation Agent from the Bloomberg pages specified in the Applicable Module, expressed as the number of Currency per one (1) USD on the relevant date. If the relevant rate is not published on such Bloomberg page (or successor page as the case may be), the **“FX Rate”** shall be the rate determined by the Index Calculation Agent taking into consideration all information that in

good faith it deems relevant (which may include, without limitation, information from a relevant Reuters page).

**“Overnight USD Rate”** means the “Federal Funds Effective Rate” as published on the Bloomberg page FEDL01 Index. If the relevant rate is not published on such Bloomberg page (or successor page as the case may be), the **“Overnight USD Rate”** shall be the rate determined by the Index Calculation Agent taking into consideration all information that in good faith it deems relevant.

## **6. Risk Factors**

### **6.1 Momentum Investment Strategy**

The FX Momentum Strategy Indices are constructed using what is generally known as a momentum investment strategy. Momentum investing generally seeks to capitalise on positive trends in the price of the assets. **No assurance can be given that the investment strategy used to construct the FX Momentum Strategy Indices will be successful or that the FX Momentum Strategy Indices will outperform any alternative strategy that might be constructed from the Underlying Constituent of the relevant FX Momentum Strategy Index.**

### **6.2 Other Risk Factors**

Also see the “Risk Factors” section contained in Part A for other risk factors applicable to the FX Momentum Strategy Indices.

**Module D1.0: J.P. Morgan Alternative Index EURUSD FX Momentum Strategy**

This Module D1.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index EURUSD FX Momentum Strategy

Name of Index	J.P. Morgan Alternative Index EURUSD FX Momentum Strategy (Bloomberg ticker: AIJPMF1U)
Currency of the Index	US Dollars
Index Business Days	Each day which is either (1) a Currency Business Day for Currency One; or (2) a Currency Business Day for Currency Two.
Currency Pair	EUR/USD
Currency One	EUR
Currency Two	USD
Currency One FX Rate WMS Bloomberg Page	EUR WMCO Curncy
Currency One FX Forward Points WMF Reuters Page	USDEURTNFIX=WM
Currency Two FX Rate WMS Bloomberg Page	N/A
Currency Two FX Forward Points WMF Reuters Page	N/A
Start Date	3 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days
Adjustment Factor 1 ("A1")	0.30%
Adjustment Factor 2 ("A2")	0.00%

**Module D2.0: J.P. Morgan Alternative Index USDJPY FX Momentum Strategy**

This Module D1.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index USDEUR FX Momentum Strategy

Name of Index	J.P. Morgan Alternative Index USDJPY FX Momentum Strategy (Bloomberg ticker: AIJPMF2U)
Currency of the Index	US Dollars
Index Business Days	Each day which is either (1) a Currency Business Day for Currency One; or (2) a Currency Business Day for Currency Two.
Currency Pair	USD/JPY
Currency One	USD
Currency Two	JPY
Currency One FX Rate WMS Bloomberg Page	N/A
Currency One FX Forward Points WMF Reuters Page	N/A
Currency Two FX Rate WMS Bloomberg Page	JPY WMCO Curncy
Currency Two FX Forward Points WMF Reuters Page	USDJPYTNFIX=WM
Start Date	3 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days
Adjustment Factor 1 ("A1")	0.00%
Adjustment Factor 2 ("A2")	0.30%

**Module D3.0: J.P. Morgan Alternative Index EURJPY FX Momentum Strategy**

This Module D3.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index EURJPY FX Momentum Strategy

Name of Index	J.P. Morgan Alternative Index EURJPY FX Momentum Strategy (Bloomberg ticker: AIJPMF3U)
Currency of the Index	US Dollars
Index Business Days	Each day which is either (1) a Currency Business Day for Currency One; or (2) a Currency Business Day for Currency Two.
Currency Pair	EUR/JPY
Currency One	EUR
Currency Two	JPY
Currency One FX Rate WMS Bloomberg Page	EUR WMCO Curncy
Currency One FX Forward Points WMF Reuters Page	USDEURTNFIX=WM
Currency Two FX Rate WMS Bloomberg Page	JPY WMCO Curncy
Currency Two FX Forward Points WMF Reuters Page	USDJPYTNFIX=WM
Start Date	3 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days
Adjustment Factor 1 ("A1")	0.20%
Adjustment Factor 2 ("A2")	0.20%

**Module D4.0: J.P. Morgan Alternative Index USDCAD FX Momentum Strategy**

This Module D4.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index USDCAD FX Momentum Strategy

Name of Index	J.P. Morgan Alternative Index USDCAD FX Momentum Strategy (Bloomberg ticker: AIJPMF4U)
Currency of the Index	US Dollars
Index Business Days	Each day which is either (1) a Currency Business Day for Currency One; or (2) a Currency Business Day for Currency Two.
Currency Pair	USD/CAD
Currency One	USD
Currency Two	CAD
Currency One FX Rate WMS Bloomberg Page	N/A
Currency One FX Forward Points WMF Reuters Page	N/A
Currency Two FX Rate WMS Bloomberg Page	CAD WMCO Curncy
Currency Two FX Forward Points WMF Reuters Page	USDCADTNFIX=WM
Start Date	5 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days
Adjustment Factor 1 ("A1")	0.00%
Adjustment Factor 2 ("A2")	0.30%

**Module D5.0: J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy**

This Module D5.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy

Name of Index	J.P. Morgan Alternative Index AUDUSD FX Momentum Strategy (Bloomberg ticker: AIJPMF5U)
Currency of the Index	US Dollars
Index Business Days	Each day which is either (1) a Currency Business Day for Currency One; or (2) a Currency Business Day for Currency Two.
Currency Pair	AUD/USD
Currency One	AUD
Currency Two	USD
Currency One FX Rate WMS Bloomberg Page	AUD WMCO Curncy
Currency One FX Forward Points WMF Reuters Page	USDAUDTNFIX=WM
Currency Two FX Rate WMS Bloomberg Page	N/A
Currency Two FX Forward Points WMF Reuters Page	N/A
Start Date	5 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days
Adjustment Factor 1 ("A1")	0.40%
Adjustment Factor 2 ("A2")	0.00%

**Module D6.0: J.P. Morgan Alternative Index EURGBP FX Momentum Strategy**

This Module D6.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index EURGBP FX Momentum Strategy

Name of Index	J.P. Morgan Alternative Index EURGBP FX Momentum Strategy (Bloomberg ticker: AIJPMF6U)
Currency of the Index	US Dollars
Index Business Days	Each day which is either (1) a Currency Business Day for Currency One; or (2) a Currency Business Day for Currency Two.
Currency Pair	EUR/GBP
Currency One	EUR
Currency Two	GBP
Currency One FX Rate WMS Bloomberg Page	EUR WMCO Curncy
Currency One FX Forward Points WMF Reuters Page	USDEURTNFIX=WM
Currency Two FX Rate WMS Bloomberg Page	GBP WMCO Curncy
Currency Two FX Forward Points WMF Reuters Page	USDGBPTNFIX=WM
Start Date	3 August 2009
Start Level	100.00
Short Term Window ("n")	5 days
Long Term Window ("m")	260 days
Adjustment Factor 1 ("A1")	0.20%
Adjustment Factor 2 ("A2")	0.20%



## Part E

### J.P. Morgan Alternative Index Equity Carry Strategies

#### 1. Introduction

The equity carry strategy rules set out in this Part E apply to each of the Indices in the Module to this Part E (each an “**Equity Carry Strategy Index**” or “**Index**” and together the “**Equity Carry Strategy Indices**” or “**Indices**”). The Index Rules of each Equity Carry Strategy Index are comprised of Part A of this document, this Part D and the Applicable Module to this Part D.

Each Equity Carry Strategy Index aims to track the potential risk premium of the particular asset (the Carry Component Index) compared to a historically lower yielding asset (the Market Index). For example, this may be a value premium (notionally long a value share index versus notionally short a broad equity market index) or small cap premium (notionally long a small cap share index versus notionally short a large cap share index). The exposure to the Carry Component Index and Market Index are re-set to 100% on each Rebalancing Date.

For each Equity Carry Strategy Index, the Applicable Module sets out (among other things) the:

- name of the Index and Bloomberg ticker;
- Index Business Days of the Index;
- Carry Component Index and Market Index of the Index (each of which are “**Underlying Constituents**” of the Index for the purposes of the Index Rules);
- Rebalancing Dates of the Index; and
- Adjustment Factor of the Index.

#### 2. Calculation of Index Levels

Subject section 4.3 of Part A (Market Disruption Events), the Index Level for each Equity Carry Strategy Index shall be calculated in respect of each Index Business Day from and excluding each Rebalancing Date  $t_k$  to and including Rebalancing Date  $t_{k+1}$  as follows:

$$Index_{k,t} = Index_k \times (1 + Return_{k,t})$$

Where

$Index_{k,t}$  means the Index Level on Index Business Day  $t$ ;

$Index_k$  means the Index Level on Rebalancing Date  $k$ ;

where

$$Return_{k,t} = E_k \times \left( \frac{S_{k,t}}{S_k} - \frac{M_{k,t}}{M_k} \right) - A \times \left( \frac{t - k}{360} \right)$$

$S_{k,t}$  means the Closing Level of the Carry Component Index on Index Business Day  $t$ ;

$S_k$  means the Closing Level of the Carry Component Index on Rebalancing Date  $k$ ;

$M_{k,t}$  means the Closing Level of the Market Index on Index Business Day  $t$ ;

$M_k$  means the Closing Level of the Market Index on Rebalancing Date  $k$ ;

**Closing Level** means, subject to section 4.3 of Part A (Market Disruption Events), the official closing level of the relevant Underlying Constituent (i.e. Carry Component Index or Market Index, as the case may be);

**A** means the notional Adjustment Factor as specified in the Applicable Module;

$E_k$  means the Exposure to the Underlying Constituents on Rebalancing Date  $k$  and shall equal 100%;

$(t-k)$  means the number of calendar days from (but excluding) Rebalancing Date  $k$  to (and including) Index Business Day  $t$ .

### 3. Risk Factors

#### 3.1 Carry Investment Strategy

The Equity Carry Strategy Indices seek to track the potential risk premium of a particular asset (the Carry Component Index) compared to a historically lower yielding asset (the Market Index). **No assurance can be given that the investment strategy used to construct the Equity Carry Strategy Indices will be successful or that the Equity Carry Strategy Indices will outperform any alternative strategy that might be constructed from the Underlying Constituents of the relevant Equity Carry Strategy Index.**

#### 3.2 Other Risk Factors

Also see the “Risk Factors” section contained in Part A for other risk factors applicable to the Equity Carry Strategy Indices.

#### Module E1.0: J.P. Morgan Alternative Index Equity Value Carry Strategy

This Module E1.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Equity Value Carry Strategy.

Name of Index	J.P. Morgan Alternative Index Equity Value Carry Strategy (Bloomberg ticker AIJPCE1U)
Currency of the Index	US Dollar
Carry Component Index	MSCI Daily Value Total Return Gross World Index (Bloomberg Ticker GDUVWI)
Market Index	MSCI Daily Total Return Gross World Index (Bloomberg Ticker GDDUWI)
Rebalancing Dates	The first Index Business Day of each calendar month.
Index Business Days	Each day (other than a Saturday or Sunday) on which: (a) commercial banks in London, New York and Tokyo are open generally for business (including dealings in foreign exchange and foreign currency deposits); and (b) TARGET is open.
Adjustment Factor	0.5%
Start Date	3 August 2009
Start Level	100.00

#### MSCI Indices

The MSCI Daily Value Total Return Gross World Index and MSCI Daily Total Return Gross World Index (“MSCI Indices”) are the exclusive property of Morgan Stanley Capital International Inc. (“MSCI”). MSCI and the MSCI index names are service mark(s) of MSCI or its affiliates and have been licensed for use for certain purposes by JPMorgan. The J.P. Morgan Alternative Index Equity Value Carry Strategy (“Index”) referred to herein is not sponsored, endorsed, or promoted by MSCI, and MSCI bears no liability with respect to any such Index. No purchaser, seller or holder of any product referenced to the Strategy, or any other person or entity, should use or refer to any MSCI trade name, trademark or service mark to sponsor, endorse, market or promote this product without first contacting MSCI to determine whether MSCI's permission is required. Under no circumstances may any person or entity claim any affiliation with MSCI without the prior written permission of MSCI.

**Module E2.0: J.P. Morgan Alternative Index Equity Small Cap Carry Strategy**

This Module E2.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Equity Small Cap Carry Strategy.

Name of Index	J.P. Morgan Alternative Index Equity Small Cap Carry Strategy (Bloomberg ticker AIJPCE2U)
Currency of the Index	US Dollar
Carry Component Index	The J.P. Morgan US Small Cap Equity Futures (G) Tracker (Bloomberg Ticker FTJGUSSE)
Market Index	The J.P. Morgan US Equity Futures (G) Tracker (Bloomberg ticker FTJGUSEE)
Rebalancing Dates	The first Index Business Day of each calendar month.
Index Business Days	Each day on which the Chicago Mercantile Exchange and the London Stock Exchange are both scheduled to open for business.
Adjustment Factor	0.5%
Start Date	3 August 2009
Start Level	100.00

## PART F

### J. P. Morgan Alternative Index Bond Carry Long Strategies

#### 1. Introduction

The bond carry long strategy rules set out in this Part F apply to each of the Indices in the Modules to this Part F (each a “**Bond Carry Long Strategy Index**” or “**Index**” and together the “**Bond Carry Long Strategy Indices**” or “**Indices**”). The Index Rules of each Bond Carry Long Strategy Index are comprised of Part A of this document, this Part F and the Applicable Module to this Part F.

Each Bond Carry Long Strategy Index tracks the returns of notionally borrowing money at short term interest rates and notionally investing such money in long positions in two bonds that contain the highest carry from a particular universe of notional global bonds. Each Bond Carry Long Strategy Index seeks to capitalise on an upward sloping yield-curve. If the yield curve remains unchanged from one Rebalancing Date to the next, the Index should generate return from: (i) the difference in the applicable short-term interest rate and the interest rate associated with the relevant bond; and (ii) the increase in the value of the notional long position in the relevant bond due to the lower yield available for a bond of slightly shorter maturity.

For each Bond Carry Long Strategy Index, the Applicable Module sets out (among other things) the:

- name of the Index and Bloomberg ticker;
- Index Business Days of the Index;
- Potential Underlying Constituents of the Index;
- Floating Interest Rate and Floating Frequency for the Potential Underlying Constituents;
- Rebalancing Selection Dates and Rebalancing Dates of the Index; and
- Weighting assigned to the Underlying Constituents on Rebalancing Dates.

#### 2. Rebalancing and Selection of Underlying Constituents

##### 2.1 Rebalancing Selection Dates and Rebalancing Dates

In respect of each Rebalancing Selection Date, the Index Calculation Agent will determine which Potential Underlying Constituents are to be notionally comprised in a Bond Carry Long Strategy Index (each “**Underlying Constituents**” of the Index for the purposes of the Index Rules, which will be comprised of notional long exposure to Long Underlying Constituent A and Long Underlying Constituent B) on the immediately following Effective Rebalancing Date in accordance with the methodology described in sections 2.2 and 2.3 below. The effective weight of the Underlying Constituents within an Index may fluctuate from one Effective Rebalancing Date to the next Effective Rebalancing Date due to movements in the level of the Underlying Constituents.

##### 2.2 First Step: Calculate the Carry of each Potential Underlying Constituent

In respect of each Rebalancing Selection Date  $k$ , the Index Calculation Agent will determine the carry (“**PUC Carry**”) for each Potential Underlying Constituent in accordance with the following formulas:

$$\text{PUC Carry}_k^i = \text{Weighting} \times \left( \frac{Z2_k^i}{Z1_k^i} - \frac{\zeta 2_k^i}{\zeta 1_k^i} \right) - \text{Adjustment Factor}_k^i$$

where:

*Weighting* means the Weighting specified in the Applicable Module;

$Z1_k^i$  means the Underlying Constituent Price as of Rebalancing Selection Date  $k$  for the relevant Potential Underlying Constituent maturing  $N$  years after Rebalancing Selection Date  $k$ ;

$Z2_k^i$  means the Underlying Constituent Price as of Rebalancing Selection Date  $k$  for the relevant Potential Underlying Constituent maturing  $M$  years after Rebalancing Selection Date  $k$ ;

$N$  means the relevant maturity, in years, of the relevant Potential Underlying Constituent as specified in the Applicable Module;

$M$  means  $N$  minus  $1/12$ ;

$\zeta 1_k^i$  means the Underlying Constituent Price as of Rebalancing Selection Date k for the relevant Potential Underlying Constituent maturing P months after Rebalancing Selection Date k;

$\zeta 2_k^i$  means the Underlying Constituent Price as of Rebalancing Selection Date k for the relevant Potential Underlying Constituent maturing Q months after Rebalancing Selection Date k;

P means the Floating Frequency in respect of the relevant Potential Underlying Constituent as specified in the Applicable Module;

Q means P minus 1 (one) month;

Adjustment Factor $_k^i$  means the adjustment factor, calculated as:

- (i)  $Weighting \times \left( \frac{1}{12} \right) \times 0.005\%$  if the Potential Underlying Constituent i is the same as either of the Underlying Constituents (Long Underlying Constituent A or Long Underlying Constituent B) notionally comprised in the Index on Rebalancing Selection Date k; or
- (ii)  $Weighting \times \left( N - \frac{1}{12} \right) \times 0.005\%$  if the condition in (i) above is not satisfied.

The Adjustment Factor represents the approximate notional transaction cost (as at November 2009) that would be incurred if a hypothetical investor in the Underlying Constituents was to substitute the Underlying Constituents with the relevant Potential Underlying Constituent or maintain the exposure to the Underlying Constituents. The Adjustment Factor is lower where the Potential Underlying Constituent is one of the Underlying Constituents notionally comprised in the Index at Rebalancing Selection Date k.

### 2.3 Second Step: Selecting Long Underlying Constituent A and B

Immediately after determining the PUC Carry of each Potential Underlying Constituent in respect of Rebalancing Selection Date k, the Index Calculation Agent shall determine the notional long positions over the Potential Underlying Constituents which the Index shall track (the “**Long Underlying Constituent A**” and “**Long Underlying Constituent B**”) from (but excluding) the Effective Rebalancing Date immediately after Rebalancing Selection Date k to (and including) the next Effective Rebalancing Date as follows:

- (a) the Potential Underlying Constituent with the highest PUC Carry shall be the Long Underlying Constituent A; and
- (b) the Potential Underlying Constituent with the second highest PUC Carry shall be the Long Underlying Constituent B.

## 3. Calculation of Index Levels

Subject to section 4.3 of Part A (Market Disruption Events), the Index Level for each Bond Carry Long Strategy Index shall be calculated in respect of each Index Business Day (provided that and notwithstanding section 4.2 of Part A (Publication of Index Rules), such day is a Reference Business Day in respect of both Long Underlying Constituent A and Long Underlying Constituent B) from and excluding each Effective Rebalancing Date  $tk$  to and including Effective Rebalancing Date  $tk+1$  as follows:

$$\text{Index Level}_{k,t} = \text{Index Level}_k \times (1 + \text{Return}_{k,t})$$

where:

Index Level $_{k,t}$  means the Index Level on Index Business Day t;

Index Level $_k$  means the Index Level on Effective Rebalancing Date k;

Return $_{k,t}$  means the return, adjusted for the FX Rate, for Long Underlying Constituent A and Long Underlying Constituent B, on Index Business Day t determined in accordance with the following formula:

$Return_{k,t} =$

$$\frac{Weighting}{2} \times \left\{ \frac{FXA_k * \left( \frac{ZCA_k^t}{ZCA_k} - \frac{(1 + RA_k * Daycount_{k,q})}{(1 + DA_k^t * Daycount_{t,q})} \right)}{FXA_k^t} + \frac{FXB_k * \left( \frac{ZCB_k^t}{ZCB_k} - \frac{(1 + RB_k * Daycount_{k,q})}{(1 + DB_k^t * Daycount_{t,q})} \right)}{FXB_k^t} \right\}$$

$- Adjustment\_A_k^t - Adjustment\_B_k^t$

where, in respect of Long Underlying Constituent A or Long Underlying Constituent B, terms that end in A or B shall apply to Long Underlying Constituent A or Long Underlying Constituent B respectively;

$FXA_k$  and  $FXB_k$  each mean the FX Rate on Effective Rebalancing Date k of the relevant Long Underlying Constituent;

$FXA_k^t$  and  $FXB_k^t$  each mean the FX Rate on Index Business Day t of the relevant Long Underlying Constituent;

$ZCA_k^t$  and  $ZCB_k^t$  each mean the Underlying Constituent Price on Index Business Day t of the relevant Long Underlying Constituent maturing N years after Effective Rebalancing Date k;

$ZCA_k$  and  $ZCB_k$  each mean the Underlying Constituent Price on Effective Rebalancing Date k of the relevant Long Underlying Constituent maturing N years after Effective Rebalancing Date k;

N as specified in the Applicable Module;

$RA_k$  and  $RB_k$  each mean the Floating Interest Rate (as specified in the Applicable Module) for the relevant Long Underlying Constituent on Effective Rebalancing Date k;

$DA_k^t$  and  $DB_k^t$  each mean the Interpolated Floating Interest Rate for the relevant Long Underlying Constituent from (and including) Index Business Day t to (but excluding) the day that is Q months after Effective Rebalancing Date k;

$Daycount_{k,q}$  means the Floating Rate Day Count fraction of the relevant Long Underlying Constituent (as specified in the Applicable Module) where the numerator represents the actual number of calendar days from (and including) the Effective Rebalancing Date k, through to (but excluding) the day that is Q months after Effective Rebalancing Date k; and

Q equals the Floating Rate Frequency (as specified in the Applicable Module)

$Daycount_{t,q}$  means the Floating Rate Day Count fraction of the relevant Long Underlying Constituent (as specified in the Applicable Module) where the numerator represents the actual number of calendar days from (and including) Index Business Day t to (but excluding) the day that is Q months after the Effective Rebalancing Date k;

$Adjustment\_A_k^t$  and  $Adjustment\_B_k^t$  means the adjustment factor, calculated as, in respect of the relevant Long Underlying Constituent:

(i)  $Weighting \times \left( \frac{1}{12} \right) \times 0.005\%$  if the Long Underlying Constituent was the same as either of the Underlying Constituents (Long Underlying Constituent A or Long Underlying Constituent B) notionally comprised in the Index immediately prior to the Effective Rebalancing Date k; or

(ii)  $Weighting \times \left( N - \frac{1}{12} \right) \times 0.005\%$  if the condition in (i) above is not satisfied

The Adjustment factor represents the approximate notional transaction cost (as at November 2009) that would be incurred if a hypothetical investor in the Underlying Constituents was to substitute the Underlying Constituents with the relevant Potential Underlying Constituent or maintain exposure to the Underlying Constituents. The Adjustment is lower where the Potential Underlying Constituent is one of the Underlying Constituents notionally comprised in the Index immediately before the Effective Rebalancing Date.

## 4. Definitions

Capitalised terms defined below shall have the following meanings in respect of each Bond Carry Long Strategy Index:

**“Currency”** means, in respect of a Potential Underlying Constituent (including a Long Underlying Constituent), the currency specified as such in the Applicable Module.

**“Effective Rebalancing Date”** means, in respect of each Rebalancing Date, the first day falling on or following the Rebalancing Date which is a Reference Business Day for:

- (a) both Long Underlying Constituent A and Long Underlying Constituent B notionally comprised in the Index immediately prior to the Rebalancing Date; and
- (b) both Long Underlying Constituent A and Long Underlying Constituent B to be notionally comprised in the Index from (but excluding) such day as determined in accordance with section 2 above.

**“FX Rate”** means, in respect of the relevant Potential Underlying Constituent (including a Long Underlying Constituent) on Effective Rebalancing Date k or Index Business Day t (as applicable), the spot exchange rate determined by the Index Calculation Agent based on the rates published on Bloomberg page WMCO to convert one (1) USD into the Currency of the Potential Underlying Constituent on the Effective Rebalancing or Index Business Day (as applicable), provided that, if the relevant rate(s) are not published on the relevant Bloomberg Page, then the “FX Rate” shall be the rate determined by the Index Calculation Agent taking into consideration all information that in good faith it deems relevant (which may include, without limitation, other Bloomberg composite FX pages).

**“Interpolated Floating Interest Rate”** means in respect of a Long Underlying Constituent on Index Business Day t, and a future date q, the interest rate for the period from (and including) Index Business Day t, to (but excluding) date q for the Currency, as determined by the Index Calculation Agent in accordance with a generally accepted market practice for such calculation which uses the swap rates and money market rates published on the relevant Reuters Page for various maturities and such other information that the Index Calculation Agent deems relevant.

**“Long Underlying Constituent”** means either Long Underlying Constituent A or Long Underlying Constituent B (as applicable), as determined in accordance with section 2.3 above.

**“Potential Underlying Constituent”** as specified in the Applicable Module.

**“Reference Business Day”** means, in respect of a Potential Underlying Constituent (including a Long Underlying Constituent), a day (other than a Saturday or Sunday) on which commercial banks are open generally for business (including for dealings in foreign exchange and foreign currency deposits) in the principal financial centre for the Currency corresponding to that Potential Underlying Constituent.

**“Reuters Page”** means, in respect of a Potential Underlying Constituent (including a Long Underlying Constituent) denominated in: (i) USD, LIBOR01 and ISDAFIX1, (ii) EUR, EURIBOR01 and ISDAFIX2, (iii) JPY, LIBOR01 and ISDAFIX1, (iv) GBP, LIBOR01 and ISDAFIX4, (v) CHF, LIBOR02 and ISDAFIX4, (vi) AUD, BBSW and AUDIRS, (vii) CAD, CIDOR and CADIRS=ICAP and, (viii) SEK, 0#/STIBOR= and ICAPSEK

**“Underlying Constituent Price”** means the price of the relevant Potential Underlying Constituent (including a Long Underlying Constituent) where such price shall be determined by discounting the notional redemption amount of the relevant Potential Underlying Constituent at a zero coupon rate determined by the Index Calculation Agent in accordance with a generally accepted market practice for such calculation which uses the swap rates and money market rates published on the relevant Reuters Page for various maturities and such other information that the Index Calculation Agent deems relevant.

## 5. Risk Factors

### 5.1 Leverage

The AI Bond Carry Long Strategies may use leverage to increase the return from any Underlying Constituent. However, the use of leverage also increases the potential risk of negative returns of such Bond Carry Long Strategy Indices. Any event which adversely affects the value of a notional Underlying Constituent will be magnified to the extent the Underlying Constituent is leveraged.

## 5.2 Interest Rate and Duration Risk

The Bond Carry Long Strategy Indices are exposed to interest rate risk relating to the Underlying Constituents. Interest rates can be volatile over the short term and, combined with leverage, can cause fluctuations, up or down, in the level of the Bond Carry Long Strategy Indices.

Additionally, longer dated (e.g. 10 year) bonds are exposed to duration risk. Through duration, moves in longer dated interest rates amplify the movement in the price of bonds of such tenor as compared with bonds of shorter tenor.

## 5.3 Other Risk Factors

Also see the “Risk Factors” section contained in Part A for other risk factors applicable to the Bond Carry Long Strategy Indices.

### Module F1.0: J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy

This Module F1.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy.

Name of Index	The J.P. Morgan Alternative Index Bond 2Y Carry Long Strategy (Bloomberg Ticker: AIJPCB1U)
Currency of the Index	US Dollars
Rebalancing Selection Dates	1 week day prior to 1 London Business Day prior to the first scheduled Index Business Day of the month. Where “ <b>London Business Day</b> ” means each day (other than a Saturday or Sunday) on which commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
Rebalancing Dates	The first Index Business Day of each month
Index Business Days	Each day (other than a Saturday or Sunday) on which (a) commercial banks in London, New York and Tokyo are open generally for business (including for dealings in foreign exchange and foreign currency deposits) and (b) TARGET is open.
Weighting	500%
N	2 years
Start Date	3 August 2009
Start Level	100.00

### Potential Underlying Constituents

	Potential Underlying Constituents	Floating Interest Rate	Floating Frequency i	Floating Rate Day Count i	Currency
1	Synthetic USD zero coupon bond	USD 3 month LIBOR	4	Act/360	USD
2	Synthetic EUR zero coupon bond	EUR 6 month EURIBOR	2	Act/360	EUR
3	Synthetic JPY zero coupon bond	JPY 6 month LIBOR	2	Act/360	JPY
4	Synthetic GBP zero coupon bond	GBP 6 month LIBOR	2	Act/365	GBP
5	Synthetic CHF zero coupon bond	CHF 6 month LIBOR	2	Act/360	CHF
6	Synthetic AUD zero	AUD 6 month BBSW	2	Act/365	AUD



	coupon bond				
7	Synthetic CAD zero coupon bond	CAD 3 month CDOR	4	Act/365	CAD
8	Synthetic SEK zero coupon bond	SEK 3 month STIBOR	4	Act/360	SEK

## Module F2.0: J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy

This Module F2.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Bond 10Y Carry Long Strategy.

Name of Index	The J.P. Morgan Alternative Index Bond 10Y Carry Short Strategy (Bloomberg Ticker: AIJPCB3U)
Currency of Strategy	US Dollars
Rebalancing Selection Dates	1 week day prior to 1 London Business Day prior to the first scheduled Index Business Day of the month. Where “ <b>London Business Day</b> ” means each day (other than a Saturday or Sunday) on which commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
Rebalancing Dates	The first Index Business Day of each month
Index Business Days	Each day (other than a Saturday or Sunday) on which (a) commercial banks in London, New York and Tokyo are open generally for business (including for dealings in foreign exchange and foreign currency deposits) and (b) TARGET is open.
Weighting	100%
N	10 years
Start Date	3 August 2009
Start Level	100.00

## Potential Underlying Constituents

	Potential Underlying Constituents	Floating Interest Rate	Floating Frequency i	Floating Rate Day Count i	Currency
1	Synthetic USD zero coupon bond	USD 3 month LIBOR	4	Act/360	USD
2	Synthetic EUR zero coupon bond	EUR 6 month EURIBOR	2	Act/360	EUR
3	Synthetic JPY zero coupon bond	JPY 6 month LIBOR	2	Act/360	JPY
4	Synthetic GBP zero coupon bond	GBP 6 month LIBOR	2	Act/365	GBP
5	Synthetic CHF zero coupon bond	CHF 6 month LIBOR	2	Act/360	CHF
6	Synthetic AUD zero coupon bond	AUD 6 month BBSW	2	Act/365	AUD
7	Synthetic CAD zero coupon bond	CAD 3 month CDOR	4	Act/365	CAD
8	Synthetic SEK zero coupon bond	SEK 3 month STIBOR	4	Act/360	SEK

## PART G

### J. P. Morgan Alternative Index Bond Carry Long Short Strategies

#### 1. Introduction

The bond carry long short strategy rules set out in this Part G apply to each of the Indices in the Modules to this Part G (each a **“Bond Carry Long Short Strategy Index”** or **“Index”** and together the **“Bond Carry Long Short Strategy Indices”** or **“Indices”**). The Index Rules of each Bond Carry Long Short Strategy Index are comprised of Part A of this document, this Part G and the Applicable Module to this Part G.

Each Bond Carry Long Short Strategy Index tracks the returns of a notional long position in a Bond Carry Long Strategy Index (the **“Long Underlying Constituent”**) and a notional short position in a Bond Carry Short Strategy Index (the **“Short Underlying Constituent”**), each an **“Underlying Constituent”** for the purposes of the Index Rules. On each Rebalancing Date, the exposure to the Underlying Constituents comprised in a Bond Carry Long Short Strategy Index will be rebalanced so that the Index provides notional long exposure to the Long Underlying Constituent and notional short exposure to the Short Underlying Constituent (each weighted to the relevant Weighting on the Rebalancing Date). The effective weight of the Underlying Constituents within an Index may fluctuate from one Rebalancing Date to the next Rebalancing Date due to movements in the level of the Underlying Constituents.

For each Bond Carry Long Short Strategy Index, the Applicable Module sets out (among other things) the:

- name of the Index and Bloomberg ticker;
- Index Business Days of the Index;
- Underlying Constituents of the Index (which are comprised of the Long Underlying Constituent and Short Underlying Constituent);
- Rebalancing Dates of the Index;
- Weighting assigned to the Underlying Constituents on Rebalancing Dates;
- Specific information pertaining to the relevant Bond Carry Long Short Strategy Index (see section 2 below).

#### 2. J.P. Morgan Alternative Index Bond Carry Short Strategies

The Index Calculation Agent shall calculate the level of a Bond Carry Short Strategy Index (which shall constitute the Short Underlying Constituent of the Index) solely for the purposes of referencing the notional short exposure to the synthetic bonds that contain the lowest carry from a particular universe of synthetic global bonds. The rules for calculating the level of the Short Underlying Constituent/ Bond Carry Short Strategy Index are set out in this section 2 and the Applicable Module.

The level of each Bond Carry Short Strategy Index (relevant Short Underlying Constituent) shall be calculated in accordance with the bond carry long strategy rules set out in Part F except that:

- (a) references to the Applicable Module for the Index shall be taken to be the relevant part of the Applicable Module to this Part G that sets out the specific information pertaining the Short Underlying Constituent (i.e. Bond Carry Short Strategy Index);
- (b) references to “Bond Carry Long Strategy Indices” shall be taken to be references to “Bond Carry Short Strategies Indices”;
- (c) Section 2.3 of Part F shall be deleted and replaced with the following:

“2.3 Second Step: Selecting Long Underlying Constituent A and B

Immediately after determining the PUC Carry of each Potential Underlying Constituent in respect of Rebalancing Selection Date k, the Index Calculation Agent shall determine the notional long positions over the Potential Underlying Constituents which the Index shall track (the **“Long Underlying Constituent A”** and **“Long Underlying Constituent B”**) from (but excluding) the Effective Rebalancing Date immediately after Rebalancing Selection Date k to (and including) the next Effective Rebalancing Date as follows:

- (a) the Potential Underlying Constituent with the lowest PUC Carry shall be the Long Underlying Constituent A; and
- (b) the Potential Underlying Constituent with the second lowest PUC Carry shall be the Long Underlying Constituent B.”
- (d) The Adjustment applied in calculating the Index Levels in section 3 of Part F shall be multiplied by minus 1, by deleting and replacing the definition of “Adjustment” in section 3 of Part F with the following

“Adjustment<sub>A<sub>k</sub></sub><sup>t</sup> and Adjustment<sub>B<sub>k</sub></sub><sup>t</sup> means the adjustment factor, calculated as, in respect of the relevant Long Underlying Constituent:

- (i)  $-Weighting \times \left(\frac{1}{12}\right) \times 0.005\%$  if the Long Underlying Constituent was the same as either of the Underlying Constituents (Long Underlying Constituent A or Long Underlying Constituent B) notionally comprised in the Index immediately prior to the Effective Rebalancing Date k; or
- (ii)  $-Weighting \times \left(N - \frac{1}{12}\right) \times 0.005\%$  if the condition in (i) above is not satisfied

### 3. Calculation of Index Levels

Subject to section 4.3 of Part A (Market Disruption Events), the Index Level for each Bond Carry Long Short Strategy Index shall be calculated in respect of each Index Business Day (provided that and notwithstanding section 4.2 of Part A (Publication of Index Levels), both the level of the Long Underlying Constituent and Short Underlying Constituent are published on such Index Business Day) from and excluding each Rebalancing Date  $t_k$  to and including Rebalancing Date  $t_{k+1}$  as follows:

$$\text{Index Level}_{k,t} = \text{Index Level}_k \times (1 + \text{Return}_{k,t})$$

where:

Index Level<sub>k,t</sub> means the Index Level on Index Business Day t;

Index Level<sub>k</sub> means the Index Level on Rebalancing Date k immediately prior to Index Business Day t;

Return<sub>k,t</sub> means the return, of the Long Underlying Constituent minus the Short Underlying Constituent, on Index Business Day t determined in accordance with the following formula:

$$\text{Return}_{k,t} = \text{Weighting} \times \left\{ \frac{LC_{k,t}}{LC_k} - \frac{SC_{k,t}}{SC_k} \right\}$$

where,:

$LC_{k,t}$  means the Closing Level of the Long Underlying Constituent on Index Business Date t;

$LC_k$  means the Closing level of the Long Underlying Constituent on the Rebalancing Date k immediately prior to Index Business Day t;

$SC_{k,t}$  means the Closing Level of the Short Underlying Constituent on Index Business Day t;

$SC_k$  means the Closing Level of the Short Underlying Constituent on the Rebalancing Date k immediately prior to Index Business Day t;

**Closing Level** means, subject to section 4.3 of Part A (Market Disruption Events), the official closing level of the Long Underlying Constituent or Short Underlying Constituent, as the case may be.

#### **4. Risk Factors**

##### **4.1 Leverage**

The Bond Carry Long Short Strategy Indices may use leverage to increase the return from any Underlying Constituent. However, the use of leverage also increases the potential risk of negative returns of such Bond Carry Long Short Strategy Indices. Any event which adversely affects the value of a notional Underlying Constituent will be magnified to the extent the Underlying Constituent is leveraged.

##### **4.2 Interest Rate and Duration Risk**

The Bond Carry Long Short Strategy Indices are exposed to interest rate risk relating to the Underlying Constituents. Interest rates can be volatile over the short term and, combined with leverage, can cause fluctuations, up or down, in the level of the Bond Carry Long Short Strategy Indices.

Additionally, longer dated (e.g. 10 year) bonds are exposed to duration risk. Through duration, moves in longer dated interest rates amplify the movement in the price of bonds of such tenor as compared with bonds of shorter tenor.

##### **4.3 Other Risk Factors**

Also see the "Risk Factors" section contained in Part A for other risk factors applicable to the Bond Carry Long Short Strategy Indices.

**Module G1.0: J.P. Morgan Alternative Index Bond 2Y Carry Long Short Strategy**

This Module G1.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Bond 2Y Carry Long Short Strategy.

**Specific information pertaining to the J.P. Morgan Alternative Index Bond 2Y Carry Long Short Strategy**

Name of Index	The J.P. Morgan Alternative Index Bond 2Y Carry Long Short Strategy (Bloomberg Ticker: AIJPCB2U)
Currency of the Index	US Dollars
Rebalancing Dates	The first Index Business Day of each month
Index Business Days	Each day (other than a Saturday or Sunday) on which (a) commercial banks in London, New York and Tokyo are open generally for business (including for dealings in foreign exchange and foreign currency deposits) and (b) TARGET is open.
Weighting	100%
Long Underlying Constituent	The J.P. Morgan Alternative Index Bond 2Y Carry Long Index
Short Underlying Constituent	The J.P. Morgan Alternative Index Bond 2Y Carry Short Index (see particulars below)
Start Date	3 August 2009
Start Level	100.00

**Specific information pertaining to the J.P. Morgan Alternative Index Bond 2Y Carry Short Strategy (a “Bond Carry Short Strategy Index”):**

Name of Index	The J.P. Morgan Alternative Index Bond 2Y Carry Short Strategy
Currency of the Index	US Dollars
Rebalancing Selection Dates	1 week day prior to 1 London Business Day prior to the first scheduled Index Business Day of the month. Where “London Business Day” means each day on which commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
Rebalancing Dates	The first Index Business Day of each month
Index Business Days	Each day (other than a Saturday or Sunday) on which (a) commercial banks in London, New York and Tokyo are open generally for business (including for dealings in foreign exchange and foreign currency deposits) and (b) TARGET is open.
Weighting	500%
N	2 years
Start Date	3 August 2009
Start Level	100.00

	Potential Underlying Constituents	Floating Interest Rate	Floating Frequency i	Floating Rate Day Count i	Currency
1	Synthetic USD zero coupon bond	USD 3 month LIBOR	4	Act/360	USD
2	Synthetic EUR zero coupon bond	EUR 6 month EURIBOR	2	Act/360	EUR
3	Synthetic JPY zero coupon bond	JPY 6 month LIBOR	2	Act/360	JPY
4	Synthetic GBP zero coupon bond	GBP 6 month LIBOR	2	Act/365	GBP
5	Synthetic CHF zero coupon bond	CHF 6 month LIBOR	2	Act/360	CHF
6	Synthetic AUD zero coupon bond	AUD 6 month BBSW	2	Act/365	AUD
7	Synthetic CAD zero coupon bond	CAD 3 month CDOR	4	Act/365	CAD
8	Synthetic SEK zero coupon bond	SEK 3 month STIBOR	4	Act/360	SEK

#### Module G2.0: J.P. Morgan Alternative Index Bond 10Y Carry Long Short Strategy

This Module G2.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Bond 10Y Carry Long Short Strategy.

#### Specific information pertaining to the J.P. Morgan Alternative Index Bond 10Y Carry Long Short Strategy

Name of Index	The J.P. Morgan Alternative Index Bond 10Y Carry Long Short Strategy (Bloomberg Ticker: AIJPCB4U)
Currency of the Index	US Dollars
Rebalancing Dates	The first Index Business Day of each month
Index Business Days	Each day on which (a) commercial banks in London, New York and Tokyo are open generally for business (including for dealings in foreign exchange and foreign currency deposits) and (b) TARGET is open.
Weighting	100%
Long Underlying Constituent	The J.P. Morgan Alternative Index Bond 10Y Carry Long Index
Short Underlying Constituent	The J.P. Morgan Alternative Index Bond 10Y Carry Short Index (see particulars below)
Start Date	3 August 2009
Start Level	100.00

**Specific information pertaining to the J.P. Morgan Alternative Index Bond 10Y Carry Short Strategy (a “Bond Carry Short Strategy Index”):**

Name of Index	The J.P. Morgan Alternative Index Bond 10Y Carry Short Strategy
Currency of the Index	US Dollars
Rebalancing Selection Dates	1 week day prior to 1 London Business Day prior to the first scheduled Index Business Day of the month. Where “London Business Day” means each day on which commercial banks in London are open generally for business (including for dealings in foreign exchange and foreign currency deposits).
Rebalancing Dates	The first Index Business Day of each month
Index Business Days	Each day on which (a) commercial banks in London, New York and Tokyo are open generally for business (including for dealings in foreign exchange and foreign currency deposits) and (b) TARGET is open.
Weighting	100%
N	10 years
Start Date	3 August 2009
Start Level	100.00

	Potential Underlying Constituents	Floating Interest Rate	Floating Frequency <sub>i</sub>	Floating Rate Day Count <sub>i</sub>	Currency
1	Synthetic USD zero coupon bond	USD 3 month LIBOR	4	Act/360	USD
2	Synthetic EUR zero coupon bond	EUR 6 month EURIBOR	2	Act/360	EUR
3	Synthetic JPY zero coupon bond	JPY 6 month LIBOR	2	Act/360	JPY
4	Synthetic GBP zero coupon bond	GBP 6 month LIBOR	2	Act/365	GBP
5	Synthetic CHF zero coupon bond	CHF 6 month LIBOR	2	Act/360	CHF
6	Synthetic AUD zero coupon bond	AUD 6 month BBSW	2	Act/365	AUD
7	Synthetic CAD zero coupon bond	CAD 3 month CDOR	4	Act/365	CAD
8	Synthetic SEK zero coupon bond	SEK 3 month STIBOR	4	Act/360	SEK



## PART H

### J.P. Morgan Alternative Index FX Carry Strategies

#### 1. Introduction

The rules of the foreign exchange carry strategy set out in this Part H apply to each of the Indices in the appendices to this Part H (each a “**FX Carry Strategy Index**” or “**Index**” and together the “**FX Carry Strategy Indices**” or “**Indices**”). The Index Rules of each FX Carry Strategy Index are comprised of Part A of this document, this Part H and the Applicable Module to this Part H.

Each FX Carry Strategy Index tracks (i) the notional returns of three currencies (versus the USD) that have the highest short term interest rate minus (ii) the notional returns of three currencies (versus the USD) that have the lowest short term interest rate.

For each FX Carry Strategy Index, the Applicable Module sets out (among other things) the:

- Name of the Index and Bloomberg ticker;
- Index Business Days of the Index;
- Eligible Currencies of the Index;
- Rebalancing Dates of the Index; and
- Rebalancing Selection Dates of the Index.

#### 2. Rebalancing and Selection of Underlying Constituents

##### 2.1 Rebalancing Selection Dates and Rebalancing Dates

In respect of each Rebalancing Selection Date, the Index Calculation Agent will determine which currencies among the Eligible Currencies are to be notionally comprised in the FX Carry Strategy Index on the immediately following Rebalancing Date in accordance with the methodology described in section 2.2 below.

##### 2.2 Selecting the six (6) Qualifying Currency Pairs

In respect of each Rebalancing Selection Date  $k$ , the Index Calculation Agent will determine the Interest Rate of each Eligible Currency, adjusted by its applicable day count, and rank the Eligible Currencies in descending order from the Eligible Currency with the highest Interest Rate to the Eligible Currency with the lowest Interest Rate. The three (3) Eligible Currencies with the highest Interest Rates will be selected as the “Qualifying Long Currencies” and the three (3) Eligible Currencies with the lowest Interest Rates will be selected as the “Qualifying Short Currencies”. Together these Currencies versus the USD shall form the six (6) “Qualifying Currency Pairs” and are also “**Currency Pairs**” and “**Underlying Constituents**” for the purposes of Part A of these Index Rules.

Such Qualifying Currency Pairs shall be comprised in the FX Carry Strategy Index from the Rebalancing Date immediately after Rebalancing Selection Date  $k$ .

Each FX Carry Strategy Index will be deemed to take a notional long position in the Qualifying Long Currencies against a notional short position in the USD and a notional short position in the Qualifying Short Currencies against a notional long position in the USD.

#### 3. Calculation of Index Levels

The Index Level for each FX Carry Strategy Index shall be calculated in respect of each Index Business Day from and excluding each Rebalancing Date  $k$  to and including Rebalancing Date  $k+1$  as follows:

$$Index_{k,t} = Index_k \times (1 + Return_{k,t})$$

$Index_{k,t}$  means the Index Level on Index Business Day  $t$ ;

$Index_k$  means the Index Level on Rebalancing Date  $k$ ;

and

$$Return_{k,t} = \frac{1}{3} \left[ \sum_{i=1}^3 Performance_{k,t}^i - \sum_{i=4}^6 Performance_{k,t}^i \right] - A \cdot \frac{Daycount_{k,t}}{360}$$

The first three terms (i.e. i = 1 to 3) in the formula above represent the synthetic return of the Qualifying Long Currencies and the second three terms (i.e. i = 4 to 6) represent the synthetic return of the Qualifying Short Currencies.

$Performance_{k,t}^i$  means the synthetic return, adjusted for the FX Rate, for Qualifying Currency i on Index Business Day t versus the USD, and is equal to 0 if Qualifying Currency i is the USD, and otherwise is determined in accordance with the following formula:

$$Performance_{k,t}^i = \frac{FXI_{k,t}^{Side}}{FXI_{k,t}^{OppSide}} \times \left( \frac{1 + (RI_k^{Side} \times Daycount_{k,(k+1)})}{1 + (DI_{k,t}^{OppSide} \times Daycount_{t,(k+1)})} \right) - \left( \frac{1 + (R\$_k \times Daycount_{k,(k+1)})}{1 + (D\$_{k,t} \times Daycount_{t,(k+1)})} \right)$$

where:

$FXI_k^{Side}$  means the bid side (if a Qualifying Long Currency) or offer side (if a Qualifying Short Currency) of the FX Rate for Qualifying Currency i on Rebalancing Date k.

$FXI_{k,t}^{OppSide}$  means the offer side (if a Qualifying Long Currency) or bid side (if a Qualifying Short Currency) of the FX Rate for the Qualifying Currency i on Index Business Day t.

$RI_k^{Side}$  means the bid side (if a Qualifying Long Currency) or offer side (if a Qualifying Short Currency) of the Implied Interest Rate for Qualifying Currency i on Rebalancing Date k.

$DI_{k,t}^{OppSide}$  means the offer side (if a Qualifying Long Currency) or bid side (if a Qualifying Short Currency) of the Interpolated Interest Rate for Qualifying Currency i on Index Business Day t.

$Daycount_{k,k+1}$  means the day count fraction determined on the basis of “actual/360” where the numerator represents the actual number of calendar days from (and including) the Value Date in respect of Rebalancing Date k to (but excluding) the Value Date in respect of Rebalancing Date k+1; and

$Daycount_{t,k+1}$  means the day count fraction determined on the basis of “actual/360” where the numerator represents the actual number of calendar days from (and including) the Value Date in respect of Index Business Day t to (but excluding) the Value Date in respect of Rebalancing Date k+1;

$Daycount_{k,t}$  means the daycount fraction determined on the basis of “actual/360” where the numerator represents the actual number of calendar days from (but excluding) Rebalancing Date k through to (and including) Index Business Day t.

A means the notional Adjustment Factor as specified in the Applicable Module.

$R\$_k$  means the Interest Rate for the USD on Rebalancing Date k

$D\$_{k,t}$  means the Interpolated Interest Rate for the USD on Index Business Day t

#### 4. Definitions

Capitalised terms defined below shall have the following meanings in respect of each FX Carry Strategy Index:

“**AUD**” means the lawful currency of the Commonwealth of Australia.

“**Business Day**” means, in respect of a Qualifying Currency, a day on which the principal financial centre for the Qualifying Currency and principal financial centre for US Dollars is open for dealings in foreign exchange and banking institutions in such primary local market are not otherwise authorised or required by law, regulation or executive order to close.

“**CAD**” means the lawful currency of Canada.

**“CHF”** means the lawful currency of Switzerland.

**“Currency Pair”** means each Qualifying Currency Pair selected in accordance with section 2 above;

**“Eligible Currencies”** as specified in the Applicable Module.

**“EUR or Euro”** each mean the lawful currency of the member states of the European Union that adopt the single currency in accordance with the EC Treaty.

**“FX Forward Points”** means in respect of a Qualifying Currency, the 1 month FX Forward Points expressed as number of Qualifying Currency per one USD, and shall be 0 if the Eligible Currency i is USD otherwise calculated as:

(a) if the Qualifying Currency is quoted in the market as number of Qualifying Currency per one USD:

$$F_{Bid} = WMF_{Bid} \text{ and } F_{Offer} = WMF_{Offer}$$

(b) if the Qualifying Currency is quoted in the market as number of USD per one Qualifying Currency:

$$F_{Bid} = \frac{1}{WMS_{Offer} + WMF_{Offer}} - \frac{1}{WMS_{Offer}} \text{ and } F_{Offer} = \frac{1}{WMS_{Bid} + WMF_{Bid}} - \frac{1}{WMS_{Bid}}$$

WMS and WMF are the FX spot rates and FX forward points respectively as published in the Bloomberg or Reuters pages set out in the Applicable Module. If the relevant rate is not published on such Bloomberg or Reuters page (or successor page), the FX spot rates and FX forward points shall be the rate determined by the Index Calculation Agent taking into consideration all information that in good faith it deems relevant (which may include, without limitation, Bloomberg composite FX pages).

**“FX Rate”** means in respect of a Qualifying Currency and Index Business Day, the spot exchange rate of the Qualifying Currency determined by the Index Calculation Agent from the WM fixes specified in the Applicable Module, expressed as the number of Qualifying Currency per one (1) USD on the relevant date. If the relevant rate(s) are not published on the relevant Bloomberg/WM page specified in the Applicable Module (or successor page as the case may be) the **“FX Rate”** shall be the rate determined by the Index Calculation Agent taking into consideration all information that in good faith it deems relevant (which may include, without limitation, Bloomberg composite FX pages).

**“GBP”** means the lawful currency of the United Kingdom.

**“Implied Interest Rate”** means in respect of a Qualifying Currency on Rebalancing Date k, the rate for the period from (but excluding) the day that is two Business Days after Rebalancing Date k to (and including) the day that is two Business Days after Rebalancing Date k+1 as determined by the Index Calculation Agent according to the below formulae:

- if the Qualifying Currency is USD means the USD 1 Month LIBOR rate that appears on the Bloomberg page specified in the Applicable Module on Rebalancing Date k
- and otherwise

$$R^{side^i} = \frac{1}{\tau} \left[ \frac{S^{side^i} + F^{side^i}}{S^{side^i}} (1 + \tau R^{\$}) - 1 \right]$$

where:

$S^{side^i}$  means the bid (if a Qualifying Long Currency) or offer side (if a Qualifying Short Currency) of the FX Rate for the Qualifying Currency on Rebalancing Selection Date k;

$F^{side^i}$  means bid side (if a Qualifying Long Currency) or offer side (if a Qualifying Short Currency) of the one month FX Forward Points for the Qualifying Currency on Rebalancing Selection Date k;

$\tau$ , denotes, in respect of the Qualifying Currency, the number of calendar days from (and excluding) the day which is two Business Days for the Qualifying Currency after Rebalancing

Date  $k$  to (and including) the day which is two Business Days for the Qualifying Currency after Rebalancing Date  $k+1$  divided by 360.

**“Interest Rate”** means in respect of an Eligible Currency and any day, the rate that appears on the Bloomberg page specified in the Applicable Module on such day (or successor page as the case may be).

**“Interpolated Interest Rate”** means in respect of Qualifying Currency  $i$  on Index Business Day  $t$ , the interest rate for the period from (but excluding) the day that is two Business Days for the Qualifying Currency after Index Business Day  $t$ , to (and including) the day that is two Business Days for the Qualifying Currency after Rebalancing Date  $k+1$ , (whether USD or not) (on the applicable side), as determined by the Index Calculation Agent in accordance with a generally accepted market practice for such calculation which may use the Implied Interest Rates determined as of Index Business Day  $t$  and foreign exchange forward rates published on a relevant Reuters or Bloomberg page for various maturities and such other information that the Index Calculation Agent deems relevant.

**“JPY”** means the lawful currency of Japan.

**“NOK”** means the lawful currency of the Kingdom of Norway.

**“NZD”** means the lawful currency of New Zealand.

**“Qualifying Currency”** means each Qualifying Long Currency or Qualifying Short Currency, as applicable.

**“Qualifying Long Currency”** means the Eligible Currency selected as a Qualifying Long Currency in accordance with section 2 above;

**“Qualifying Short Currency”** means the Eligible Currency selected as a Qualifying Short Currency in accordance with section 2 above;

**“SEK”** means the lawful currency of the Kingdom of Sweden.

**“USD”** means the lawful currency of the United States.

**“Value Date in respect of Index Business Date  $t$ ”** means the date that is two (2) Index Business Days after Index Business Day  $t$ .

**“Value Date in respect of Rebalancing Date  $k$ ”** means the date that is two (2) Index Business Days after Rebalancing Date  $k$ .

## **5. Risk Factors**

### **5.1 Carry Investment Strategy**

The FX Carry Strategy Indices are based on a currency trading strategy that is generally known as “positive carry”, and therefore seeks to capitalise on the carry that might be earned from notional trading positions in the Qualifying Currency Pairs. **No assurance can be given that the investment strategy on which the FX Carry Strategy Indices are based will be successful or that the FX Carry Strategy Indices will outperform any alternative strategy that might be employed in respect of the Eligible Currency Pairs.**

### **5.2 Other Risk Factors**

Also see the “Risk Factors” section contained in Part A for other risk factors applicable to the FX Carry Strategy Indices.

## Module H1.0: J.P. Morgan Alternative Index G10 FX Carry Strategy

Name of Index	J.P. Morgan Alternative Index G10 FX Carry Strategy (Bloomberg ticker AIJPCF1U)
Currency of the Index	US Dollars
Index Business Days	Each day (other than a Saturday or Sunday) on which commercial banks in New York and London are generally open for business (including for dealings in foreign exchange and foreign currency deposits)
Rebalancing Dates	The first Index Business Day of each month
Rebalancing Selection Dates	The Index Business Day prior to the relevant Rebalance Date
Adjustment Factor	0.4%
Start Date	3 August 2009
Start Level	100.00

	<b>Eligible Currency</b>	<b>Interest Rate</b>	<b>Bloomberg page for relevant Interest Rate</b>	<b>Interest Rate day count</b>	<b>Bloomberg page of FX Rate data</b>	<b>Reuters page of FX Forward Points data</b>
1	USD	USD 1 month LIBOR	US0001M Index	Act / 360	n/a	n/a
2	EUR	EUR 1 month EURIBOR	EUR001M Index	Act / 360	EUR WMCO Curncy	USDEUR1MFI X=WM
3	JPY	JPY 1 month LIBOR	JY0001M Index	Act / 360	JPY WMCO Curncy	USDJPY1MFI X=WM
4	GBP	GBP 1 month LIBOR	BP0001M Index	Act / 365	GBP WMCO Curncy	USDGBP1MFI X=WM
5	CHF	CHF 1 month LIBOR	SF0001M Index	Act / 360	CHF WMCO Curncy	USDCHF1MFI X=WM
6	AUD	AUD 1 month LIBOR	AU0001M Index	Act / 360	AUD WMCO Curncy	USDAUD1MFI X=WM
7	CAD	CAD 1 month LIBOR	CD0001M Index	Act / 360	CAD WMCO Curncy	USDCAD1MFI X=WM
8	NOK	NOK 1 month NIBOR	NIBOR1M Index	Act / 360	NOK WMCO Curncy	USDNOK1MFI X=WM
9	NZD	NZD 1 month LIBOR	NZ0001M Index	Act / 360	NZD WMCO Curncy	USDNZD1MFI X=WM
10	SEK	SEK 1 month STIBOR	STIB1M Index	Act / 360	SEK WMCO Curncy	USDSEK1MFI X=WM

## PART I

### J.P. Morgan Alternative Index Mean Reversion Strategies

#### 1. Introduction

The mean reversion strategy rules set out in this Part I apply to each of the Indices in the Modules to this Part I (each a “**Mean Reversion Strategy Index**” or “**Index**” and together the “**Mean Reversion Strategy Indices**” or “**Indices**”). The Index Rules of each Mean Reversion Strategy Index are comprised of Part A of this document, this Part I and the Applicable Module to this Part I.

Each Mean Reversion Strategy Index tracks the return of a synthetic long or short position in the relevant Underlying Constituent. The exposure to the synthetic position to the Underlying Constituent is adjusted on each Index Business Day based on the performance of the Underlying Constituent over the preceding five (5) Index Business Days as described below. The strategy seeks to capitalise on the view that over short periods of time, such as five Index Business Days, markets are cyclical – meaning that an upward trend in the level of the Underlying Constituent is usually followed by a downward trend or vice versa. As such and in general terms, each Mean Reversion Strategy Index notionally takes a synthetic short position in the Underlying Constituent following a recent increase in its level or vice versa. Moreover, the magnitude of the exposure (either positive following a fall representing a long position or negative following a rise representing a short position) will increase with the magnitude of the recent performance of the Underlying Constituent (subject to a cap and floor).

For each Mean Reversion Strategy Index, the Applicable Module sets out (among other things) the:

- Name of the Index and Bloomberg ticker;
- Index Business Days of the Index; and
- Underlying Constituent of the Index
- Adjustment Factor in respect of the Index

#### 2. Rebalancing of Underlying Constituents

In respect of each Index Business Day, the synthetic exposure to the Underlying Constituent is rebalanced and determined by the Index Calculation Agent in accordance with the following formula:

$$\text{Exposure}_t = \text{MAX}(-100\% ; \text{MIN}(40 \times \text{Unit}_t ; 100\%))$$

where:

$$\text{Unit}_t = -\frac{1}{10} \times \left( 4 \times \left( \frac{P_{t-1}}{P_{t-2}} - 1 \right) + 3 \times \left( \frac{P_{t-2}}{P_{t-3}} - 1 \right) + 2 \times \left( \frac{P_{t-3}}{P_{t-4}} - 1 \right) + \left( \frac{P_{t-4}}{P_{t-5}} - 1 \right) \right)$$

$P_t$  means the Closing Level of the Underlying Constituent on such Index Business Day  $t$ ;

$P_{t-n}$  means the Closing Level of the Underlying Constituent on such Index Business Day  $t-n$ ;

$n$  varies from 1 to 5.

**Closing Level** means, subject to the provisions of 4.3 in Part A (Market Disruption Events), the official closing level of the Underlying Constituent.

#### 3. Calculation of Index Levels

Subject to section 4.3 of Part A (*Market Disruption Events*), the Index Level for each Mean Reversion Strategy Index shall be calculated in respect of each Index Business Day as follows:

$$\text{Index}_t = \text{Index}_{t-1} \times (1 + \text{Return}_t)$$

where:

$\text{Index}_t$  means the Index Level on Index Business Day  $t$ ;

$\text{Index}_{t-1}$  means the Index Level on Index Business Day t-1;

$$\text{Return}_t = \text{Exposure}_t \times \left( \frac{S_t}{S_{t-1}} - 1 \right) - |\text{Exposure}_{t+1} - \text{Exposure}_t| \times \text{Adjustment}$$

where:

$S_t$  means the Closing Level of the Underlying Constituent on Index Business Day t;

$S_{t-1}$  means the Closing Level of the Underlying Constituent on Index Business Day t-1;

*Adjustment* is the notional Adjustment Factor as specified in the Applicable Module;

$|\text{Exposure}_{t+1} - \text{Exposure}_t|$  means the absolute value of  $(\text{Exposure}_{t+1} - \text{Exposure}_t)$ :

(i) if  $(\text{Exposure}_{t+1} - \text{Exposure}_t)$  is positive:

$$|\text{Exposure}_{t+1} - \text{Exposure}_t| = (\text{Exposure}_{t+1} - \text{Exposure}_t); \text{ or}$$

(ii) if  $(\text{Exposure}_{t+1} - \text{Exposure}_t)$  is negative,

$$|\text{Exposure}_{t+1} - \text{Exposure}_t| = -(\text{Exposure}_{t+1} - \text{Exposure}_t);$$

$\text{Exposure}_t$  means the Exposure to the Underlying Constituent on Index Business Day t;

$\text{Exposure}_{t+1}$  means the Exposure to the Underlying Constituent on Index Business Day t+1;

**Closing Level** means subject to the provisions of 4.3 in Part A (Market Disruption Events) the official closing level of the Underlying Constituent.

## 4. Risk Factors

### 4.1 Mean Reversion Strategy

The Mean Reversion Strategy Indices are constructed based upon what is generally known as a mean reversion investment strategy. Mean reversion investing generally seeks to capitalize on short term price reversals. **No assurance can be given that the investment strategy on which the Mean Reversion Strategy Indices are based will be successful or that the Mean Reversion Strategy Indices will outperform any alternative strategy that might be employed in respect of the Underlying Constituents.**

### 4.2 Other Risk Factors

Also see the "Risk Factors" section contained in Part A for other risk factors applicable to the Mean Reversion Strategy Indices.

**Module I1.0: J.P. Morgan Alternative Index Mean Reversion US Strategy**

This Module I1.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Mean Reversion US Strategy.

Name of Index	J.P. Morgan Alternative Index Mean Reversion US Strategy (Bloomberg Ticker AIJPSR1U)
Currency of the Index	US Dollars
Underlying Constituent	The J.P. Morgan US Equity Futures (G) Tracker (Bloomberg ticker FTJGUSEE)
Index Business Days	Each day on which the Chicago Mercantile Exchange is scheduled to open for business.
Adjustment Factor	0.03%
Start Date	3 August 2009
Start Level	100.00



### Module I2.0: J.P. Morgan Alternative Index Mean Reversion Europe Strategy

This Module I2.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Mean Reversion Europe Strategy.

Name of Index	J.P. Morgan Alternative Index Mean Reversion Europe Strategy (Bloomberg Ticker AIJPSR1E)
Currency of the Index	Euro
Underlying Constituent	The J.P. Morgan European Equity Futures (G) Tracker (Bloomberg ticker FTJGEUEE)
Index Business Days	Each day on which the Eurex Exchange is scheduled to open for business.
Adjustment Factor	0.03%
Start Date	3 August 2009
Start Level	100.00

### Module I3.0: J.P. Morgan Alternative Index Mean Reversion Japan Strategy

This Module I3.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Mean Reversion Japan Strategy.

Name of Index	J.P. Morgan Alternative Index Mean Reversion Japan Strategy (Bloomberg Ticker AIJPSR1J)
Currency of the Index	Japanese Yen
Underlying Constituent	The J.P. Morgan Japanese Equity Futures (G) Tracker (Bloomberg ticker FTJGJPEE)
Index Business Days	Each day on which the Osaka Stock Exchange is scheduled to open for business.
Adjustment Factor	0.03%
Start Date	3 August 2009
Start Level	100.00

## PART J

### J.P. Morgan Alternative Index Short Volatility Strategies

#### 1. Introduction

The short volatility strategy rules set out in this Part J apply to each of the Indices in the Modules to this Part J (each an “**Short Volatility Strategy Index**” or “**Index**” and together the “**Short Volatility Strategy Indices**” or “**Indices**”). The Index Rules of each Short Volatility Strategy Index are comprised of Part A of this document, this Part J and the Applicable Module to this Part J.

Each Short Volatility Strategy Index tracks the return of a synthetic sale of a one month variance swap on the Underlying Constituent on each Rebalancing Date. Each Short Volatility Strategy Index seeks to capitalise from the long-term trend that the observed volatility of a broad market equity index tends to be less than the implied by prices in the equity options market. If the actual volatility in any month is less than the reference volatility implied by the options market at the beginning of such month then the Index will make a positive return. Conversely, if the actual volatility in such month is more than the reference volatility implied by the options market at the beginning of the month, then the Index will record a negative return.

For each Short Volatility Strategy Index, the Applicable Module sets out (among other things) the:

- name of the Index and Bloomberg ticker;
- Index Business Days of the Index;
- Underlying Constituent of the Index;
- Underlying Volatility Index of the Index; and
- Rebalancing Dates of the Index.

#### 2. Rebalancing of Underlying Constituent

On each Rebalancing Date, the Underlying Constituent will be assigned a weight (“**Weight**”) determined by the Index Calculation Agent in accordance with the following formula:

$$Weight_k = \frac{1}{8 * Strike_k}$$

where:

$Strike_k$  means the Variance Swap Strike (as defined in section 3 below) on Rebalancing Date k.

#### 3. Calculation of Index Levels

Subject section 4.3 of Part A (Market Disruption Events), the Index Level for each Short Volatility Strategy Index shall be calculated on each Index Business Day from and excluding each Rebalancing Date  $t_k$  to and including Rebalancing Date  $t_{k+1}$  as follows:

$$Index\ Level_{k,t} = Index\ Level_k \times (1 + Return_{k,t})$$

where:

$Index\ Level_{k,t}$  means the Index Level on Index Business Day t;

$IndexLevel_k$  means the Index Level on Rebalancing Date k;

$Return_{k,t}$  means, in respect of Index Business Day t, the return determined by the Index Calculation Agent in accordance with the following formula:

$$\text{Return}_{k,t} = \text{Weight}_k \times \left( \frac{\text{Strike}_k^2 - \text{Min} \left[ \text{Cap}_k^2 \times \text{Strike}_k^2, \left[ \frac{(T-t)}{T} \times \sigma_t^2 + \frac{252}{T} \times \sum_{m=1}^t \left( \ln \left( \frac{S_m}{S_{m-1}} \right) \right)^2 \right] \right]}{(1 + D_{k,t} * \text{Daycount}_{t,(k+1)})} \right)$$

where:

*Weight* means the Weight as determined in Section 2 above on Rebalancing Date k

*Strike<sub>k</sub>* means the Variance Swap Strike on Rebalancing Date k

*Cap<sub>k</sub>* means  $\sqrt{1 + \frac{8}{\text{Strike}_k}}$ ;

*T* means the number of Index Business Days from and including Rebalancing Date k to and excluding the next Rebalancing Date k+1;

*σ<sub>t</sub>* means the Variance Swap Strike on Index Business Day t;

*S<sub>m</sub>* means the Closing Level of the Underlying Constituent on Index Business Day t;

*S<sub>m-1</sub>* means the Closing Level of the Underlying Constituent on the Index Business Day immediately prior to Index Business Day t;

**“Closing Level”** means, subject to 4.3 of Part A (Market Disruption Events), the official closing level of the Underlying Constituent.

*D<sub>k,t</sub>* means the Interpolated Interest Rate from (and including) Index Business Day t to (but excluding) the Rebalancing Date k+1;

*Daycount<sub>t,(k+1)</sub>* means the day count fraction of Actual/360 where the numerator represents the actual number of calendar days from (and including) Index Business Day t to (but excluding) the Rebalancing Date k+1;

**“Interpolated Interest Rate”** means in respect of an Index Business Day t, and a future date q, the interest rate for the period from (and including) Index Business Day t, to (but excluding) date q for the Currency of the Index, as determined by the Index Calculation Agent in accordance with a generally accepted market practice for such calculation which may use swap rates and money market rates on a relevant Reuters or Bloomberg page for various maturities and such other information that the Index Calculation Agent deems relevant.

The Variance Swap Strike, *Strike<sub>k</sub>*, on any Rebalancing Date k is calculated as

$$V_k - \text{MAX} \left( 1.1\% + \frac{(V_k - 10\%) \times 0.5\%}{10\%}, 1.1\% \right)$$

Where

*V<sub>k</sub>* is the Closing Level of the Underlying Volatility Index on Rebalancing Date k expressed as a percentage

The Variance Swap Strike, *σ<sub>t</sub>*, on any Index Business Day t is determined as

$$V_t - \text{MAX} \left( 1.1\% + \frac{(V_t - 10\%) \times 0.5\%}{10\%}, 1.1\% \right)$$

Where:

$V_t$  is the Closing Level of the Underlying Volatility Index on Index Business Day  $t$  expressed as a percentage

**“Closing Level”** means the official closing level of the Underlying Volatility Index in respect of the relevant day. If the relevant day is a day on which the sponsor of the Underlying Volatility Index fails to calculate and publish the closing level of the Underlying Volatility Index, the Index Calculation Agent, acting in good faith and a commercially reasonable manner, shall calculate its good faith estimate of the closing level for such Index Business Day for the purposes of determining the Index Level on such day.

#### 4. Index Calculation Agent determination of Variance Swap Strike levels

If, on any Index Business Day, the Index Calculation Agent determines, by reference to at least 3 independent leading market sources, that the 1 month implied volatility level for the Underlying Constituent is 3% greater than or 3% less than the Closing Level of the Underlying Volatility Index, the Index Calculation Agent may (but is not obliged), for such period of time determined by the Index Calculation Agent, utilise the average of at least 3 independent leading market sources for the purposes of calculating the closing level of the Underlying Volatility Index when calculating the Index Level of the Index.

The Index Calculation Agent is under no obligation to actively monitor whether or not the above event has occurred.

#### 5. Risk Factors

##### Short Volatility Investment Strategy

Each Short Volatility Strategy Index seeks to capitalise from the long-term trend that the observed volatility of a broad market equity index tends to be less than the implied by prices in the equity options market. **No assurance can be given that the investment strategy on which the Short Volatility Strategy Indices are based will be successful or that the Short Volatility Strategy Indices will outperform any alternative strategy that might be employed in respect of the Underlying Constituents.**

##### 5.1 Short Volatility and non linear financial instruments

The strategy of synthetically selling variance swaps can lead to **large negative returns** in periods of **high volatility** in the Underlying Constituent. Hence, increased returns (or volatility) of the Underlying Constituent results in proportionally higher negative returns in the short variance swap position.

##### 5.2 Other Risk Factors

Also see the “Risk Factors” section contained in Part A for other risk factors applicable to the Short Volatility Strategy Indices.

## Module J1.0: J.P. Morgan Alternative Index Short Volatility US Strategy

This Module J1.0 sets out the specific information pertaining to the J.P. Morgan Alternative Index Short Volatility US Strategy.

Name of Index	J.P. Morgan Alternative Index Short Volatility US Strategy (Bloomberg ticker AIJPSV1U)
Currency of the Index	US Dollars
Underlying Volatility Index	VIX Index (Bloomberg page VIX <Index>)
Underlying Constituent	S&P 500 Index (Bloomberg ticker SPX)
Index Business Days	Each day on which the index sponsor of the Underlying Constituent is scheduled to calculate and announce the level of the Underlying Constituent.
Rebalancing Dates	The 3rd Friday of each month. If, on such day, the Chicago Mercantile Exchange (the “CME”) is not open for business, the Rebalancing Date shall be the first preceding day on which the CME is open for business.
Start Date	3 August 2009
Start Level	100.00

The J.P. Morgan Alternative Index Short Volatility US Strategy (“**Index**”) is not sponsored, endorsed, sold or promoted by Standard & Poor’s, a division of The McGraw-Hill Companies, Inc. (“S&P”). Standard & Poor’s does not make any representation or warranty, express or implied, to the owners of products linked to the Index (“**products**”) or any member of the public regarding the advisability of investing in securities generally or in the products particularly or the ability of the S&P Indices to track general stock market performance. S&P’s only relationship to JPMorgan Chase Bank, N.A., for itself and on behalf of each of its Affiliates (“Licensee”) is the licensing of certain trademarks and trade names of S&P and of the S&P Indices, which indices are determined, composed and calculated by S&P without regard to the Licensee or the products. S&P has no obligation to take the needs of the Licensee or the owners of the products into consideration in determining, composing or calculating the S&P Indices. S&P is not responsible for and have not participated in the determination of the timing of, prices at, or quantities of the products to be issued or in the determination or calculation of the equation by which the products are to be converted into cash. S&P has no obligation or liability in connection with the administration, marketing or trading of the products.

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## **ANNEX A**

### J.P. Morgan Alternative Index Commodity Carry Strategy Index Rules

# J.P. Morgan Contag Module A: Selection Methodology

August 2009 (amended 8 March 2010)

**J.P.Morgan**

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## 1. Contag

Contag refers to a methodology for selecting Futures Contracts (the "Selection Methodology") and several strategies developed by J.P. Morgan (the "Contag Indices") that utilise this methodology. The Selection Methodology uses the slope of the futures curve of certain specified commodities in order to select a particular Futures Contract in respect of each commodity in which to synthetically gain exposure. The Selection Methodology aims to select a Futures Contract with the highest level of Local Backwardation subject to certain constraints, all as further explained in more detail below.

## 2. This Document

This document, Module A (*Selection Methodology*), explains the Selection Methodology. By itself this document does not define an index or product. The Selection Methodology will result in the determination of a Futures Contract for each Eligible Commodity (the "Contag Contract") in which the relevant Contag Index will have synthetic exposure over the following month.

The determination of the level of a Contag Index will depend, amongst other things, on the selection of the Contag Contracts according to the Selection Methodology. Further modules will be used to describe other concepts or details of the Contag Indices and or modify concepts or details described herein for the purposes of a particular Contag Index. One or more of these modules should be read in conjunction with this document to obtain the full rules of the relevant Contag Index.

## 3. Definitions

Capitalised terms used in this document should be interpreted according to the definitions given below. In many cases there is a further explanation of the term or concept in the body of this document.

Base Contract	means, in relation to an Eligible Commodity and a Relevant Month, a Futures Contract which is a member of the Base Set.
Base Set	means, in relation to an Eligible Commodity and a Relevant Month, a set of Futures Contracts which enter into the Selection Methodology for the determination of the Contag Contract.
Closest Dated Preceding Futures Contract	means, in relation to a Base Set and the $i^{\text{th}}$ Base Contract of the Base Set, the $(i-1)^{\text{th}}$ Base Contract.
Contag Contract	means, in relation to an Eligible Commodity and a Relevant Month, the Futures Contract selected by the Selection Methodology.
Contag Index or Contag Indices	means a family of commodity based strategies developed by J.P. Morgan that are dependent on the Selection Methodology.
Contract at Month Start	means, in relation to an Eligible Commodity and a Relevant Month, the Futures Contract with the earliest Delivery Month in the Base Set.
Contract Business Day	means, in relation to an Eligible Commodity and a Futures Contract, a day on which the Relevant Exchange for such Eligible Commodity is scheduled to be open for trading for its regular trading sessions and to publish a settlement price.
Contract Letter	means each letter listed in Table 2: <i>Mapping of Contract Letter to Delivery Months</i> , denoting the Delivery Month of a Futures Contract.

Contract Price	means, in relation to a Futures Contract and a Dealing Day, the settlement price in USD of such Futures Contract as published by the Relevant Exchange for such Dealing Day.
Contract Selection Date	means, in relation to each Relevant Month, the Dealing Day for which Contract Prices are observed in the Selection Methodology as specified in Section 4.1 ( <i>General</i> ) below.
Dealing Day	means a day on which the NYSE Euronext is scheduled to be open for trading for its regular trading session.
Deferring Commodities	means the Eligible Commodities set out as a Deferring Commodity in Table 3 ( <i>Eligible Commodities</i> ).
Delivery Month	means, in relation to a Futures Contract, the month in which such Futures Contract is due to expire, settle or be delivered as specified by the Relevant Exchange.
Disrupted Day	has the meaning given to it in Section 5 ( <i>Market Disruption</i> ) below.
Eligible Commodity	means each commodity listed on the Related Exchange specified in Table 3: <i>Eligible Commodities</i> below.
Eligible Contract	means, in relation to an Eligible Commodity and a Relevant Month, a Futures Contract which is eligible to be selected as the Contag Contract as determined in Section 4.4 ( <i>Eligible Contracts</i> ) below.
Eligible Set	means, in relation to an Eligible Commodity and a Relevant Month, a set of Eligible Contracts.
Futures Contract	means a contract for delivery of an Eligible Commodity which is associated with a Delivery Month.
Index Calculation Agent	means J.P. Morgan Securities Ltd. or any affiliate or subsidiary designated by it to act as calculation agent in connection with the Selection Methodology.
J.P. Morgan	means J.P. Morgan Securities Ltd., any affiliate, subsidiary of nominated successor thereof.
Limit Price	means, in relation to a Dealing Day and a Contract Price, the maximum or minimum price allowed for that Futures Contract by the Relevant Exchange on such day.
Liquid Contract Months	means, in relation to an Eligible Commodity that is a Deferring Commodity, the Futures Contracts listed as such in <i>Table 3: Eligible Commodities</i> .
Local Backwardation	means, in respect of a Futures Contract ( $F_i$ ), a measure of the degree of backwardation between $F_i$ and the Closest Dated Preceding Futures Contract ( $F_{i-1}$ ) as further defined in Section 4.2 ( <i>Local Backwardation</i> ) below.
Market Disruption	means the occurrence of a Disrupted Day, as described in Section 5 ( <i>Market Disruptions</i> ) below.
Most Backwardated Contract	means, in relation to an Eligible Set, the Eligible Contract with the highest Local Backwardation.



Non-Deferring Commodity	means an Eligible Commodity which is not a Deferring Commodity as set out in Table 3 ( <i>Eligible Commodities</i> ) below.
Previously Selected Contract	means, in relation to a Relevant Month and an Eligible Commodity, the Contag Contract for such Eligible Commodity for the month immediately preceding the Relevant Month.
Relevant Exchange	means, in respect of an Eligible Commodity, the exchange on which such Futures Contract is listed as specified in Table 3 ( <i>Eligible Commodities</i> ), or any successor to such exchange.
Relevant Month	means the calendar month in respect of which the Selection Methodology is determining the Contag Contracts.
Selection Methodology	means the algorithmic process described in this document for the selection of Contag Contracts.
Significant Benefit Test	means the test set out in Section 4.5.3 ( <i>Significant Benefit Test</i> ) to decide if the Most Backwardated Contract shall be the Contag Contract.

## 4. Methodology

### 4.1 General

The Selection Methodology is an algorithmic process which determines, in respect of each calendar month (the "Relevant Month") and each Eligible Commodity, the Contag Contract. The Contag Contract is selected from the Eligible Contracts in respect of such Eligible Commodity for such Relevant Month. This selection is based on Contract Prices for the last Dealing Day of the calendar month immediately preceding the Relevant Month (the "Contract Selection Date" for the Relevant Month).

The Selection Methodology may be described as "backwardation-seeking". The methodology aims (subject to various constraints) to select the Futures Contract which has the highest Local Backwardation based on the Contract Price for a Futures Contract on the Contract Selection Date compared to the Contract Price for the Closest Dated Preceding Futures Contract.

### 4.2 Local Backwardation

When looking at the Contract Prices of Futures Contracts in relation to an Eligible Commodity the term "backwardation" is used to refer to the situation where Futures Contracts with a Delivery Month further in time have lower Contract Prices than Futures Contracts with a Delivery Month closer in time. If plotted on a graph the curve of the Contract Prices of the Futures Contracts of an Eligible Commodity would be downsloping.

In the Selection Methodology the term Local Backwardation is used as a measure of the degree of backwardation for the  $i^{\text{th}}$  Base Contract ( $F_i$ ) in the Base Set compared to the preceding Base Contract ( $F_{i-1}$ ) in the Base Set (the "Closest Dated Preceding Futures Contract").

Subject to the occurrence of a Market Disruption and in respect of a Relevant Month, Local Backwardation in respect of the  $i^{\text{th}}$  Base Contract in the Base Set ( $F_i$ ) is determined by the Index Calculation Agent in accordance with the following formula:

$$\text{Local Backwardation}(F_i) = \frac{1}{m} \left( \frac{\text{Level}(F_{i-1})}{\text{Level}(F_i)} - 1 \right)$$

where:

$\text{Level}(F_i)$  means the Contract Price of the  $i^{\text{th}}$  Base Contract in the Base Set ( $F_i$ ) on the Contract Selection Date in respect of the Relevant Month;

$\text{Level}(F_{i-1})$  means the Contract Price of the  $(i-1)^{\text{th}}$  Base Contract in the Base Set ( $F_{i-1}$ ) on the Contract Selection Date in respect of the Relevant Month; and

$m$  means the number of calendar months from and including the Delivery Month of  $F_{i-1}$  to but excluding the Delivery Month of  $F_i$ . If the Delivery Months of  $F_{i-1}$  and  $F_i$  are consecutive,  $m$  shall be 1.

Local Backwardation cannot be determined for the first Base Contract in a Base Set ( $F_1$ ) since there is no Closest Dated Preceding Futures Contract in the Base Set.

### 4.3 The Base Set

In respect of each Relevant Month and for each Eligible Commodity, only certain Futures Contracts may be considered by the Selection Methodology. These Futures Contracts comprise the Base Set and each such Futures Contract in the Base Set is a Base Contract.

The Base Set shall be determined by reference to Table 1 (*Futures Contracts entering into the Base Set*) below.

Each row of Table 1 gives information about an Eligible Commodity. Under the heading "Contract at Month Start" are 12 columns, corresponding (from left to right) to each calendar month from, and including, January to, and including, December. The entries in the columns are single uppercase letters (each a "Contract Letter"). Each Contract Letter relates to a month which is detailed in Table 2 (*Mapping of Contract Letter to Delivery Months*) below and such month is the Delivery Month of a Futures Contract. Reading from left to right in Table 1 the Delivery Month is increasing through the year, so that where the Delivery Month in the columns towards the right of the table moves from a later month e.g. Z (December) to an earlier month e.g. F (January) the Delivery Month refers to that month in the year immediately following the year in which the Relevant Month falls.

Eligible Commodity (Relevant Exchange)	Contract at Month Start											
	J a n	F e b	M a r	A p r	M a y	J u n	J u l	A u g	S e p	O c t	N o v	D e c
WTI Crude Oil (NYMEX)	G	H	J	K	M	N	Q	U	V	X	Z	F
Brent Crude Oil (ICE)	H	J	K	M	N	Q	U	V	X	Z	F	G
Heating Oil (NYMEX)	G	H	J	K	M	N	Q	U	V	X	Z	F
Gas Oil (ICE)	G	H	J	K	M	N	Q	U	V	X	Z	F
RBOB Gasoline (NYMEX)	G	H	J	K	M	N	Q	U	V	X	Z	F
Natural Gas (NYMEX)	G	H	J	K	M	N	Q	U	V	X	Z	F
Wheat (CBOT)	H	H	K	K	N	N	U	U	Z	Z	Z	H
Kansas Wheat (KCBOT)	H	H	K	K	N	N	U	U	Z	Z	Z	H
Soybeans (CBOT)	H	H	K	K	N	N	X	X	X	X	F	F
Corn (CBOT)	H	H	K	K	N	N	U	U	Z	Z	Z	H
Coffee (NYBOT)	H	H	K	K	N	N	U	U	Z	Z	Z	H
Sugar (NYBOT)	H	H	K	K	N	N	V	V	V	H	H	H
Cotton (NYBOT)	H	H	K	K	N	N	Z	Z	Z	Z	Z	H
Cocoa (NYBOT)	H	H	K	K	N	N	U	U	Z	Z	Z	H
Aluminium (LME)	G	H	J	K	M	N	Q	U	V	X	Z	F
Copper (LME)	G	H	J	K	M	N	Q	U	V	X	Z	F
Lead (LME)	G	H	J	K	M	N	Q	U	V	X	Z	F
Nickel (LME)	G	H	J	K	M	N	Q	U	V	X	Z	F
Zinc (LME)	G	H	J	K	M	N	Q	U	V	X	Z	F
Gold (COMEX)	G	J	J	M	M	Q	Q	Z	Z	Z	Z	G
Silver (COMEX)	H	H	K	K	N	N	U	U	Z	Z	Z	H
Lean Hogs (CME)	G	J	J	M	M	N	Q	V	V	Z	Z	G
Live Cattle (CME)	G	J	J	M	M	Q	Q	V	V	Z	Z	G
Feeder Cattle (CME)	H	H	J	K	Q	Q	Q	U	V	X	F	F

**Table 1: Futures Contracts entering into the Base Set**

Contract Letter	F	G	H	J	K	M	N	Q	U	V	X	Z
Delivery Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

**Table 2: Mapping of Contract Letter to Delivery Months**

The Base Set in respect of each Eligible Commodity shall comprise (i) the Futures Contract indicated as the "Contract at Month Start" in Table 1 above for the Relevant Month and (ii) each Futures Contract indicated for each subsequent month from, but excluding, the Relevant Month to, and including, the month falling 12 months after the Relevant Month.

Example 1: for the Eligible Commodity WTI Crude Oil (NYMEX) and the Relevant Month of January 2009, the Base Set shall consist of the 13 Futures Contracts with Delivery Months of February 2009 (the Contract at Month Start for the Relevant Month), March 2009, April 2009, May 2009, June 2009, July 2009, August 2009, September 2009, October 2009, November 2009, December 2009, January 2010 and February 2010.

Although the Base Set considers the Futures Contracts for the 13 calendar months from and including the Relevant Month to and including the month falling 12 months after the Relevant Month, the number of Base Contracts in the Base Set may be less than 13 (as in Example 2 below). The number of Base Contracts in the Base Set can be determined by considering the number of different Contract Letters in the row relevant to an Eligible Commodity in Table 1 (*Futures Contracts entering into the Base Set*) above.

Example 2: for the Eligible Commodity Corn (CBOT) and the Relevant Month of January 2009, the Base Set shall consist of the 6 Futures Contracts with Delivery Months of March 2009 (the Contract at Month Start for the Relevant Month), May 2009, July 2009, September 2009, December 2009 and March 2010.

The Base Contracts contained in the Base Set shall be enumerated from 1 (the nearest-dated Base Contract in the Base Set) to  $i$  (the farthest-dated Base Contract in the Base Set) where  $i$  is the size of the Base Set. In Example 1 above, the February 2009 Base Contract shall be numbered 1 and the February 2010 Base Contract shall be numbered 13. In Example 2 above, the March 2009 Base Contract shall be numbered 1 and the March 2010 Base Contract shall be numbered 6.

#### 4.4 Eligible Contracts

Once the Base Set in respect of an Eligible Commodity is determined the Index Calculation Agent will then determine a subset of the Base Set called the Eligible Set in accordance with the paragraph 4.4.1 (*Deferring Commodity*) below. Each Futures Contract which is a member of such subset is an Eligible Contract.

##### 4.4.1 Deferring Commodity

Each Eligible Commodity is classified as either a Deferring Commodity or a Non-Deferring Commodity as specified in Table 3 (*Eligible Commodities*) below.

In respect of Non-Deferring Commodities, the Contract at Month Start for the month immediately following the Relevant Month shall be the only Eligible Contract in the Eligible.

In respect of Deferring Commodities, the Eligible Contracts are the Base Contracts with a Delivery Month:

- (1) not earlier than the second Base Contract in the Base Set ( $F_2$ ); and
- (2) (a) not more than 6 months following the Relevant Month; or
- (b) more than 6 months following the Relevant Month and included in the list of Liquid Contract Months for the Eligible Commodity as specified in Table 3 (*Eligible Commodities*) below.

#### 4.5 Contag Contracts

##### 4.5.1 The Previously Selected Contract

In respect of each Eligible Commodity, the Previously Selected Contract shall mean the Contag Contract for such Eligible Commodity for the month immediately preceding the Relevant Month.

##### 4.5.2 The Most Backwardated Contract

In respect of each Eligible Commodity, the Local Backwardation shall be calculated for each Eligible Contract in the Eligible Set. When determining the Local Backwardation for an Eligible Contract the Closest Dated Preceding Futures Contract in relation to such Eligible Contract shall be the Base Contract immediately preceding the Eligible Contract in the Base Set.

The Eligible Contract with the highest Local Backwardation shall be the Most Backwardated Contract for the relevant Eligible Commodity.

##### 4.5.3 Significant Benefit Test

In cases where the Previously Selected Contract is an Eligible Contract in the Eligible Set for the Relevant Month, the Significant Benefit Test is intended to determine that the Contag Contract should change from one Relevant Month to the next Relevant Month, *only* where the increase in Local Backwardation by changing the exposure of the Contag Index to the Most Backwardated Contract significantly increases the Local Backwardation.

The Index Calculation Agent shall determine whether the Significant Benefit Test is passed as follows:

The Significant Benefit Test is considered to be passed if either:

- (1)  $F_{PS}$  is not in the Eligible Set; or
- (2) the following inequality is true:

$$Local\ Backwardation(F_{MB}) > Local\ Backwardation(F_{PS}) + SBT$$

where:

$F_{PS}$  means the Previously Selected Contract;

$F_{MB}$  means the Most Backwardated Contract;

$SBT$  means the "Significant Benefit Threshold" and is equal to 0.005.

If the Previously Selected Contract and the Most Backwardated Contract are the same Futures Contract the Significant Benefit Test will fail.

#### 4.5.4 Choice of Contag Contract

In respect of an Eligible Commodity, the Contag Contract in respect of the Relevant Month shall be selected as follows:

If the Significant Benefit Test is passed the Contag Contract shall be the Most Backwardated Contract otherwise it shall be the Previously Selected Contract.

#### 4.6 Eligible Commodities

Eligible Commodity	Relevant Exchange	Deferring Commodity (D) or Non-Deferring Commodity (N)	Liquid Contract Months
WTI Crude Oil	NYMEX	D	Z
RBOB Gasoline	NYMEX	D	None
Heating Oil	NYMEX	D	M, Z
Natural Gas	NYMEX	D	F, H, J, V
Brent Crude Oil	ICE	D	Z
Gas Oil	ICE	D	M, Z
Gold	COMEX	N	Not Applicable
Silver	COMEX	N	Not Applicable
Aluminium	LME	D	Z
Copper	LME	D	Z
Lead	LME	D	Z
Nickel	LME	D	Z
Zinc	LME	D	Z
Corn	CBOT	D	Z
Soybeans	CBOT	D	X
Wheat	CBOT	D	N, Z
Kansas Wheat	KCBOT	D	N, Z
Cocoa	NYBOT	D	None
Coffee	NYBOT	D	None
Cotton	NYBOT	N	Not Applicable
Sugar	NYBOT	D	H
Feeder Cattle	CME	N	Not Applicable
Lean Hogs	CME	N	Not Applicable
Live Cattle	CME	D	None

**Table 3: Eligible Commodities**

**5. Market Disruptions**

If, on any Contract Selection Date, any of the conditions (i) to (iii) below apply to a Futures Contract due to comprise the Base Set then such day shall be regarded as a Disrupted Day in respect of that Futures Contract and this shall constitute a Market Disruption for such Futures Contract:

- (i) such Contract Selection Date is not a Contract Business Day with respect to such Futures Contract;
- (ii) the Contract Price of such Futures Contract on such Contract Selection Date is a Limit Price;
- (iii) no Contract Price is available for the Futures Contract on such Contract Selection Date.

If a Market Disruption exists in respect of a Futures Contract due to comprise the Base Set the Selection Methodology will be adjusted by the Index Calculation Agent as follows:

A) in cases (i) and (iii) above, the Selection Methodology will treat the Contract Price for such Contract Selection Date as being equal to the Contract Price for the relevant Futures Contract which was available on the Dealing Day immediately preceding the Contract Selection Date and on which no Market Disruption occurred. If no such Contract Price exists then that particular Futures Contract will be excluded from the Base Set and the Selection Methodology will otherwise remain unaltered; or

B) in case (ii) the Selection Methodology will not be modified and the Contract Price for such Contract Selection Date shall be the Limit Price.

J.P. Morgan Contag  
Module B: J.P. Morgan Contag Beta Indices

September 2009

**J.P.Morgan**

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## 1. Contag

Contag refers to a methodology for selecting Futures Contracts (the "Selection Methodology") and several strategies developed by J.P. Morgan (the "Contag Indices") that utilise this methodology. The Selection Methodology uses the slope of the futures curve of certain specified commodities in order to select a particular Futures Contract in respect of each commodity in which to synthetically gain exposure. The Selection Methodology aims to select a Futures Contract with the highest level of Local Backwardation subject to certain constraints, all as further explained the document "J.P. Morgan Contag Module A: Selection Methodology").

## 2. This Document

This document, Module B (*J.P. Morgan Contag Beta Indices*), explains the construction of the J.P. Morgan Contag Beta Indices (the "Contag Beta Indices"). By itself this document does not define an index or product. A Contag Beta Index is a notional rules-based proprietary commodity index reflecting an unleveraged, long only synthetic exposure to commodities by reference to Futures Contracts selected by the Selection Methodology.

This document should be read in conjunction with the document "J.P. Morgan Contag Module A: Selection Methodology" (the "Selection Methodology Document"). The index construction explained in this document is of a general form, with certain concepts or particulars left unspecified (for example, the values of the Commodity Weights). Other modules will be used to specify these particulars (each an "Externally Specified Particular"). One or more modules should be read in conjunction with this document and the Selection Methodology Document to obtain the full rules of the relevant Contag Index. Throughout this document, "Index" shall refer to a Contag Beta Index. Each Contag Beta Index shall have a further module setting out the Index Name and any Externally Specified Particulars or other details required by the Index Calculation Agent to determine the Index Level.

This document may be amended or supplemented from time to time at the discretion of the Index Calculation Agent and will be re-published no later than thirty (30) calendar days following such amendment or supplement.

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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 Contag Beta Indices.

## 3. Definitions

Capitalised terms used in this document should be interpreted according to the definitions given below. In many cases there is a further explanation of the term or concept in the body of this document. All terms listed under the Definitions section in the Selection Methodology Document shall be deemed to have the same meaning in this document. In the event of a conflict between definitions used in the Selection Methodology Document and this document, the term used herein shall prevail.

Unless otherwise specified, references to "Sections" or "Tables" in this Document shall mean sections or tables in this Document.

The following terms are defined as follows:



Change in Law means:

- (a) due to:
  - (i) the adoption of, or any change in, any applicable law, regulation, rule or order (including, without limitation, any tax law); or
  - (ii) the promulgation of, or any change in, the interpretation, application, exercise or operation by any court, tribunal, regulatory authority, exchange or trading facility or any other relevant entity with competent jurisdiction of any applicable law, rule, regulation, order, decision or determination (including, without limitation, as implemented by the CFTC or exchange or trading facility), in each case occurring on or after the Initial Index Day,

in each case, the Index Calculation Agent determines in good faith that it is contrary (or, upon adoption, it will be contrary) to such law, rule, regulation, order, decision or determination for any market participants that are brokers or financial intermediaries (individually or collectively) to purchase, sell, enter into, maintain, hold, acquire or dispose of any Futures Contracts or any transaction referencing any Futures Contract (in whole or in part) (in the aggregate on a portfolio basis or incrementally on a trade by trade basis) including (without limitation) if such Futures Contract (in whole or in part) are (or, but for the consequent disposal thereof, would otherwise be) in excess of any allowable position limit(s) applicable to any market participants that are brokers or financial intermediaries (individually or collectively) in relation to any Futures Contract traded on any exchange(s) or other trading facility; or

- (b) the occurrence or existence of any:
  - (i) suspension or limitation imposed on trading commodities futures contracts (including, without limitation the Futures Contracts); or
  - (ii) any other event that causes trading in commodity futures contracts (including, without limitation Futures Contracts) to cease;

**Commodity Weight** means, in respect of an Eligible Commodity and each Weights Period, a decimal number representing the number of units of that Eligible Commodity in the Nominal Basket used in the calculation of the Index Level. The Commodity Weights are Externally Specified Particulars;

**Commodity Weight Incoming ("  $CWI_d^c$  ")** means, in respect of Dealing Day d and Eligible Commodity c, the Commodity Weight in respect of the Weights Period in which such Dealing Day falls;

**Commodity Weight Outgoing ("  $CWO_d^c$  ")** means, in respect of Dealing Day d and Eligible Commodity c, the Commodity Weight in respect of the Weights Period for the month immediately preceding the Relevant Month in which such Dealing Day falls.

**Contag Beta Index** see Section 2 (*This Document*);

Contract Price Incoming (" $CPI_{cd}^c(vd)$ ")	means the Contract Price on Dealing Day vd (the "Valuation Day") of the Incoming Contract for Dealing Day cd (the "Composition Day") for Eligible Commodity c;
Contract Price Outgoing (" $CPO_{cd}^c(vd)$ ")	means the Contract Price on Dealing Day vd (the "Valuation Day") of the Outgoing Contract for Dealing Day cd (the "Composition Day") for Eligible Commodity c;
Contract Roll Weight Incoming (" $CRWI_d^c$ ")	see Section 5.3 ( <i>Contract Roll Weights</i> );
Contract Roll Weight Outgoing (" $CRWO_d^c$ ")	see Section 5.3 ( <i>Contract Roll Weights</i> );
Current Month	means, in relation to a Dealing Day d, the calendar month in which such day falls;
Externally Specified Particular	means any value or parameter used in this document but not specified. Such values or parameters will be specified in other modules;
Incoming Contract	means, in respect of an Eligible Commodity and Dealing Day d, the applicable Contag Contract for the Current Month;
Index	means a particular Contag Beta Index comprising the applicable modules as specified in another relevant module and bearing the Index Name specified in such relevant module;
Initial Index Day	means the first date in respect of which values of the Index are published by the Index Calculation Agent. The Initial Index Day is an Externally Specified Particular;
Initial Index Level	means the level of the Index on the Initial Index Day. The Initial Index Level is an Externally Specified Particular;
Index Level	means in respect of each Dealing Day, and subject to the occurrence of a Market Disruption, a decimal value published by the Index Calculation Agent in accordance with Section 5.6 ( <i>The Index Level</i> );
Index Name	means the name by which the Index is identified. The Index Name is an Externally Specified Particular;
Index Ticker	means a Bloomberg™ ticker which identifies the Index. The Index Ticker is an Externally Specified Particular;
Investment Return ("IR")	see Section 5.6 ( <i>The Index Level</i> );
New Normalising Constant	see Section 5.2 ( <i>Normalising Constant</i> );
New Weights Period	see Section 5.2 ( <i>Normalising Constant</i> );
Nominal Basket	see Section 5.6 ( <i>Nominal Basket</i> );

Normalising Constant ("NC")	see Section 5.2 ( <i>Normalising Constant</i> );
Old Normalising Constant	see Section 5.2 ( <i>Normalising Constant</i> );
Old Weights Period	see Section 5.2 ( <i>Normalising Constant</i> );
Outgoing Contract	means, in respect of an Eligible Commodity and Dealing Day d, the applicable Contag Contract for the Previous Month;
Previous Month	means, in relation to a Dealing Day d, the calendar month immediately preceding the Current Month;
Roll Period	means, with respect to any Relevant Month, the sequence of Dealing Days over which the exposure of the Index is rolled from the Outgoing Contracts to the Incoming Contracts. See Section 5.3 ( <i>Contract Roll Weights</i> );
Roll Period Starting Day	means an integer indicating the first Dealing Day of any Roll Period. The Roll Period Starting Day is an Externally Specified Particular;
Roll Period Length	means an integer indicating the length of the Roll Period measured in Dealing Days. The Roll Period Length is an Externally Specified Particular;
Rules	means, with respect to any transaction linked to the Index, the modules which comprise the Index;
Selection Methodology Document	"J.P. Morgan Contag Module A: Selection Methodology"; and
Weights Period	A period of one or more calendar months for which a set of Commodity Weights are applicable. Each Weights Period will start with the first calendar day of a month and end with the last calendar day of the same or any subsequent month. The Weights Period(s) is an (are) Externally Specified Particular(s).

#### 4. Index Construction Overview

The Index captures the return of the synthetic exposure to the Contag Contract for each Eligible Commodity during each Relevant Month, including the effect of the monthly composition change of the Index due to the roll from the Contag Contract for each Eligible Commodity for a Relevant Month to the Contag Contract for each Eligible Commodity for the next Relevant Month. The Index is constructed as an excess return index.

Subject to the occurrence of a Market Disruption, the Index Calculation Agent shall calculate and publish the Index Level in respect of each Dealing Day, rounded to 4 decimal places, on a Bloomberg page and the Bloomberg website and the Index Level shall be identified by the Index Ticker.

The Index Level shall be determined in respect of each Dealing Day d (the Index Level on such Dealing Day being  $Index_d$ ) and is determined by reference to the Index Level published in respect of the immediately preceding Dealing Day ( $Index_{d-1}$  and Dealing Day d-1 respectively) and the notional return on the exposure of the Index to the relevant Contag Contracts from the close of business on the Relevant Exchanges on Dealing Day d-1 to the close of business on the Relevant Exchanges on Dealing Day d. This notional return is measured by reference to the Contract Prices of the Contag Contracts on such Dealing Days. Where one or more Relevant Exchanges is closed on a Dealing Day, this will constitute a Market Disruption and the Contract Prices of the affected Eligible Commodities will be determined in accordance with Section 7 (*Market Disruptions*).

Each month the Selection Methodology will determine the Contag Contracts to which the Index should be synthetically exposed. When a new Contag Contract is selected on a Contract Selection Date, the Index transfers its synthetic exposure from the Previously Selected Contract to the new Contag Contract. In order to limit the possible adverse impact on the Index Level of trading out of the Previously Selected Contract and into the new Contag Contract, the exposure is transferred gradually in equal percentages per Dealing Day over the Roll Period, as explained in Section 5.3 (*Contract Roll Weights*).

## 5. Calculation of the Index

### 5.1 Commodity Weights

For an Eligible Commodity and each Weights Period, the Commodity Weight is a decimal number representing the number of units of that Eligible Commodity in the Nominal Basket used in the calculation of the Index Level.

### 5.2 Normalising Constant

The Normalising Constant is a number associated with each Weights Period, which is an adjustment to allow for the fact that the Commodity Weights change from one Weights Period to the next. The Commodity Weights are not percentage weights which would always sum to 100% and accordingly changes in the Commodity Weights may have the unintended side effect of increasing or decreasing the total weight of the Nominal Basket which in turn could distort the intended rate of rolling from the Outgoing Contracts to the Incoming Contracts.

A new Normalising Constant ("New Normalising Constant") is determined by the Index Calculation Agent with respect to each Weights Period (the "New Weights Period") based on:

- (a) the Contract Prices on the Dealing Day immediately preceding the first Dealing Day of the first Roll Period of the New Weights Period;
- (b) the Commodity Weights for (i) the New Weights Period and (ii) the Weights Period immediately preceding the New Weights Period (the "Old Weights Period"); and
- (c) the Normalising Constant associated with the Old Weights Period (the "Old Normalising Constant").

The New Normalising Constant is applicable to the whole of the New Weights Period. During the first Roll Period of the New Weights Period, the Nominal Basket will be based on a combination of the Commodity Weights for the Old Weights Period and the Commodity Weights for the New Weights Period.

The weight given to the Outgoing Contracts is adjusted by the ratio of the New Normalising Constant to the Old Normalising Constant as described further in Section 5.5 (*The Nominal Basket*).

The Normalising Constant:

- (a) for the Weights Period following the Initial Index Day is 1000; and thereafter
- (b) for a New Weights Period is determined by the Index Calculation Agent as follows:

$$NC_{new} = NC_{old} \times \frac{\sum_c CWI_d^c \times CPO_d^c (d-1)}{\sum_c CWO_d^c \times CPO_d^c (d-1)}$$

Where:

$NC_{new}$  means the New Normalising Constant;

$NC_{old}$	means the Old Normalising Constant, being 1000 if the Old Weights Period is the first Weights Period;
$CWI_d^c$	means the Commodity Weight Incoming in respect of Eligible Commodity c and Dealing Day d;
$CWO_d^c$	means the Commodity Weight Outgoing in respect of Eligible Commodity c and Dealing Day d; and
$CPO_d^c(d-1)$	means the Contract Price Outgoing in respect of Eligible Commodity c with Composition Day d and Valuation Day d-1.
d	means the first Dealing Day of the first Roll Period of the New Weights Period

### 5.3 Contract Roll Weights

In respect of an Eligible Commodity c and a Dealing Day d, each of the Contract Roll Weight Incoming ( $CRWI_d^c$ ) and Contract Roll Weight Outgoing ( $CRWO_d^c$ ) is a number between 0.0 and 1.0, representing the fraction of the weight for that Eligible Commodity given to the Incoming Contract and the Outgoing Contract respectively and is calculated by the Index Calculation Agent in accordance with the below. It is always the case that  $CRWI_d^c + CRWO_d^c = 1$ .

The exposure of the Index to the Contag Contract in respect of an Eligible Commodity is rolled from the Outgoing Contract to the Incoming Contract over the course of a Roll Period. The Roll Period is a period of consecutive Dealing Days during each Relevant Month from, and including, the Roll Period Starting Day and continuing for a specified number of Dealing Days following such Roll Period Starting Day, being the "Roll Period Length".

(i) The Contract Roll Weight on any Dealing Day in a Roll Period

The Contract Roll Weights on each i-th Dealing Day ( $d_i$ ) of the Roll Period for a Relevant Month (where i is between 1 and Roll Period Length, inclusive) are determined by the Calculation Agent as follows:

$$CRWI_{d_i}^c = \frac{i}{Roll\ Period\ Length}$$

$$CRWO_{d_i}^c = 1 - \frac{i}{Roll\ Period\ Length}$$

where:

$CRWI_{d_i}^c$	means the Contract Roll Weight Incoming for Eligible Commodity c and Dealing Day $d_i$ ;
$CRWO_{d_i}^c$	means the Contract Roll Weight Outgoing for Eligible Commodity c and Dealing Day $d_i$ ; and
$d_i$	means the i-th Dealing Day of the Roll Period.

(ii) The Contract Roll Weight on any Dealing Day which is not in the Roll Period

The Contract Roll Weights on each Dealing Day  $d$  which is not during the Roll Period for a Relevant Month are determined by the Calculation Agent as follows:

(a) in respect of any Dealing Day  $d$  of the Relevant Month prior to the Roll Period Starting Day for such Relevant Month:

$$CRWI_d^c = 0.0; \text{ and}$$

$$CRWO_d^c = 1.0.$$

(b) in respect of any Dealing Day  $d$  of the Relevant Month following the last Dealing Day of the Roll Period for such Relevant Month:

$$CRWI_d^c = 1.0; \text{ and}$$

$$CRWO_d^c = 0.0.$$

Example 1: if the Roll Period Starting Day is 3 and the Roll Period Length is 4 then the Roll Period will run for 4 Dealing Days from the 3rd Dealing Day of the Relevant Month inclusive. In the absence of Market Disruptions, the Contract Roll Weights would be as shown in Table 1 immediately below:

Table 1

Dealing Day of the Relevant Month (d)	$CRWO_d^c$	$CRWI_d^c$
1	1.00	0.00
2	1.00	0.00
3 (Roll Period Starting Day)	0.75	0.25
4	0.50	0.50
5	0.25	0.75
6 (last Dealing Day of Roll Period)	0.00	1.00
7	0.00	1.00
8	0.00	1.00
etc.	etc.	etc.

#### 5.4 Adjustment of the roll for Disrupted Days

If any Dealing Day during the Roll Period is a Disrupted Day for either an Incoming Contract or an Outgoing Contract, then the portion of the roll which was scheduled to take place on that Dealing Day for the affected Eligible Commodity shall be postponed until the next following Dealing Day which is not a Disrupted Day for either of the Incoming Contract or Outgoing Contract in respect of such Eligible Commodity, irrespective of whether such day is already a day on which a portion of the roll is scheduled to take place.

Example 2: if the Roll Period Starting Day is 3 and the Roll Period Length is 4, and the 3rd and 4th Dealing Days of the Relevant Month are Disrupted Days for Corn (CBOT). Then the Contract Roll Weights for Corn (CBOT) would be as shown in Table 2 immediately below:

Table 2

Dealing Day of the Relevant Month (d)	$CRWO_d^c$	$CRWI_d^c$
1	1.00	0.00
2	1.00	0.00
3 (Roll Period Starting Day that is a Disrupted Day)	1.00	0.00

4 (Disrupted Day)	1.00	0.00
5	0.25	0.75
6 (last Dealing Day of Roll Period)	0.00	1.00
7	0.00	1.00
8	0.00	1.00
etc.	etc.	etc.

## 5.5 The Nominal Basket

The Nominal Basket is a nominal basket of Futures Contracts representing the synthetic exposure of the Index. Associated with each Dealing Day  $cd$  (the "composition day", i.e. the day in respect of which the Nominal Basket is composed) is a particular composition of the Nominal Basket. Furthermore, associated with each Dealing Day  $vd$  (the "valuation day", i.e. the day on which the Nominal Basket is valued) is a level of the Nominal Basket composed in respect of Dealing Day  $cd$ , defined as follows:

$$NB_{cd}(vd) = \frac{NCI}{NCO} \sum_c CWO_{cd}^c \times CRWO_{cd}^c \times CPO_{cd}^c(vd) + \sum_c CWI_{cd}^c \times CRWI_{cd}^c \times CPI_{cd}^c(vd)$$

Where:

$NB_{cd}(vd)$  means the level of the Nominal Basket composed in respect of Dealing Day  $cd$ , valued as at Dealing Day  $vd$ ;

$NCO$  means the Normalising Constant in respect of the Weights Period including the Previous Month as at Dealing Day  $cd$ ;

$NCI$  means the Normalising Constant in respect of the Weights Period including the Current Month as at Dealing Day  $cd$ ;

$c$  means an Eligible Commodity, where the summation signs ( $\sum$ ) indicate summation over all Eligible Commodities;

$cd$  means the Dealing Day in respect of which the Nominal Basket is composed; and

$vd$  means the Dealing Day in respect of which the Nominal Basket is valued.

## 5.6 The Index Level

The Index Level on the Initial Index Day is the Initial Index Level.

In respect of each Dealing Day  $d$  following the Initial Index Day, the Index Level will be determined by the Index Calculation Agent, representing the cumulative effect of the Investment Return since the Initial Index Day, in accordance with the following formula:

$$Index_d = Index_{d-1} \times (1 + IR_d)$$

where

$IR_d$  means the Investment Return for Dealing Day  $d$ , which is determined by the Index Calculation Agent in accordance with the following formula:

$$IR_d = \frac{NAR_d}{NAI_{d-1}} - 1$$

Where:

$NAI_{d-1}$  means the Nominal Amount Invested as at Dealing Day  $d - 1$ ;

$NAR_d$  means the Nominal Amount Returned as at Dealing Day  $d$ ;

Nominal Amount  
Invested as at Dealing  
Day  $d - 1$  means  $NB_{d-1}(d - 1)$ , that is, the level of the Nominal Basket composed in respect of Dealing Day  $d-1$ , valued as at Dealing Day  $d-1$ ; and

Nominal Amount  
Returned as at Dealing  
Day  $d$  means  $NB_{d-1}(d)$ , that is, the level of the Nominal Basket composed in respect of Dealing Day  $d-1$ , valued as at Dealing Day  $d$ .



## 6. Publication

Subject to the occurrence or existence of a Market Disruption, the Index Calculation Agent shall calculate and publish the Index Level in respect of each Dealing Day (although the Calculation Agent may calculate the Index Level with greater frequency and share this calculation with its affiliates for internal purposes).

The Index Level will be published on a Bloomberg page and the Bloomberg website at the pages indicated by the Index Ticker.

The Index Level shall be published to 4 decimal places.

## 7. Market Disruptions

The impact of Market Disruption with respect to:

- (a) the roll is addressed in Section 5.4 (*Adjustment of the roll for Disrupted Days*); and
- (b) the valuation of the Nominal Basket and the calculation of the Normalising Constant is addressed by the Index Calculation Agent (i) taking all published Contract Prices in respect of such day; and (ii) the most recently published Contract Prices for those Futures Contracts for which no Contract Price is published by the Relevant Exchange on the Dealing Day in question.

## 8. Extraordinary Events

### 8.1 Successor Futures Contract

If any Futures Contract is:

- (a) not quoted by the Relevant Exchange but by a successor exchange acceptable to the Index Calculation Agent; or
- (b) replaced by a successor futures contract referencing, in the determination of the Index Calculation Agent, a substantially similar commodity as used in the relevant Futures Contract,

then in each case that successor futures contract (the "Successor Futures Contract") shall replace the relevant Futures Contract and the Calculation Agent shall determine in good faith the adjustments to the Rules set out herein, as it determines appropriate, to account for such change.

### 8.2 Change in Law/ Inaccurate Contract Prices

Without prejudice to the ability of the Index Calculation Agent to amend the Rules (see Section 2 (*This Document*) above), the Index Calculation Agent may, acting in good faith and in a commercially reasonable manner:

- (a) exclude; or
- (b) substitute,

any Futures Contract following the occurrence (and/or continuation) of a Change in Law or in circumstances where it considers it reasonably necessary to do so to reflect the intention of the Contag Beta Indices, including (without prejudice to the generality of the foregoing) any perception among market participants generally that the published price of the relevant Futures Contract is inaccurate (and the Relevant Exchange fails to correct such level), and if it so excludes or substitutes any Futures Contract, then the Index Calculation Agent may adjust the Rules as it determines in good faith to be appropriate to account for such exclusion or substitution on such date(s) selected by the Index Calculation Agent. The Index Calculation Agent is under no obligation to continue the calculation and publication of any Contag Beta Indices upon the occurrence or existence of a Change in Law; and the Index Calculation Agent may decide to cancel any Contag Beta Indices if it determines, acting in good faith, that the objective of the relevant Contag Beta Indices can no longer be achieved.

### 8.3 Material change to Futures Contract, cancellation or non-publication

If, at any time, any Relevant Exchange:

- (a) announces that it will make a material change to any Futures Contract or in any other way materially modifies such contract (other than a modification prescribed in the definition of such contract); or
- (b) (i) permanently cancels any Futures Contract and no Successor Futures Contract exists or (ii) is otherwise unable or unwilling to publish levels of the Futures Contract,

then the Index Calculation Agent may remove such futures contract from the Contag Beta Indices and may adjust the Rules as it determines in good faith to be appropriate to account for such change(s) (including, without limitation, selecting a replacement underlying futures contract traded on an equivalent exchange and having similar characteristics to the affected Futures Contract) on such date(s) as selected by the Index Calculation Agent.

## Risk Factors

The following list of risk factors does not purport to be a complete enumeration or explanation of all the risks associated with Contag Beta Indices and should be read in conjunction with any other relevant modules, where applicable.

### *1 Past performance should not be used as a guide to future performance*

The past performance of the Index should not be used as a guide to future performance of the Index. Any back-testing or similar analysis performed by any person in respect of Contag Beta Indices must be considered illustrative only and may be based on estimates or assumptions not used by the Index Calculation Agent when determining the Index Level pursuant to these Rules.

### *2 Synthetic Exposure to Commodities*

The Contag Beta Indices are purely synthetic. There is no pool of futures to which any person is entitled or in which any person has any ownership interest or which serve as collateral for the return on any product referencing Contag Beta Indices.

### *3 Contag Beta Indices are "excess return"*

The return from investing in futures contracts derives from three sources:

- (a) changes in the price of the relevant futures contracts (which is known as the "price return");
- (b) any profit or loss realised when rolling the relevant futures contracts (which is known as the "roll return"); and
- (c) any interest earned on the cash deposited as collateral for the purchase of the relevant futures contracts (which is known as the "collateral return").

The Contag Beta Indices are "excess return" indices which means that they measure the returns accrued from investing in uncollateralized futures or, in other words, the sum of the price return and the roll return associated with an investment in futures. Investing in any product linked to the Contag Beta Indices will therefore not generate the same return as one would obtain from a collateralised investment in the relevant futures contracts.

### *4 Commodity prices impacted by global macro-economic and political factors*

Prices for commodities are affected by a variety of factors, including changes in supply and demand relationships, governmental programmes and policies, national and international political and economic events, wars and acts of terror, changes in interest and exchange rates, trading and speculative activities in commodities and related contracts, weather, and agricultural, trade, fiscal, monetary and exchange control policies. The price volatility of each commodity also affects the value of the futures and forward contracts related to that commodity and therefore its price at any such time. The price of any one commodity may be correlated to a greater or lesser degree with any other commodity and factors affecting the general supply and demand as well as the prices of other commodities may affect the particular commodity in question.

In respect of commodities in the energy sector, due to the significant level of its continuous consumption, limited reserves, and oil cartel controls, energy prices are subject to rapid price increases in the event of perceived or actual shortages. These factors (when combined or in isolation) may affect the price of futures contracts and, as a consequence, the performance of the Contag Beta Indices and the Index Level.

The commodities 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. These circumstances could adversely affect the price of futures contracts and, therefore, the performance of the Contag Beta Indices and the Index Level.

5        *Backwardation Seeking*

The Selection Methodology is based on a principal known as “backwardation seeking”. There can be no guarantee that Futures Contracts selected according to such a principal and employing such a mechanism as used in the Selection Methodology will exhibit superior returns to Futures Contracts selected on any other basis.

6        *Investment in deferred Futures Contracts*

Contag Beta Indices are synthetically exposed to the Futures Contracts selected as the Contag Contracts by the Selection Methodology and such Futures Contracts may, in general, be deferred Futures Contracts (i.e., those contracts having a Delivery Month further dated than the Futures Contract with the nearest Delivery Month). It is generally expected that such deferred Futures Contracts may have less liquidity than the near-month Futures Contracts (those being the nearest-to-deliver) with respect to the same Eligible Commodities. Additionally, deferred Futures Contracts may be less well correlated with the spot market (physical) prices of the relevant Eligible Commodities and exhibit different levels of volatility.

7        *Diversification*

Diversification is generally considered to reduce the amount of risk associated with generating returns, however can be no assurance that Contag Beta Indices will be sufficiently diversified at any time to reduce or minimize such risks to any extent.

8.       *Calculation Agent discretion*

The Calculation Agent is entitled to exercise certain discretions in relation to Contag Beta Indices, including but not limited to, the determination of the values to be used in the event of Market Disruptions and the interpretation of these Rules. Although the Index Calculation Agent will make all determinations and take all action in relation to Contag Beta Indices acting in good faith, such discretion could have an impact, positive or negative, on the Index Level.

9.       *Potential Conflicts of Interest*

Potential conflicts of interest may exist in the structure and operation of Contag Beta Indices and the conduct of normal business activities by any Relevant Person.

The foregoing list of risk factors is not intended to be exhaustive. Anyone reading these Rules should seek such advice as they consider necessary from their professional advisors, legal, tax or otherwise, without reliance on any Relevant Person to satisfy themselves that they fully understand these Rules and the risks associated with Contag Beta Indices.

J.P. Morgan Contag  
Module B(i): J.P. Morgan Contag Beta Full  
Energy Class A Excess Return Index and  
the J.P. Morgan Contag Beta Light Energy  
Class A Excess Return Index

September 2009

**J.P.Morgan**

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## 1. Contag

Contag refers to a methodology for selecting Futures Contracts (the "Selection Methodology") and several strategies developed by J.P. Morgan (the "Contag Indices") that utilise this methodology. The Selection Methodology uses the slope of the futures curve of certain specified commodities in order to select a particular Futures Contract in respect of each commodity in which to synthetically gain exposure. The Selection Methodology aims to select a Futures Contract with the highest level of Local Backwardation subject to certain constraints, all as further explained the document "J.P. Morgan Contag Module A: Selection Methodology".

## 2. This Document

This document, Module B(i) (*J.P. Morgan Contag Beta Full Energy Class A Excess Return Index and the J.P. Morgan Contag Beta Light Energy Class A Excess Return Index*), explains the J.P. Morgan Contag Beta Full Energy Class A Excess Return Index ("Contag Beta FE Class A") and the J.P. Morgan Contag Beta Light Energy Class A Excess Return Index ("Contag Beta LE Class A"), each a Contag Beta Index. By itself this document does not define an index or product. This document provides the Externally Specified Particulars required for the calculation of each of Contag Beta FE Class A and Contag Beta LE Class A.

This document should be read in conjunction with the documents "J.P. Morgan Contag Module A: Selection Methodology" (the "Selection Methodology Document") and "J.P. Morgan Contag Module B: J.P. Morgan Contag Beta Indices" (the "Beta Index Document") and together they comprise the rules (the "Rules") of the J.P. Morgan Contag Beta Full Energy Class A Excess Return Index and the J.P. Morgan Contag Beta Light Energy Class A Excess Return Index. These Rules may be amended or supplemented from time to time at the discretion of the Index Calculation Agent and will be re-published no later than thirty (30) calendar days following such amendment or supplement. Moreover the Index Calculation Agent will publish information in relation to the Relevant Eligible Commodities, Commodity Weights or Weights Periods and other such information which is updated in accordance with the Rules as set out below.

These Rules are published by J.P. Morgan Securities Ltd. ("JPMSL") of 125 London Wall, London EC2Y 5AJ, UK in its capacity as Index Calculation Agent. A copy of the Rules is available from the Index Calculation Agent.

ALL PERSONS READING THIS DOCUMENT SHOULD REFER TO THE DISCLAIMERS AND CONFLICTS SECTIONS SET OUT BELOW AND CONSIDER THE INFORMATION CONTAINED IN THIS DOCUMENT IN LIGHT OF SUCH DISCLAIMERS AND CONFLICTS.

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 Contag Beta FE Class A and Contag Beta LE Class A.

## 3. Definitions

Capitalised terms used in this document should be interpreted according to the definitions given below. All terms listed under the Definitions section in either the Selection Methodology Document or the Beta Index Document shall be deemed to have the same meaning in this document. In the event of a conflict between the definitions used in the Selection Methodology Document, the Beta Index Document and this document, the terms used herein shall prevail.

Contract Production Weights	has the meaning given in the S&P GSCI Methodology.
Designated Contract	has the meaning given in the S&P GSCI Methodology.
Relevant Eligible Commodities	means the Eligible Commodities which correspond to the Designated Contracts used in the calculation of S&P GSCI™ Index or the S&P GSCI™ Light Energy Index.

Index Sponsor	means Standard and Poor's, a division of the McGraw-Hill Companies, Inc.
S&P GSCI™ Family-Index	means either of the S&P GSCI™ Index and the S&P GSCI™ Light Energy Index.
S&P GSCI Methodology	means the document setting out the rules of the S&P GSCI™ Indices entitled "S&P GSCI™ Index Methodology" as updated, modified and superceded from time to time by the Index Sponsor.  At the time of publication of this document the relevant edition is dated February 2009 Edition, a copy of which can be found at <a href="http://www2.standardandpoors.com/spf/pdf/index/SP_GSCI_Methodology_Web.pdf">http://www2.standardandpoors.com/spf/pdf/index/SP_GSCI_Methodology_Web.pdf</a> .
S&P GSCI Period	has the meaning given in the S&P GSCI Methodology.

#### 4. Overview

Contag Beta FE Class A and Contag Beta LE Class A each reflect the return of synthetic exposure in an investment in the Relevant Eligible Commodities following the Selection Methodology described in the Selection Methodology Document to determine the Contag Contracts to which each Index gains exposure. Subject to the occurrence or existence of a Market Disruption, the Index Calculation Agent shall calculate and publish the Index Level in respect of each Dealing Day in accordance with the methodology specified in the Beta Index Document.

Contag Beta FE Class A aims to achieve a long-only synthetic exposure to commodity futures contract prices, with Commodity Weights for the Relevant Eligible Commodities equal to the Contract Production Weights for the relevant Designated Contract of the S&P GSCI™ Index (Bloomberg ticker: SPGCCIP Index).

Contag Beta LE Class A aims to achieve a long-only synthetic exposure to commodity futures contract prices, with Commodity Weights for the Relevant Eligible Commodities equal to the Contract Production Weights for the relevant Designated Contract of the S&P GSCI™ Light Energy Index (Bloomberg ticker: SPGCLEP Index).

The difference between Contag Beta FE Class A and Contag Beta LE Class A is the way in which the Commodity Weights are determined, as described above and in Section 5 (*Externally Specified Particulars: Contag Beta FE Class A*) and Section 6 (*Externally Specified Particulars: Contag Beta LE Class A*) below.

#### 5. Externally Specified Particulars: Contag Beta FE Class A

The Externally Specified Particulars in respect of Contag Beta FE Class A are shown in Table 1 (*Externally Specified Particulars in respect of Contag Beta FE Class A*) below:

<i>Externally Specified Particular</i>	<i>Definition in respect of Contag Beta FE Class A (in this table the "Index")</i>
Commodity Weights	The Commodity Weight of each Eligible Commodity in the Index is equal to the Contract Production Weight of the relevant Designated Contract in the S&P GSCI™ Index (Bloomberg ticker: SPGCCIP Index) for the S&P GSCI Period corresponding to the relevant Weights Period for the Index, as specified in the S&P GSCI Methodology
Initial Index Day	30th December 1994
Initial Index Level	100
Index Name	J.P. Morgan Contag Beta Full Energy Class A Excess Return Index

Index Ticker	JCTABFEE
Roll Period Starting Day	1
Roll Period Length	10
Weights Periods	The Weights Periods are equal to the S&P GSCI Periods of the S&P GSCI™ Index, with the modification that each Weights Period of Index is from and including the first calendar day of the first month of the S&P GSCI Period to and including the last calendar day of the month immediately preceding the last day of the S&P GSCI Period

**Table 1: Externally Specified Particulars in respect of Contag Beta FE Class A**

6. Externally Specified Particulars: Contag Beta LE Class A

The Externally Specified Particulars in respect of Contag Beta LE Class A are shown in Table 2 (*Externally Specified Particulars in respect of Contag Beta LE Class A*) below:

<i>Externally Specified Particular</i>	<i>Definition in respect of the Contag Beta LE Class A (in this table the "Index")</i>
Commodity Weights	The Commodity Weight of each Eligible Commodity in the Index is equal to the Contract Production Weight of the relevant Designated Contract in the S&P GSCI™ Light Energy Index (Bloomberg ticker: SPGCLEP Index) for the S&P GSCI Period corresponding to the relevant Weights Period for the Index, as specified in the S&P GSCI Methodology
Initial Index Day	30th December 1994
Initial Index Level	100
Index Name	J.P. Morgan Contag Beta Light Energy Class A Excess Return Index
Index Ticker	JCTABLEE
Roll Period Starting Day	1
Roll Period Length	10
Weights Periods	The Weights Periods are equal to the S&P GSCI Periods of the S&P GSCI™ Index, with the modification that each Weights Period of Index is from and including the first calendar day of the first month of the S&P GSCI Period to and including the last calendar day of the month immediately preceding the last day of the S&P GSCI Period

**Table 2: Externally Specified Particulars in respect of Contag Beta LE Class A**

7. Regular amendments to Commodity Weights

The Commodity Weights in respect of each of Contag Beta FE Class A and Contag Beta LE Class A (together, in this document, the "Contag Beta FE and LE Class A Indices") are determined by reference to the Contract Production Weights as specified in the S&P GSCI Methodology and as detailed above. The Commodity Weights for the Contag Beta FE and LE Class A Indices are expected to change on an annual basis in line with the frequency with which the Contract Production Weights are routinely updated by the Index Sponsor in respect of each S&P GSCI™ Family-Index. Furthermore, from time to time the Index Sponsor may change the Contract Production Weights on an intra-annual basis, in which case a new S&P GSCI Period will begin. Corresponding changes will be made by the Index Calculation Agent to the Weights Period for the Contag Beta FE and LE Class A Indices. The Commodity Weights for the Contag Beta FE and LE Class A Indices in respect of a given Weights Period will always be equal to the Contract Production Weights in respect of the corresponding S&P GSCI Period.



## 8. Changes to the Relevant Eligible Commodities

### 8.1 Amendment to Relevant Eligible Commodities

In the event that a Designated Contract is added to or removed from the calculation of either S&P GSCI Family-Index corresponding changes shall be made by the Index Calculation Agent to the Relevant Eligible Commodities contained in the Contag Beta FE and LE Class A Indices. Such amendments shall be published by the Index Calculation Agent and shall be effective for the Weights Period corresponding to the S&P GSCI Period in respect of which such Designated Contract is added or removed from the calculation of such S&P GSCI Family-Index.

### 8.2 Addition of Eligible Commodities

In the event that a Designated Contract is added to the calculation of either S&P GSCI Family-Index that is not currently in the set of Eligible Commodities, such Designated Contract (the "New Eligible Commodity") will be considered an Eligible Commodity for the purposes of calculating the Contag Beta FE and LE Class A Indices, effective as of the Weights Period corresponding to the S&P GSCI Period for which the addition is set to take effect in the relevant S&P GSCI Family-Index. All details relating to such New Eligible Commodity necessary for the purposes of carrying out the Selection Methodology (for example the Liquid Contract Months) shall be published by the Index Calculation Agent.

## 9. Modifications to or Cancellation of the S&P GSCI™ Index and the S&P GSCI™ Light Energy Index

### 9.1

If either S&P GSCI Family-Index is (a) not calculated and announced by the Index Sponsor but is calculated and announced by a successor sponsor acceptable to the Index Calculation Agent, or (b) replaced by a successor index using, in the determination of the Index Calculation Agent, the same or substantially similar formula for and method of calculation as used in the calculation of such S&P GSCI Family-Index, then such index will be deemed to be the index so calculated and announced by that successor index sponsor or that successor index, as the case may be.

### 9.2

If on or prior to any Dealing Day on which the Index Calculation Agent is determining the Index Level of either of the Contag Beta FE and LE Class A Indices the Index Sponsor makes a material change in the formula for or the method of calculating the relevant S&P GSCI Family-Index (other than a modification prescribed in that formula or method to maintain such index in the S&P GSCI Family-Index or prescribed routine events) which affects the ability of the Index Calculation Agent to define an Externally Specified Particular in respect of either of the Contag Beta FE and LE Class A Indices, then the Index Calculation Agent shall, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, Externally Specified Particular or any other rule in relation to the Contag Beta FE and LE Class A Indices to account for such modification.

### 9.3

If on or prior to any Dealing Day on which the Index Calculation Agent is determining the Index Level of either of the Contag Beta FE and LE Class A Indices the Index Sponsor permanently cancels either S&P GSCI Family-Index, and no successor index exists, the Index Calculation Agent shall, in good faith, either:

- (i) continue to calculate the Index Level of the relevant Contag Beta FE and LE Class A Indices using the latest available Externally Specified Particulars at the time the S&P GSCI Family-Index was cancelled; or
- (ii) make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, valuation terms or any other rule in relation to the Contag Beta FE and LE Class A Indices to account for such cancellation.

## 10. Responsibility of Index Calculation Agent

The Index Calculation Agent's determinations in respect of the Contag Beta FE and LE Class A Indices and interpretation of the Rules shall be final.

The Index Calculation Agent shall act in good faith and in a commercially reasonable manner.

Whilst these Rules are intended to be comprehensive, ambiguities may arise. In such circumstances the Index Calculation Agent will resolve such ambiguities in a reasonable manner and, if necessary, amend these Rules to reflect such resolution. Moreover the Index Calculation Agent will publish information in relation to the Relevant Eligible Commodities, Commodity Weights or Weights Periods and other such information which is updated in accordance with the Rules as set out above.

Neither the Index Calculation Agent nor any of its affiliates or subsidiaries or any of their respective directors, officers, employees, delegates or agents (each a "Relevant Person") shall have any responsibility to any person (whether as a result of negligence or otherwise) for any determinations made or anything done (or omitted to be determined or done) in respect of the Contag Beta FE and LE Class A Indices or in respect of the publication of the Index Level (or failure to publish such level) and any use to which any person may put the Contag Beta FE and LE Class A Indices or the Index Levels. All determinations of the Index Calculation Agent in respect of the Contag Beta FE and LE Class A Indices shall be final, conclusive and binding and no person shall be entitled to make any claim against any of the Relevant Persons in respect thereof. Once a determination or calculation is made or action taken by the Index Calculation Agent or any other Relevant Person in respect of the Contag Beta FE and LE Class A Indices, neither the Index Calculation Agent nor any other Relevant Person shall be under any obligation to revise any determination or calculation made or action taken for any reason

#### 11. Corrections

In the event that (a) the Contract Price of any Futures Contract used to calculate the Index Level in respect of any Dealing Day is subsequently corrected and the correction is published by the Relevant Exchange before the next following Roll Period or (b) the Index Calculation Agent identifies an error or omission in any of its calculations or determinations in respect of the Contag Beta FE and LE Class A Indices, then the Index Calculation Agent may, if practicable and the correction is deemed material by the Index Calculation Agent, adjust or correct the Index Level published in respect of the relevant Dealing Day and each subsequent Dealing Day and publish such corrected Index Level(s) as soon as reasonably practicable.

#### 12. Notices, Disclaimers and Conflicts

Neither JPMSL nor any Relevant Person shall have any liability, contingent or otherwise, to any person or entity for the quality, accuracy, timeliness or completeness of the information or data contained in the Rules or the Contag Beta FE and LE Class A Indices, or for delays, omissions or interruptions in the delivery of the Contag Beta FE and LE Class A Indices or related data. Neither JPMSL nor any Relevant Person makes any warranty, express or implied, as to the results to be obtained by any person or entity in connection with any use of the Contag Beta FE and LE Class A Indices, including but not limited to the trading of or investments in products based on or indexed or otherwise related to the Contag Beta FE and LE Class A Indices, any data related thereto or any components thereof. Neither JPMSL nor any Relevant Person makes any express or implied warranties, and hereby expressly disclaims, to the fullest extent permitted by law, all warranties of merchantability or fitness for a particular purpose or use with respect to the Rules, the Contag Beta FE and LE Class A Indices or any data related thereto. Without limitation any of the foregoing, in no event shall either JPMSL or any Relevant Person have any liability for any special, punitive, indirect or consequential damages (including lost profits), in connection with any use by any person of the Contag Beta FE and LE Class A Indices or any products based on or indexed or otherwise related thereto, even if notified of the possibility of such damages.

The Index Calculation Agent is under no obligation to continue the calculation, publication and dissemination of any of the Contag Beta FE and LE Class A Indices or any Index Level.

During the course of their normal business, the Index Calculation Agent or any other Relevant Person may enter into or promote, offer or sell transactions or investments (structured or otherwise) linked to the Contag Beta FE and LE Class A Indices and/or any of the Futures Contracts. In addition, any Relevant Person may have, or may have had, interests or positions, or may buy, sell or otherwise trade positions in or relating to the Contag Beta FE and LE Class A Indices or any of the Futures Contracts, or may invest or engage in transactions with other persons, or on behalf of such persons relating to any of these items. Such activity may or may not have an impact on the Index Levels but all persons reading these Rules should be aware that a conflict of interest could arise where anyone is acting in more than one capacity. Neither the Index Calculation Agent nor any other Relevant Person has any duty to consider the circumstances of any person when participating in such transactions or to conduct themselves in a manner that is favourable to any person.

It should be noted that the Rules have been developed with the possibility of the Index Calculation Agent or any of the Relevant Persons entering into or promoting, offering or selling transactions or investments (structured or otherwise) linked to the Contag Beta FE and LE Class A Indices, and hedging the obligations that might arise under any such transactions or investments. Accordingly it should be assumed that these Rules have and will be analysed from this point of view.

It should be noted that the Contag Beta FE and LE Class A Indices are described as a notional portfolio of assets because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. The Contag Beta FE and LE Class A Indices merely identify certain assets in the market, the performance of which will be used as a reference point for the purposes of calculating the Index Levels.

There is no obligation upon the Index Calculation Agent to publish the Index Levels by any alternative method if the relevant Index Ticker (as identified above) is subject to any delay in or interruptions of publication or 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 may occur or any other event beyond the control of the Index Calculation Agent.

No one may reproduce or disseminate the information contained in these Rules or the Index Levels without the prior written consent of the Index Calculation Agent. "J.P. Morgan Contag Beta Full Energy Excess Return Class A Index", "J.P. Morgan Contag Beta Light Energy Class A Excess Return Index", "Contag Beta FE and LE Class A Indices" and "J.P. Morgan Contag" are the intellectual property of the Index Calculation Agent and may only be used (as an underlying for financial products or otherwise) by third parties who have entered into a license agreement with the Index Calculation Agent. These Rules are not intended for distribution to, or use by any person in, a jurisdiction where such distribution is prohibited by law or regulation.

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J.P. Morgan Contag  
Module C: J.P. Morgan Contag Alpha  
Indices

September 2009

**J.P.Morgan**

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## 1. Contag

Contag refers to a methodology for selecting Futures Contracts (the "Selection Methodology") and several strategies developed by J.P. Morgan (the "Contag Indices") that utilise this methodology. The Selection Methodology uses the slope of the futures curve of certain specified commodities in order to select a particular Futures Contract in respect of each commodity in which to synthetically gain exposure. The Selection Methodology aims to select a Futures Contract with the highest level of Local Backwardation subject to certain constraints, all as further explained the document "J.P. Morgan Contag Module A: Selection Methodology".

## 2. This Document

This document, Module C (*J.P. Morgan Contag Alpha Indices*), explains the construction of the J.P. Morgan Contag Alpha Indices (the "Contag Alpha Indices"). By itself this document does not define an index or product. A Contag Alpha Index is a notional rules-based proprietary commodity index reflecting a long-short synthetic exposure to commodities by reference to two excess return commodity indices (the "Long Constituent" and the "Short Constituent").

This document should be read in conjunction with the document "J.P. Morgan Contag Module A: Selection Methodology" (the "Selection Methodology Document"). The index construction explained in this document is of a general form, with certain concepts or particulars left unspecified (for example, the choice of Long Constituent and Short Constituent). Other modules will be used to specify these particulars (each an "Externally Specified Particular"). One or more modules should be read in conjunction with this document and the Selection Methodology Document to obtain the full rules of the relevant Contag Index. Throughout this document, "Index" shall refer to a Contag Alpha Index. Each Contag Alpha Index shall have a further module setting out the Index Name and any Externally Specified Particulars or other details required by the Index Calculation Agent to determine the Index Level.

This document may be amended or supplemented from time to time at the discretion of the Index Calculation Agent and will be re-published no later than thirty (30) calendar days following such amendment or supplement.

This document is published by J.P. Morgan Securities Ltd. ("JPMSL") of 125 London Wall, London EC2Y 5AJ, UK in its capacity as Index Calculation Agent. A copy of this document is available from the Index Calculation Agent.

ALL PERSONS READING THIS DOCUMENT SHOULD REFER TO THE RISK FACTORS, DISCLAIMERS AND CONFLICTS SECTIONS SET OUT AT THE END OF THIS DOCUMENT AND IN ANY OTHER RELEVANT MODULE AND CONSIDER THE INFORMATION CONTAINED IN THIS DOCUMENT IN LIGHT OF SUCH RISK FACTORS, DISCLAIMERS AND CONFLICTS.

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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 Contag Alpha Indices.

## 3. Definitions

Capitalised terms used in this document should be interpreted according to the definitions given below. In many cases there is a further explanation of the term or concept in the body of this document. All terms listed under the Definitions section in the Selection Methodology Document shall be deemed to have the same meaning in this document. In the event of a conflict between definitions used in the Selection Methodology Document and this document, the term used herein shall prevail.



Externally Specified Particular	means any value or parameter used in this document but not specified. Such values or parameters will be specified in other modules.
Index	means a particular Contag Alpha Index. The rules of such index comprise applicable modules and shall have the Index Name specified in such rules.
Index Level	means, in respect of each Dealing Day, and subject to the occurrence of a Market Disruption Event, a decimal value published by the Index Calculation Agent in accordance with Section 5.5 ( <i>The Index Level</i> )
Index Leverage (RD <sub>n</sub> )	means the leverage applied to the Index on Rebalancing Date n.
Index Name	means the name by which the Index is identified. The Index Name is an Externally Specified Particular.
Index Sponsor	means, in respect of any Constituent, the corporation or other entity that (a) is responsible for setting and reviewing the rules and procedures and the methods of calculation and adjustments, if any, related to the Constituent and (b) announces (directly or through an agent) the level of the Constituent on a regular basis.
Index Ticker	means a Bloomberg™ ticker which identifies the Index. The Index Ticker is an Externally Specified Particular.
Initial Index Day	means the earliest Dealing Day in respect of which the time series of Index Levels is calculated and published by the Index Calculation Agent. The Initial Index Day is an Externally Specified Particular. The Initial Index Day may precede the day on which the Index was first calculated.
Initial Index Level	means the Index Level on the Initial Index Day. The Initial Index Level is an Externally Specified Particular.
Long Constituent	means an excess return index to which the Index has a long exposure. The Long Constituent is an Externally Specified Particular.
Market Disruption Event	means, <ul style="list-style-type: none"> <li>a) in respect of a Constituent and a Dealing Day (such Dealing Day a "Disrupted Day" in respect of such Constituent), either: <ul style="list-style-type: none"> <li>i. the occurrence or continuation on such Dealing Day of a Market Disruption Event in respect of any Futures Contract (as defined in b) below) entering into the calculation of the closing level of such Constituent; or</li> <li>ii. the occurrence of a Non-Publication Event in respect of such Constituent and such Dealing Day;</li> </ul> </li> <li>b) in respect of a Futures Contract and a Dealing Day (such Dealing Day a "Disrupted Day" in respect of such Futures Contract), the occurrence of any of the following:</li> </ul>



- i. a material limitation, suspension, discontinuation or disruption of trading of such Futures Contract which results in failure by the Relevant Exchange on which such futures contract(s) is/are traded to report an official settlement price for such futures contract(s);
- ii. a limitation, suspension or disruption of trading of such Futures Contract, by reason of movements exceeding "limit up" or "limit down" levels permitted by the Relevant Exchange and which, in the opinion of the Index Calculation Agent, is material to trading volume and market conditions in such Futures Contract on such Dealing Day;
- iii. publication by the Relevant Exchange of a "limit price" as the official settlement price for such Futures Contract (by reason of movements exceeding "limit up" or "limit down" levels permitted by the Relevant Exchange);
- iv. the Relevant Exchange for such Futures Contract not being open for trading during its regular trading session, regardless of whether any such exchange closes prior to its scheduled closing time.

#### Market Position

means the direction of exposure to each Constituent. For the Long Constituent, the Market Position of that Constituent is long. For the Short Constituent, the Market Position of that Constituent is short.

The Index will benefit from a positive return in the Long Constituent when the level of the Long Constituent increases and will benefit from a negative return in the Short Constituent when the level of the Short Constituent increases. Conversely, the Index will suffer from a negative return in the Long Constituent when the level of the Long Constituent decreases and will suffer from a positive return in the Short Constituent when the level of the Short Constituent increases.

#### Maximum Index Leverage

means a positive percentage, representing the maximum leverage applicable for the Index. Maximum Index Leverage is an Externally Specified Particular.

#### Maximum Short Constituent Leverage

means a positive percentage, representing the maximum leverage applicable for the Short Constituent. The Maximum Short Constituent Leverage is an Externally Specified Particular.

#### Minimum Index Leverage

means a non-negative percentage, less than or equal to Maximum Index Leverage, representing the minimum leverage applicable for the Index. Minimum Index Leverage is an Externally Specified Particular.

#### Minimum Short Constituent Leverage

means a non-negative percentage, less than or equal to the Maximum Short Constituent Leverage, representing the minimum leverage applicable for the Short Constituent. The Minimum Short Constituent Leverage is an Externally Specified Particular.

Month-to-Date Performance	means the cumulative performance of the Constituents since the immediately preceding Rebalancing Date taking into account any Short Constituent Leverage.
Non-Publication Event	<p>means, with respect to a Constituent and a Dealing Day, the failure by the Relevant Exchange, any Index Sponsor or other price source to announce publicly or publish the following (or the information necessary for determining the following) with respect to such Dealing Day:</p> <ul style="list-style-type: none"> <li>(a) the official settlement price for any relevant futures contract; or</li> <li>(b) the closing level of such Constituent, in either case by noon (London time) on the immediately following Dealing Day,</li> </ul> <p>provided, however that the occurrence of such an event shall not constitute a "Non-Publication Event" in the case of clause (b) hereof if the Index Calculation Agent determines in its sole discretion by 12pm (London time) on such immediately following Dealing Day that the information necessary for determining the closing level of the relevant Constituent has been announced publicly or has been published by a Relevant Exchange, Index Sponsor or other price source in which case the Index Calculation Agent shall determine the USD Level of such Constituent in good faith and in a commercially reasonable manner.</p>
Non-Volatility Targeted Index	means a hypothetical index identical to the Index except that Index Leverage is considered to have been 100% for all previous Rebalancing Dates.
Non-Volatility Targeted Index Level	means the level of the Non-Volatility Targeted Index which is determined in respect of each Dealing Day in accordance with the methodology described in Section 5.5 ( <i>The Index Level</i> ) to calculate the Index Level of the Index, except that (i) Use Volatility Targeting is considered to be "No", (ii) the provisions described in Section 7 ( <i>Market Disruptions</i> ) are not applied, and (iii) on the occurrence of a Non-Publication Event with respect to a Constituent and a Dealing Day, the USD Level of such Constituent shall be considered to be the USD Level of such Constituent on the immediately preceding Dealing Day for which the Index Sponsor has published a level of such Constituent.
Rebalancing Date	<p>means a Dealing Day on which the synthetic exposure of the Index to the Long Constituent and the Short Constituent is rebalanced. The Rebalancing Date in respect of an Index shall be determined by reference to the Rebalancing Date Integer.</p> <p>Rebalancing Dates shall be enumerated with Rebalancing Date<sub>0</sub> being the Rebalancing Date immediately preceding the Initial Index Day. The n<sup>th</sup> Rebalancing Date shall be referred to as Rebalancing Date<sub>n</sub> (abbreviated as RD<sub>n</sub>).</p>

Rebalancing Date Integer	<p>means the Dealing Day of each calendar month on which the Rebalancing Date with respect to that calendar month occurs. The Rebalancing Date Integer is an Externally Specified Particular.</p> <p>The Rebalancing Date Integer can be a positive or negative integer.</p> <p>If the Rebalancing Date Integer is greater than or equal to 1, then the Rebalancing Date in respect of any calendar month will be a day in such calendar month e.g. if the Rebalancing Date Integer is 1, each Rebalancing Date will be the 1st Dealing Day of the relevant calendar month.</p> <p>If the Rebalancing Date Integer is less than 1 then the Rebalancing Date in respect of any calendar month will be a day in the preceding calendar month. For example, if the Rebalancing Date Integer is 0 (zero), each Rebalancing Date will be the last Dealing Day of the preceding calendar month. Similarly, if the Rebalancing Date Integer is -1, each Rebalancing Date will be the penultimate Dealing Day of the preceding calendar month etc.</p>
Replication Adjustment Factor	means an adjustment to the Index Level that shall have the effect of reducing the Index Level by the Replication Adjustment Rate per annum, calculated on the basis of the actual number of calendar days from, and including, the immediately preceding Rebalancing Date to, but excluding, the Dealing Day on which the Index Calculation Agent is determining the Index Level, divided by 360.
Replication Adjustment Rate	means a percentage, which may be zero, used to determine the Replication Adjustment Factor. The Replication Adjustment Rate is an Externally Specified Particular.
Short Constituent	means an excess return index to which the Index has a short exposure. The Short Constituent is an Externally Specified Particular.
Short Constituent Leverage	see Section 5.2 ( <i>Volatility Matching</i> )
Target Index Volatility	means a positive percentage used to calculate the Index Leverage. Target Index Volatility is an Externally Specified Particular.
USD Level	means, in respect of a Dealing Day d and a Constituent and subject to the occurrence of a Market Disruption Event, the official closing level of the Constituent on Dealing Day d as published by the relevant Index Sponsor.
Use Volatility Matching	means a parameter specified as either "Yes" or "No" to indicate whether Volatility Matching is applicable for an Index. Use Volatility Matching is an Externally Specified Particular.
Use Volatility Targeting	means a parameter specified as either "Yes" or "No" to indicate whether Volatility Targeting is applicable for an Index. Use Volatility Targeting is an Externally Specified Particular.

Volatility Matching	means a mechanism to adjust the weight of the Short Constituent, aiming to account for a difference in volatility between the Short Constituent and the Long Constituent.
Volatility Matching Lookback	means an integer greater than or equal to 2, to indicate the number of Dealing Days' returns which will be used for Volatility Matching, if applicable. Volatility Matching Lookback is an Externally Specified Particular.
Volatility Matching Period ( $RD_n$ )	<p>means, with respect to Rebalancing Date<sub>n</sub>, the chronologically ordered set of consecutive Dealing Days ending with the Dealing Day occurring the number of Dealing Days equal to the Volatility Observation Lag prior to Rebalancing Date<sub>n</sub>. The Volatility Matching Period shall consist of the number of Dealing Days equal to the Volatility Matching Lookback plus one. The number of days is one greater than Volatility Matching Lookback since to measure <math>k</math> consecutive returns you need <math>k + 1</math> levels.</p> <p>The earliest day of the Volatility Matching Period(<math>RD_n</math>) shall be regarded as the zero-th day of the period, so that the latest day of the Volatility Matching Period(<math>RD_n</math>) shall be the Volatility Matching Lookback-th day.</p>
Volatility Observation Lag	<p>means an integer specifying the number of Dealing Days from, and excluding, the last Dealing Day of each of:</p> <ul style="list-style-type: none"> <li>(a) the Volatility Matching Period;</li> <li>(b) the Volatility Targeting Period 1; and,</li> <li>(c) the Volatility Targeting Period 2,</li> </ul> <p>to and including the relevant Rebalancing Date, each where applicable.</p> <p>Volatility Observation Lag is an Externally Specified Particular.</p>
Volatility Targeting	means a mechanism to adjust the overall leverage of the Index (Index Leverage( $RD_n$ )) aiming to target a certain level of realized volatility of the Index.
Volatility Targeting Lookback 1 and Volatility Targeting Lookback 2	<p>mean two integers greater than or equal to 2, to indicate the number of Dealing Days' returns which will be used in the two measurements of volatility used for Volatility Targeting for the Index, if applicable. Volatility Targeting Lookback 1 and Volatility Targeting Lookback 2 are Externally Specified Particulars.</p> <p>These two numbers may be the same, in which case there is effectively only one measurement of volatility for the Index.</p>

Volatility Targeting Period 1(RD<sub>n</sub>)  
and  
Volatility Targeting Period 2(RD<sub>n</sub>)

means, with respect to Rebalancing Date<sub>n</sub>, the two sets of consecutive Dealing Days used in the calculation of IndexVol(RD<sub>n</sub>), both ending with the Dealing Day occurring the number of Dealing Days equal to the Volatility Observation Lag prior to Rebalancing Date<sub>n</sub>.

Volatility Targeting Period 1(RD<sub>n</sub>) consists of the number of Dealing Days equal to the Volatility Targeting Lookback 1 plus one.

Volatility Targeting Period 2(RD<sub>n</sub>) consists of the number of Dealing Days equal to the Volatility Targeting Lookback 2 plus one.

The number of days is one greater than the corresponding Volatility Targeting Lookback since to measure  $k$  consecutive returns you need  $k + 1$  levels.

The earliest day of each Volatility Targeting Period shall be regarded as the zero-th day of the period, so that the latest day shall be the corresponding Volatility Targeting Lookback-th day.

#### 4. Index Construction Overview

The Index captures the return of synthetic long exposure to the Long Constituent and synthetic short exposure to the Short Constituent. Each of the Long Constituent and the Short Constituent is an excess return index i.e. they reflect synthetic exposure to uncollateralized positions in Futures Contracts. The Index itself is an excess return index.

Subject to the occurrence of a Market Disruption Event, the Index Calculation Agent shall calculate and publish the Index Level in respect of each Dealing Day, rounded to 4 decimal places, on a Bloomberg page and the Bloomberg website and the Index Level shall be identified by the Index Ticker.

The Index Level shall be determined in respect of each Dealing Day  $d$  (the Index Level on such Dealing Day being Index( $d$ )) and is determined by reference to the Index Level published in respect of the immediately preceding Rebalancing Date (RD <sub>$n-1$</sub> ) and the USD Levels of the Constituents on RD <sub>$n-1$</sub>  and Dealing Day  $d$ .

It should be noted that the Index is described as a notional portfolio of assets because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. The Index Level shall be adjusted as a result of a Market Disruption Event, as described in Section 7 (*Market Disruptions*).

#### 5. Calculation of the Index

##### 5.1 Index Rebalancing

Subject to the occurrence of a Market Disruption Event, the Index will be rebalanced on each Rebalancing Date to adjust the synthetic exposure of the Index to the Short Constituent and the Long Constituent to account for the performance of the Index and the Constituents since the immediately preceding Rebalancing Date, and the effects, if applicable, of the Volatility Matching and/or Volatility Targeting. The effect of the rebalancing will be to reset the exposure to the Constituents, and, if applicable, apply the weighting determined by Volatility Matching or Volatility Targeting each as described below.

## 5.2 Volatility Matching

Volatility Matching is a mechanism to adjust the weight of the Short Constituent, aiming to account for a difference in volatility between the Short Constituent and the Long Constituent. Whether the Volatility Matching is a feature of the Index is an Externally Specified Particular.

If Volatility Matching is applicable for an Index then the Index Calculation Agent will need to determine the Short Constituent Leverage in respect of a Rebalancing Date ( $RD_n$ ). A value ( $VolRatio(RD_n)$ ) will be calculated by the Index Calculation Agent as a measurement of the ratio of the realized volatility of the Long Constituent to the realized volatility of the Short Constituent over a period preceding such Rebalancing Date (Volatility Matching Period ( $RD_{n-1}$ )). Subject to the Maximum Short Constituent Leverage and Minimum Short Constituent Leverage,  $VolRatio(RD_n)$  will determine the Short Constituent Leverage( $RD_n$ ) applied to the Short Constituent on Rebalancing Date ( $RD_n$ ). Therefore if the Short Constituent exhibits greater volatility over the Volatility Matching Period ( $RD_{n-1}$ ) than the Long Constituent then the Short Constituent Leverage will generally be smaller than 100% and if the Short Constituent exhibits smaller volatility over the Volatility Matching Period ( $RD_{n-1}$ ) than the Long Constituent then the Short Constituent Leverage will generally be greater than 100%, *provided that* the Short Constituent Leverage shall not be less than the Minimum Short Constituent Leverage or greater than the Maximum Short Constituent Leverage.

The Short Constituent Leverage is determined by the Index Calculation Agent in respect of Dealing Day  $d$  in accordance with the following formula:

$$SCL(RD_{n-1}) = \text{Min}(\text{MaxLeverage}, \text{Max}(\text{MinLeverage}, \text{VolRatio}(RD_{n-1})))$$

where

$SCL(RD_{n-1})$  means, in respect of Dealing Day  $d$ , the Short Constituent Leverage for the immediately preceding Rebalancing Date  $RD_{n-1}$ .

$\text{MaxLeverage}$  means the Maximum Short Constituent Leverage.

$\text{MinLeverage}$  means the Minimum Short Constituent Leverage.

$\text{VolRatio}(RD_{n-1})$  means:  
 (a) if Use Volatility Matching is specified as "No", 1; otherwise  
 (b)

$$\text{VolRatio}(RD_{n-1}) = \frac{\sqrt{\frac{252}{m-1} \times \sum_{j=1}^m \left( Rtn_{Long}(j) - \frac{1}{m} \sum_{k=1}^m Rtn_{Long}(k) \right)^2}}{\sqrt{\frac{252}{m-1} \times \sum_{j=1}^m \left( Rtn_{Short}(j) - \frac{1}{m} \sum_{k=1}^m Rtn_{Short}(k) \right)^2}}$$

where

$m$  means the Volatility Matching Lookback

$Rtn_{Long}(j)$  means the return of the Long Constituent on the  $j$ -th day of the Volatility Matching Period( $RD_{n-1}$ ), defined as follows:

$$Rtn_{Long}(j) = \frac{\text{LookbackLevel}_{Long}(j)}{\text{LookbackLevel}_{Long}(j-1)} - 1$$

$Rtn_{Long}(k)$  means the return of the Long Constituent on the  $k$ -th day of the Volatility Matching Period( $RD_{n-1}$ ), defined as follows:

$$Rtn_{Long}(k) = \frac{LookbackLevel_{Long}(k)}{LookbackLevel_{Long}(k-1)} - 1$$

$Rtn_{Short}(j)$  means the return of the Short Constituent on the  $j$ -th day of the Volatility Matching Period( $RD_{n-1}$ ), defined as follows:

$$Rtn_{Short}(j) = \frac{LookbackLevel_{Short}(j)}{LookbackLevel_{Short}(j-1)} - 1$$

$Rtn_{Short}(k)$  means the return of the Short Constituent on the  $k$ -th day of the Volatility Matching Period( $RD_{n-1}$ ), defined as follows:

$$Rtn_{Short}(k) = \frac{LookbackLevel_{Short}(k)}{LookbackLevel_{Short}(k-1)} - 1$$

where

$LookbackLevel_{Long}(j)$  means the USD Level of the Long Constituent on the  $j$ -th day of the Volatility Matching Period( $RD_{n-1}$ ).

$LookbackLevel_{Long}(k)$  means the USD Level of the Long Constituent on the  $k$ -th day of the Volatility Matching Period( $RD_{n-1}$ ).

$LookbackLevel_{Short}(j)$  means the USD Level of the Short Constituent on the  $j$ -th day of the Volatility Matching Period( $RD_{n-1}$ ).

$LookbackLevel_{Short}(k)$  means the USD Level of the Short Constituent on the  $k$ -th day of the Volatility Matching Period( $RD_{n-1}$ ).

$LookbackLevel_{Long}(j-1)$  means the USD Level of the Long Constituent on the  $(j-1)$ -th day of the Volatility Matching Period( $RD_{n-1}$ ).

$LookbackLevel_{Long}(k-1)$  means the USD Level of the Long Constituent on the  $(k-1)$ -th day of the Volatility Matching Period( $RD_{n-1}$ ).

$LookbackLevel_{Short}(j-1)$  means the USD Level of the Short Constituent on the  $(j-1)$ -th day of the Volatility Matching Period( $RD_{n-1}$ ).

$LookbackLevel_{Short}(k-1)$  means the USD Level of the Short Constituent on the  $(k-1)$ -th day of the Volatility Matching Period( $RD_{n-1}$ ).

### 5.3 Volatility Targeting

Volatility Targeting is a mechanism to adjust the overall leverage of the Index (Index Leverage( $RD_n$ )) aiming to target a certain level of realized volatility of the Index. Whether Volatility Targeting is a feature of the Index is an Externally Specified Particular.

If Volatility Targeting is applicable for an Index then the Index Calculation Agent will need to determine the Index Leverage in respect of a Rebalancing Date ( $RD_n$ ). A value (IndexVol( $RD_n$ )) shall be calculated by the Index Calculation Agent as a measurement of the hypothetical realized volatility of the Non-Volatility Targeted Index over period(s) preceding such Rebalancing Date (Volatility Targeting Period 1( $RD_n$ ) and Volatility Targeting Period 2( $RD_n$ ) and each a "Volatility Targeting Period"). Non-Volatility Targeted Index is a hypothetical index identical to the Index except that the IndexLeverage( $RD_n$ ) is considered to have been 100% for all previous Rebalancing Dates. The volatility is measured over two periods (or, effectively, one period, by setting the two periods to be identical in length) with the maximum of the two volatility measurements used in the calculation of Index Leverage ( $RD_n$ ).

Subject to the Maximum Index Leverage and Minimum Index Leverage, the Target Volatility and IndexVol( $RD_n$ ) will determine the Index Leverage( $RD_n$ ) applied to the Index on Rebalancing Date ( $RD_n$ ).

The Index Leverage is determined by the Index Calculation Agent in respect of Dealing Day d in accordance with the following formula:

$IndexLeverage(RD_{n-1})$  means:

- (a) if Use Volatility Targeting is specified as "No", 1; otherwise
- (b)

$$IndexLeverage(RD_{n-1}) = \text{Max} \left( \text{Min} \left( \frac{TargetVol}{IndexVol(RD_{n-1})}, MaxLeverage \right), MinLeverage \right)$$

where

$MinLeverage$  means the Minimum Index Leverage

$MaxLeverage$  means the Maximum Index Leverage

$TargetVol$  means the Target Index Volatility

$$IndexVol(RD_{n-1}) = \text{Max}(VolMeasure_1(RD_{n-1}), VolMeasure_2(RD_{n-1}))$$

where

$$VolMeasure_1(RD_{n-1}) = \sqrt{\frac{252}{m_1 - 1} \times \sum_{j=1}^{m_1} \left( Rtn(j, 1, n-1) - \frac{1}{m_1} \sum_{k=1}^{m_1} Rtn(k, 1, n-1) \right)^2}$$

$$VolMeasure_2(RD_{n-1}) = \sqrt{\frac{252}{m_2 - 1} \times \sum_{j=1}^{m_2} \left( Rtn(j, 2, n-1) - \frac{1}{m_2} \sum_{k=1}^{m_2} Rtn(k, 2, n-1) \right)^2}$$

$m_1$  means Volatility Targeting Lookback 1

$m_2$  means Volatility Targeting Lookback 2

$Rtn(j, 1, n-1)$  means the return of the Non-Volatility Targeted Index on the  $j$ th day of Volatility Targeting Period 1( $RD_{n-1}$ ), defined as follows:

$$Rtn(j, 1, n-1) = \frac{NVTIndex(j, 1, n-1)}{NVTIndex(j-1, 1, n-1)} - 1$$

$Rtn(j, 2, n-1)$  means the return of the Non-Volatility Targeted Index on the  $j$ th day of Volatility Targeting Period 2( $RD_{n-1}$ ), defined as follows:

$$Rtn(j, 2, n-1) = \frac{NVTIndex(j, 2, n-1)}{NVTIndex(j-1, 2, n-1)} - 1$$



$Rtn(k,1,n-1)$  means the return of the Non-Volatility Targeted Index on the  $k$ -th day of Volatility Targeting Period 1( $RD_{n-1}$ ), defined as follows:

$$Rtn(k,1,n-1) = \frac{NVTIndex(k,1,n-1)}{NVTIndex(k-1,1,n-1)} - 1$$

$Rtn(k,2,n-1)$  means the return of the Non-Volatility Targeted Index on the  $k$ -th day of Volatility Targeting Period 2( $RD_{n-1}$ ), defined as follows:

$$Rtn(k,2,n-1) = \frac{NVTIndex(k,2,n-1)}{NVTIndex(k-1,2,n-1)} - 1$$

$NVTIndex(j,1,n-1)$  means the Non-Volatility Targeted Index Level on the  $j$ -th day of Volatility Targeting Period 1( $RD_{n-1}$ )

$NVTIndex(j,2,n-1)$  means the Non-Volatility Targeted Index Level on the  $j$ -th day of Volatility Targeting Period 2( $RD_{n-1}$ )

$NVTIndex(j-1,1,n-1)$  means the Non-Volatility Targeted Index Level on the  $j-1$ -th day of Volatility Targeting Period 1( $RD_{n-1}$ )

$NVTIndex(j-1,2,n-1)$  means the Non-Volatility Targeted Index Level on the  $j-1$ -th day of Volatility Targeting Period 2( $RD_{n-1}$ )

$NVTIndex(k,1,n-1)$  means the Non-Volatility Targeted Index Level on the  $k$ -th day of Volatility Targeting Period 1( $RD_{n-1}$ )

$NVTIndex(k,2,n-1)$  means the Non-Volatility Targeted Index Level on the  $k$ -th day of Volatility Targeting Period 2( $RD_{n-1}$ )

$NVTIndex(k-1,1,n-1)$  means the Non-Volatility Targeted Index Level on the  $k-1$ -th day of Volatility Targeting Period 1( $RD_{n-1}$ )

$NVTIndex(k-1,2,n-1)$  means the Non-Volatility Targeted Index Level on the  $k-1$ -th day of Volatility Targeting Period 2( $RD_{n-1}$ )

#### 5.4 Month-To-Date Performance

The Month-To-Date Performance on Dealing Day  $d$  (MTDP( $d$ )) represents the net return of synthetic unleveraged long exposure to the Long Constituent and synthetic short exposure to the Short Constituent with leverage (if any) determined by reference to the Short Constituent Leverage, since the Rebalancing Date immediately preceding Dealing Day  $d$  (henceforth  $RD_{n-1}$ ).

The Month-To-Date Performance is determined by the Index Calculation Agent in respect of Dealing Day  $d$  in accordance with the following formula:

$$MTDP(d) = \left( \frac{Level_{Long}(d)}{Level_{Long}(RD_{n-1})} - 1 \right) - SCL(RD_{n-1}) \left( \frac{Level_{Short}(d)}{Level_{Short}(RD_{n-1})} - 1 \right)$$

where

$Level_{Long}(d)$  means the USD Level of the Long Constituent on Dealing Day  $d$ .

$Level_{Short}(d)$  means the USD Level of the Short Constituent on Dealing Day d.

$Level_{Long}(RD_{n-1})$  means the USD Level of the Long Constituent on Dealing Day  $RD_{n-1}$ .

$Level_{Short}(RD_{n-1})$  means the USD Level of the Short Constituent on Dealing Day  $RD_{n-1}$ .

$SCL(RD_{n-1})$  means the Short Constituent Leverage, determined as above.

## 5.5 The Index Level

The Index Level on the Initial Index Day is the Initial Index Level.

In respect of each Dealing Day d following the Initial Index Day, the Index Level will be determined by the Index Calculation Agent as follows:

$$Index(d) = [Index(RD_{n-1}) + Index(RD_{n-1}) \times IndexLeverage(RD_{n-1}) \times MTDP(d)] \times (1 - RAF_d)$$

$Index(RD_{n-1})$  means the Index Level on the Rebalancing Date immediately preceding Dealing Day d, rounded to 4 decimals.

$IndexLeverage(RD_{n-1})$  means the Index Leverage on the Rebalancing Date immediately preceding Dealing Day d, determined as above.

$MTDP(d)$  is the Month-To-Date Performance on Dealing Day d, as defined above.

$RAF_d$  is the Replication Adjustment Factor, calculated by the Index Calculation Agent as follows:

$$RAF_d = 1 - (1 - RAR)^{\frac{CalendarDays}{360}}$$

where:

$RAR$  is the Replication Adjustment Rate

**Calendar Days** is the number of calendar days from, and including, the Rebalancing Date immediately preceding Dealing Day d to, but excluding, Dealing Day d.

## 6. Publication

Subject to the occurrence or existence of a Market Disruption Event, the Index Calculation Agent shall calculate and publish the Index Level in respect of each Dealing Day (although the Index Calculation Agent may calculate the Index Level with greater frequency and share this calculation with its affiliates for internal purposes).

The Index Level will be published on a Bloomberg page and the Bloomberg website at the pages indicated by the Index Ticker.

The Index Level shall be published to 4 decimal places.

## 7. Market Disruptions

If, with respect to any Dealing Day t, a Market Disruption Event has occurred on:

- (a) Dealing Day t; or
- (b) the Rebalancing Date immediately preceding Dealing Day t, then:

- (i) the Index Level in respect of Dealing Day  $t$  shall be equal to the Adjusted Index Level in respect of  $t$  and observed as at  $t$  ( $AdjIndex_t(t)$ ), calculated and published by the Index Calculation Agent where, for the avoidance of doubt,  $AdjIndex_t(t)$  is calculated in accordance with the following procedure for calculating  $AdjIndex_s(d)$  in the particular case that  $s$  is equal to  $t$  and  $d$  is equal to  $t$ ; and
- (ii) the Index Calculation Agent shall calculate the Adjusted Index Level in respect of  $t$  and observed as at each Dealing Day  $s$  from and following  $t$ , until the first Dealing Day  $s'$  for which, in respect of each Futures Contract entering into the calculation of the Index, there has been at least one Dealing Day (from, and including,  $t$  to, and including,  $s'$ ) which is not a Disrupted Day. The Adjusted Index Level in respect of  $t$  and observed as at such Dealing Day  $s'$  ( $AdjIndex_{s'}(t)$ ) shall be the "Final Adjusted Index Level". It follows from the procedure described below that  $s'$  shall occur no later than 5 Dealing Days following  $t$ . For the avoidance of doubt,  $AdjIndex_{s'}(t)$ , calculated in accordance the following procedure for calculating  $AdjIndex_s(d)$  in the particular case that  $s$  is equal to  $s'$  and  $d$  is equal to  $t$ ,

all, in accordance with the following procedure:

**Adjusted Index Level in respect of  $d$  observed as at  $s$  ("  $AdjIndex_s(d)$  ")**

The formula given in Section 5.5 (The Index Level) above for the calculation of the Index Level shall be modified to calculate the Adjusted Index Level in respect of Dealing Day  $d$  as observed at Dealing Day  $s$  ("  $AdjIndex_s(d)$  ") as follows:

$$AdjIndex_s(d) = [AdjIndex_s(RD_{n-1}) + AdjIndex_{RD_{n-1}}(RD_{n-1}) \times IndexLeverage(RD_{n-1}) \times AdjMTDP_s(d)] \times (1 - RAF_d)$$

where:

$AdjMTDP_s(d)$  means the Adjusted Month-to-Date Performance in respect of Dealing Day  $d$  and observed as at Dealing Day  $s$ , defined as follows:

$$AdjMTDP_s(d) = \left( \frac{AdjLevel_{Long,s}(d)}{AdjLevel_{Long,s}(RD_{n-1})} - 1 \right) - SCL(RD_{n-1}) \left( \frac{AdjLevel_{Short,s}(d)}{AdjLevel_{Short,s}(RD_{n-1})} - 1 \right)$$

$AdjIndex_s(RD_{n-1})$  means the Adjusted Index Level in respect of  $RD_{n-1}$  as observed at Dealing Day  $s$

$AdjIndex_{RD_{n-1}}(RD_{n-1})$  means the Adjusted Index Level in respect of  $RD_{n-1}$  as observed at  $RD_{n-1}$

where:

$AdjLevel_{Long,s}(RD_{n-1})$  means  $AdjLevel_{c,s}(d)$  where  $c$  is the Long Constituent and  $d$  is  $RD_{n-1}$ ;

$AdjLevel_{Short,s}(RD_{n-1})$  means  $AdjLevel_{c,s}(d)$  where  $c$  is the Short Constituent and  $d$  is  $RD_{n-1}$ ;

$AdjLevel_{Long,s}(d)$  means  $AdjLevel_{c,s}(d)$  where  $c$  is the Long Constituent;

$AdjLevel_{Short,s}(d)$  means  $AdjLevel_{c,s}(d)$  where  $c$  is the Short Constituent;

$AdjLevel_{c,s}(d)$  means the Adjusted USD Level of Constituent  $c$  in respect of Dealing Day  $d$  and observed as at Dealing Day  $s$ , defined as follows:

- if Dealing Day  $d$  is not a Disrupted Day in respect of any Futures Contract entering into the calculation of the closing level of Constituent  $c$ , the USD Level of Constituent  $c$  on Dealing Day  $d$ ; otherwise,
- the level for Constituent  $c$  calculated by the Index Calculation Agent in respect of Dealing Day  $d$  in accordance with the rules of Constituent  $c$  by reference to

- i. with respect to each Futures Contract included in Constituent c which is not affected by Market Disruption Event on d, the settlement price of such Futures Contract on Dealing Day d as published by the Relevant Exchange
- ii. with respect to each Futures Contract included in Constituent c which is affected by a Market Disruption Event on Dealing Day d (each an "Affected Futures Contract"):
  - (a) the settlement price of the each such Affected Futures Contract as published by the Relevant Exchange on the Dealing Day which was first to occur during the period from, and including, Dealing Day d to, and including, Dealing Day s on which no Market Disruption Event exists or is occurring with respect to such Affected Futures Contract, or,
  - (b) in the case that there is no such Dealing Day as mentioned in (a) above, the settlement price of such Affected Futures Contract as published by the Relevant Exchange on the most recent Dealing Day on or before Dealing Day s on which a settlement price has been published for such Affected Futures Contract (whether or not there has been a Market Disruption Event on such day),

*provided that* if a Market Disruption Event continues for 5 consecutive Dealing Days following Dealing Day d, the price of such Affected Futures Contract used by the Index Calculation Agent in determining the level for Constituent c in respect of Dealing Day d (the "Index Calculation Agent Determined Price") shall be determined by the Index Calculation Agent acting in good faith and using such information and/or methods as it deems appropriate (notwithstanding the existence of a Market Disruption Event), and in such case such Index Calculation Agent Determined Price for such Affected Futures Contract will apply in the determination of Adjusted USD Level of Constituent c in respect of Dealing Day d and as observed at each Dealing Day following d + 5.

## 8. Extraordinary Events

### 8.1

If either Constituent is (a) not calculated and announced by the Index Sponsor but is calculated and announced by a successor sponsor acceptable to the Index Calculation Agent, or (b) replaced by a successor index using, in the determination of the Index Calculation Agent, the same or substantially similar formula for and method of calculation as used in the calculation of such Constituent, then such index will be deemed to be the index so calculated and announced by that successor index sponsor or that successor index, as the case may be.

### 8.2

If on or prior to any Dealing Day on which the Index Calculation Agent is determining the Index Level of a Contag Alpha Index the Index Sponsor makes a material change in the formula for or the method of calculating the relevant Constituent (other than a modification prescribed in that formula or method to maintain such index in the Constituent or prescribed routine events) which affects the ability of the Index Calculation Agent to define an Externally Specified Particular in respect of a Contag Alpha Index, then the Index Calculation Agent shall, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, Externally Specified Particular or any other rule in relation to the Contag Alpha Index to account for such modification.

### 8.3

If on or prior to any Dealing Day on which the Index Calculation Agent is determining the Index Level of a Contag Alpha Index an Index Sponsor permanently cancels the relevant Constituent, and no successor index exists, the Index Calculation Agent shall, in good faith, either:

- (i) continue to calculate the Index Level of the relevant Contag Alpha Index using the latest available Externally Specified Particulars at the time the Constituent was cancelled; or

- (ii) make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, valuation terms or any other rule in relation to the relevant Contag Alpha Index to account for such cancellation.

#### 8.4 Change in Law/ Inaccurate Contract Prices

Without prejudice to the ability of the Index Calculation Agent to amend the Rules (see Section 2 (*This Document*) above), the Index Calculation Agent may, acting in good faith and in a commercially reasonable manner:

- (a) exclude; or
- (b) substitute,

any Futures Contract following the occurrence (and/or continuation) of a Change in Law or in circumstances where it considers it reasonably necessary to do so to reflect the intention of the Contag Alpha Indices, including (without prejudice to the generality of the foregoing) any perception among market participants generally that the published price of the relevant Futures Contract is inaccurate (and the Relevant Exchange fails to correct such level), and if it so excludes or substitutes any Futures Contract, then the Index Calculation Agent may adjust the Rules as it determines in good faith to be appropriate to account for such exclusion or substitution on such date(s) selected by the Index Calculation Agent. The Index Calculation Agent is under no obligation to continue the calculation and publication of any Contag Alpha Indices upon the occurrence or existence of a Change in Law; and the Index Calculation Agent may decide to cancel any Contag Alpha Indices if it determines, acting in good faith, that the objective of the relevant Contag Alpha Indices can no longer be achieved.

#### 9. Risk Factors

The following list of risk factors does not purport to be a complete enumeration or explanation of all the risks associated with Contag Alpha Indices and should be read in conjunction with any other relevant modules in respect of the Index, where applicable.

- (i) Past performance should not be used as a guide to future performance

The past performance of the Index or any Contag Alpha Indices should not be used as a guide to future performance of the Index or such index. Any back-testing or similar analysis performed by any person in respect of a Contag Alpha Index must be considered illustrative only and may be based on estimates or assumptions not used by the Index Calculation Agent when determining the Index Level pursuant to the rules of the Index.

- (ii) Synthetic Exposure to Commodities

The Contag Alpha Indices are purely synthetic. There is no pool of futures contracts to which any person is entitled or in which any person has any ownership interest or which serve as collateral for the return on any product referencing Contag Alpha Indices.

- (iii) Contag Alpha Indices are "excess return"

The return from investing in futures contracts derives from three sources:

- (a) changes in the price of the relevant futures contracts (which is known as the "price return");
- (b) any profit or loss realised when rolling the relevant futures contracts (which is known as the "roll return"); and
- (c) any interest earned on the cash deposited as collateral for the purchase of the relevant futures contracts (which is known as the "collateral return").

The Contag Alpha Indices are "excess return" indices which means that they measure the returns accrued from investing in uncollateralized futures contracts or, in other words, the sum of the price return and the roll return associated with an investment in futures. They do not reflect the collateral return that would be generated by a collateralised investment in commodity futures. Investing in any product linked to the Contag Alpha Indices will therefore not generate the same return as one would obtain from a collateralised investment in the relevant futures contracts.

(iv) Commodity prices impacted by global macro-economic and political factors

Prices for commodities are affected by a variety of factors, including changes in supply and demand relationships, governmental programmes and policies, national and international political and economic events, wars and acts of terror, changes in interest and exchange rates, trading and speculative activities in commodities and related contracts, weather, and agricultural, trade, fiscal, monetary and exchange control policies. The price volatility of each commodity also affects the value of the futures and forward contracts related to that commodity and therefore its price at any such time. The price of any one commodity may be correlated to a greater or lesser degree with any other commodity and factors affecting the general supply and demand as well as the prices of other commodities may affect the particular commodity in question.

In respect of commodities in the energy sector, due to the significant level of its continuous consumption, limited reserves, and oil cartel controls, energy prices are subject to rapid price increases in the event of perceived or actual shortages. These factors (when combined or in isolation) may affect the price of futures contracts and, as a consequence, the performance of the Contag Alpha Indices and the Index Level.

The commodities 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. These circumstances could adversely affect the price of futures contracts and, therefore, the performance of the Contag Alpha Indices and the Index Level.

(v) Volatility Targeting and Volatility Matching

Volatility Targeting, if applicable, is intended to restrict the realised volatility of the Index so as not to exceed the Volatility Target, based on certain measurements of past hypothetical realised volatility. There can be no guarantee that this methodology will effectively lead to a realised volatility of the Index that does not exceed the Volatility Target, for reasons including but not limited to a) the Minimum Index Leverage provides a lower constraint on the leverage employed b) past hypothetical realised volatility may not provide a good estimate of future realised volatility.

Volatility Matching, if applicable, is intended to reduce the realised volatility of the Index by matching the volatility of the synthetic exposure to the Long Constituent and the Short Constituent, based on the past historic realised volatility of such Constituents, seeking to maximise the offsetting effect of these two sources of synthetic exposure. There can be no guarantee that this methodology will effectively lead to a reduced volatility of the Index, for reasons including but not limited to a) the Long Constituent and Short Constituent may be insufficiently correlated to achieve the desired offsetting effect b) past historic realised volatility of the Constituents may not provide a good estimate of future realised volatility.

(vi) Short Exposure

Contag Alpha Indices include synthetic short exposure to the Short Constituent. The potential losses in the case of short exposure are unlimited since in general there is no limit to the possible increase in the USD Level of the Short Constituent.

(vii) Diversification

Diversification is generally considered to reduce the amount of risk associated with generating returns, however can be no assurance that Contag Alpha Indices will be sufficiently diversified at any time to reduce or minimize such risks to any extent.

(viii) Index Calculation Agent discretion

The Index Calculation Agent is entitled to exercise certain discretions in relation to Contag Alpha Indices, including but not limited to, the determination of the values to be used in the event of Market Disruptions and the interpretation of these Rules. Although the Index Calculation Agent will make all determinations and take all action in relation to Contag Alpha Indices acting in good faith, such discretion could have an impact, positive or negative, on the Index Level.

(ix) Potential Conflicts of Interest

Potential conflicts of interest may exist in the structure and operation of Contag Alpha Indices and the conduct of normal business activities for the Index Calculation Agent or any of its affiliates or subsidiaries or their respective directors, officers, employees, representatives, delegates or agents (a "Relevant Person").

During the course of their normal business, the Index Calculation Agent or any Relevant Person may enter into or promote, offer or sell transactions or investments (structured or otherwise) linked to the Indices or any of their components. In addition, any Relevant Person may have, or may have had, interests or positions, or may buy, sell or otherwise trade positions in or relating to the Indices or any of their components, or may invest or engage in transactions with other persons, or on behalf of such persons relating to any of these items. Such activity could give rise to a conflict of interest, and such conflict may have an impact, positive or negative, on the level of the Indices. Neither the Index Calculation Agent nor any Relevant Person has any duty to consider the circumstances of any person when participating in such transactions or to conduct themselves in a manner that is favourable to anyone with exposure to the Indices.

The foregoing list of risk factors is not intended to be exhaustive. Anyone reading these Rules should seek such advice as they consider necessary from their professional advisors, legal, tax or otherwise, without reliance on any Relevant Person to satisfy themselves that they fully understand these Rules and the risks associated with Contag Alpha Indices.

J.P. Morgan Contag  
Module C(iii): J.P. Morgan Alternative Index  
Commodity Carry Strategy

November 2009 (amended 8 March 2010)

**J.P.Morgan**

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## 1. Contag

Contag refers to a methodology for selecting Futures Contracts (the "Selection Methodology") and several strategies developed by J.P. Morgan (the "Contag Indices") that utilise this methodology. The Selection Methodology uses the slope of the futures curve of certain specified commodities in order to select a particular Futures Contract in respect of each commodity in which to synthetically gain exposure. The Selection Methodology aims to select a Futures Contract with the highest level of Local Backwardation subject to certain constraints, all as further explained the document "J.P. Morgan Contag Module A: Selection Methodology".

## 2. This Document

This document, Module C(iii) (*J.P. Morgan Alternative Index Commodity Carry Strategy*), explains the J.P. Morgan Alternative Index Commodity Carry Full Energy Strategy ("AI Commodity Carry Strategy"). By itself this document does not define an index or product. This document provides the Externally Specified Particulars required for the calculation of the AI Commodity Carry Strategy.

This document should be read in conjunction with "J.P. Morgan Contag Module A: Selection Methodology" (the "Selection Methodology Document") and "J.P. Morgan Contag Module C: J.P. Morgan Contag Alpha Indices" (the "Alpha Index Document") and together they comprise the rules (the "Rules") of the AI Commodity Carry Strategy. These Rules may be amended or supplemented from time to time at the discretion of the Index Calculation Agent and will be re-published no later than thirty (30) calendar days following such amendment or supplement.

These Rules are published by J.P. Morgan Securities Ltd. ("JPMSL") of 125 London Wall, London EC2Y 5AJ, UK in its capacity as Index Calculation Agent. A copy of the Rules is available from the Index Calculation Agent.

ALL PERSONS READING THIS DOCUMENT SHOULD REFER TO THE DISCLAIMERS AND CONFLICTS SECTIONS SET OUT BELOW AND CONSIDER THE INFORMATION CONTAINED IN THIS DOCUMENT IN LIGHT OF SUCH DISCLAIMERS AND CONFLICTS.

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 AI Commodity Carry Strategy.

## 3. Overview

The AI Commodity Carry Strategy reflects the return of synthetic exposure in a Long Constituent and a Short Constituent. Subject to the occurrence or existence of a Market Disruption Event, the Index Calculation Agent shall calculate and publish the Index Level in respect of each Dealing Day in accordance with the methodology specified in the Alpha Index Document.

The AI Commodity Carry Strategy aims to achieve a long synthetic exposure to the J.P. Morgan Contag Beta Full Energy Class A Excess Return Index (Bloomberg ticker: JCTABFEE Index) and a short synthetic exposure to the S&P GSCI™ Index ER (Bloomberg ticker: SPGCCIP Index).

#### 4. Externally Specified Particulars: AI Commodity Carry Strategy

The Externally Specified Particulars for the AI Commodity Carry Strategy are as described in Table 1 (*Externally Specified Particulars in respect of the AI Commodity Carry Strategy*) below:

<i>Externally Specified Particular</i>	<i>Definition in respect of the AI Commodity Carry Strategy</i>
Index Name	J.P. Morgan Alternative Index Commodity Carry Strategy
Index Ticker	AIJPCC1U Index
Long Constituent	J.P. Morgan Contag Beta Full Energy Class A Excess Return Index [Ticker: JCTABFEE Index]
Short Constituent	S&P GSCI™ Index ER [Ticker: SPGCCIP Index]
Rebalancing Date Integer	4 (the fourth Dealing Day of every month)
Use Volatility Matching	Yes
Volatility Matching Lookback	63
Maximum Short Constituent Leverage	100%
Minimum Short Constituent Leverage	0%
Use Volatility Targeting	No
Target Index Volatility	Not Applicable
Volatility Targeting Lookback 1	Not Applicable
Volatility Targeting Lookback 2	Not Applicable
Volatility Observation Lag	4
Maximum Index Leverage	100%
Minimum Index Leverage	100%
Initial Index Day	30th December 1994
Initial Index Level	35.980
Replication Adjustment Rate	0.40%

**Table 1: Externally Specified Particulars in respect of the AI Commodity Carry Strategy**

#### 5. Modifications to or Cancellation of the Constituents

##### 5.1

If any Constituent (such, an “Affected Index”) is (a) not calculated and announced by the Index Sponsor but is calculated and announced by a successor sponsor acceptable to the Index Calculation Agent, or (b) replaced by a successor index using, in the determination of the Index Calculation Agent, the same or substantially similar formula for and method of calculation as used in the calculation of the “Affected Index”, then such index will be deemed to be the index so calculated and announced by that successor index sponsor or that successor index, as the case may be.

##### 5.2

If on or prior to any Dealing Day on which the Index Calculation Agent is determining the Index Level of the AI Commodity Carry Strategy the Index Sponsor makes a material change in the formula for or the method of calculating a Constituent (other than a modification prescribed in that formula or method to maintain such index or prescribed routine events), then the Index Calculation Agent shall, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, Externally Specified Particular or any other rule in relation to the AI Commodity Carry Strategy to account for such modification.

##### 5.3

If on or prior to any Dealing Day on which the Index Calculation Agent is determining the Index Level of the AI Commodity Carry Strategy the Index Sponsor permanently cancels any Constituent, and no successor index exists, the Index Calculation Agent shall, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, valuation terms or any other rule in relation to the AI Commodity Carry Strategy to account for such cancellation.

## 6. Responsibility of Index Calculation Agent

The Index Calculation Agent's determinations in respect of the AI Commodity Carry Strategy and interpretation of the Rules shall be final.

The Index Calculation Agent shall act in good faith and in a commercially reasonable manner.

Whilst these Rules are intended to be comprehensive, ambiguities may arise. In such circumstances the Index Calculation Agent will resolve such ambiguities in a reasonable manner and, if necessary, amend these Rules to reflect such resolution.

Neither the Index Calculation Agent nor any of its affiliates or subsidiaries or any of their respective directors, officers, employees, delegates or agents (each a "Relevant Person") shall have any responsibility to any person (whether as a result of negligence or otherwise) for any determinations made or anything done (or omitted to be determined or done) in respect of the AI Commodity Carry Strategy or in respect of the publication of the Index Level (or failure to publish such level) and any use to which any person may put the AI Commodity Carry Strategy or the Index Levels. All determinations of the Index Calculation Agent in respect of the AI Commodity Carry Strategy shall be final, conclusive and binding and no person shall be entitled to make any claim against any of the Relevant Persons in respect thereof. Once a determination or calculation is made or action taken by the Index Calculation Agent or any other Relevant Person in respect of the AI Commodity Carry Strategy, neither the Index Calculation Agent nor any other Relevant Person shall be under any obligation to revise any determination or calculation made or action taken for any reason.

## 7. Corrections

In the event that (a) the USD Level of any Constituent used to calculate the Index Level in respect of any Dealing Day is subsequently corrected and the correction is published by the relevant Index Sponsor before the next following Rebalancing Date or (b) the Index Calculation Agent identifies an error or omission in any of its calculations or determinations in respect of the AI Commodity Carry Strategy, then the Index Calculation Agent may, if practicable and the correction is deemed material by the Index Calculation Agent, adjust or correct the Index Level published in respect of the relevant Dealing Day and each subsequent Dealing Day and publish such corrected Index Level(s) as soon as reasonably practicable.

## 8. Notices, Disclaimers and Conflicts

Neither JPMSL nor any Relevant Person shall have any liability, contingent or otherwise, to any person or entity for the quality, accuracy, timeliness or completeness of the information or data contained in the Rules or the AI Commodity Carry Strategy, or for delays, omissions or interruptions in the delivery of the AI Commodity Carry Strategy or related data. Neither JPMSL nor any Relevant Person makes any warranty, express or implied, as to the results to be obtained by any person or entity in connection with any use of the AI Commodity Carry Strategy, including but not limited to the trading of or investments in products based on or indexed or otherwise related to the AI Commodity Carry Strategy, any data related thereto or any components thereof. Neither JPMSL nor any Relevant Person makes any express or implied warranties, and hereby expressly disclaims, to the fullest extent permitted by law, all warranties of merchantability or fitness for a particular purpose or use with respect to the Rules, the AI Commodity Carry Strategy or any data related thereto. Without limitation any of the foregoing, in no event shall either JPMSL or any Relevant Person have any liability for any special, punitive, indirect or consequential damages (including lost profits), in connection with any use by any person of the AI Commodity Carry Strategy or any products based on or indexed or otherwise related thereto, even if notified of the possibility of such damages.

The Index Calculation Agent is under no obligation to continue the calculation, publication and dissemination of any of the AI Commodity Carry Strategy or any Index Level.

During the course of their normal business, the Index Calculation Agent or any other Relevant Person may enter into or promote, offer or sell transactions or investments (structured or otherwise) linked to the AI Commodity Carry Strategy and/or any of the Futures Contracts. In addition, any Relevant Person may have, or may have had, interests or positions, or may buy, sell or otherwise trade positions in or relating to the AI Commodity Carry Strategy or any of the Futures Contracts, or may invest or engage in transactions with other persons, or on behalf of such persons relating to any of these items. Such activity may or may not have an impact on the Index Levels but all persons reading these Rules should be aware that a conflict of interest could arise where anyone is acting in more than one capacity. Neither the Index Calculation Agent nor any other Relevant Person has any duty to consider the circumstances of any person when participating in such transactions or to conduct themselves in a manner that is favourable to any person.

It should be noted that the Rules have been developed with the possibility of the Index Calculation Agent or any of the Relevant Persons entering into or promoting, offering or selling transactions or investments (structured or otherwise) linked to the AI Commodity Carry Strategy, and hedging the obligations that might arise under any such transactions or investments. Accordingly it should be assumed that these Rules have and will be analysed from this point of view.

It should be noted that the AI Commodity Carry Strategy are described as a notional portfolio of assets because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. The AI Commodity Carry Strategy merely identify certain assets in the market, the performance of which will be used as a reference point for the purposes of calculating the Index Levels.

There is no obligation upon the Index Calculation Agent to publish the Index Levels by any alternative method if the relevant Index Ticker (as identified above) is subject to any delay in or interruptions of publication or 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 may occur or any other event beyond the control of the Index Calculation Agent.

No one may reproduce or disseminate the information contained in these Rules or the Index Levels without the prior written consent of the Index Calculation Agent. "J.P. Morgan Alternative Index Commodity Carry Strategy", "AI Commodity Carry Strategy" and "J.P. Morgan Contag" are the intellectual property of the Index Calculation Agent and may only be used (as an underlying for financial products or otherwise) by third parties who have entered into a license agreement with the Index Calculation Agent. These Rules are not intended for distribution to, or use by any person in, a jurisdiction where such distribution is prohibited by law or regulation.

These Rules shall be governed by and construed in accordance with the laws of England.

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## **ANNEX B**

# **The J.P. Morgan Futures Tracker Series**

**J.P.Morgan**

16 November 2009

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# THE J.P. MORGAN FUTURES TRACKER SERIES

## RULES

### PART A

#### 1. Introduction

This document comprises the rules (the “**Rules**”) of the J.P. Morgan Futures Tracker Series, a family of notional rule-based strategies (each such strategy a “**Futures Tracker**” and together, the “**Futures Trackers**”). The Rules may be amended from time to time at the discretion of J.P. Morgan Securities Ltd. (“**JPMSL**”) in its capacity as Calculation Agent. The Rules will be re-published no later than one calendar month following amendment to reflect any such changes. Copies of the current Rules are available from JPMSL upon request.

Part A of the Rules sets out general information applicable to each Futures Tracker, such as the calculation algorithms which are applicable to all Futures Trackers). Specific information pertaining to each Futures Tracker, including, for example, the name of the Base Underlying, Futures Tracker Currency, Tracker Business Days are set out in the appendices of Part B.

This document is published by JPMSL of 125 London Wall, London EC2Y 5AJ, UK in its capacity as Calculation Agent.

**ALL PERSONS READING THIS DOCUMENT SHOULD REFER TO THE RISK FACTORS, DISCLAIMERS AND CONFLICTS SECTIONS BELOW AND CONSIDER THE INFORMATION CONTAINED IN THIS DOCUMENT IN LIGHT OF SUCH RISK FACTORS, DISCLAIMERS AND CONFLICTS.**

**NOTHING IN THESE RULES 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.**

#### 2. General Notes on the Futures Tracker

Each Futures Tracker is a notional dynamic strategy that aims to replicate the returns of a long position in the near month listed futures contract (each a “**Futures Contract**” and together the “**Futures Contracts**”) on a specific underlying (the “**Base Underlying**”) traded on the Relevant Exchange. A futures contract is a standardized contract traded on an exchange to buy or sell a standard quantity of an asset at a specific date in the future (such date being its expiry date), at a price specified today. Each Futures Contract is identified by its expiry date.

On each Tracker Business Day, each Futures Tracker shall be notionally invested in the nearest listed expiry Futures Contract (the “**Near Futures Contract**”). It shall maintain this exposure until several Tracker Business Days before the expiry date of such Near Futures Contract (such date being the “**Re-weighting Date**”). After the Re-weighting Date, it shall then be notionally invested in the Futures Contract expiring after the Near Futures Contract expiry date (the “**Far Futures Contract**”). For the avoidance of doubt, on any Tracker Business Day after the Near Futures Contract expiry date, the Far Futures Contract becomes the Near Futures Contract.

**No assurance can be given that the investment strategy used to construct the Futures Tracker will be successful or that the Futures Tracker will outperform any alternative basket or strategy that might be constructed from the Futures Contracts.**

Subject to the occurrence of Market Disruption Events, the level of the Futures Tracker (the “**Tracker Level**”) will be calculated by the Calculation Agent on each Tracker Business Day to an accuracy of two decimal places. The Tracker Level is calculated in its relevant currency (the “**Futures Tracker Currency**”) in accordance with the methodology set out in Section 7 (*the Futures Tracker Level*).

**The Futures Tracker is described as a notional basket of assets because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. The Futures Tracker merely references certain assets, the performance of which will be used as a reference point for calculating the Tracker Level.**

### 3. Calculation Agent

JPMSL or any affiliate or subsidiary designated by it will act as calculation agent (the “**Calculation Agent**”) for the Futures Tracker. The Calculation Agent’s determinations in respect of the Futures Tracker and interpretation of these Rules are final. Further information is contained in the statement of responsibility set out in Section 11 (*Responsibility*) below.

### 4. The Futures Contracts

In respect of each Futures Tracker, there are typically 4 listed Futures Contracts per calendar year over the Base Underlying. The exact number of Futures Contracts per calendar year (the “**Number of Contracts p.a.**”) is specified in Part B of the Rules.

Each Futures Contracts has a specific expiry date (the “**Expiry Date**” and together, the “**Expiry Dates**”) specified in Part B.

### 5. Initial Composition of the Futures Tracker

Each Futures Tracker has a base date (the “**Base Date**”) which is the date on which the Futures Tracker comprised a notional investment of one contract in the relevant Near Futures Contract in respect of such date.

The composition of each of the Futures Trackers has been and will be adjusted in accordance with the methodology described in the remainder of these Rules.

### 6. Futures Tracker Rebalancing

Unless a Market Disruption Event has occurred and is continuing, the Futures Tracker will be rebalanced on the relevant Re-weighting Date.

### 7. Futures Tracker Level

Unless a Market Disruption Event has occurred and is continuing, the level of the Futures Tracker will be calculated by the Calculation Agent on each Tracker Business Day.

On the Base Date, the Tracker Level was equal to the initial tracker level (the “**Initial Tracker Level**”) and the Exposure (  $E_0$  ) was set at 1. On each Tracker Business Day  $t$  from, but excluding, Re-weighting Date  $k$  to, and including, the next following Re-weighting Date  $k+1$ , the Tracker Level is calculated by the Calculation Agent in accordance with the following formula:

$$\text{Tracker}_{k,t} = E_k \times \text{Future}_{k+1,t}$$

where:

$\text{Tracker}_{k,t}$  means the Tracker Level on Tracker Business Day  $t$ ;

$\text{Future}_{k+1,t}$  means the Closing Price on Tracker Business Day  $t$  of the Futures Contract that expires on the first Expiry Date to occur following Re-weighting Date  $k+1$ ; and

$E_k$  means the Exposure of the Futures Tracker on Re-weighting Date  $k$  immediately preceding Tracker Business Day  $t$  calculated as:

$$E_k = E_{k-1} \times \frac{\text{Future}_k - A}{\text{Future}_{k+1}}$$

where:



$Future_k$	means the Closing Price on Re-weighting Date k of the Futures Contract that expires on the first Expiry Date to occur following Re-weighting Date k;
$Future_{k+1}$	means the Closing Price on Re-weighting Date k of the Futures Contract that expires on the first Expiry Date to occur following Re-weighting Date k+1; and
$A$	is the Adjustment Factor (as specified in Part B), provided that, were any hypothetical holder of $Future_k$ required, relative to Reweighting Date <sub>k-1</sub> , to incur an increased (or decreased) cost or amount of tax, duty, expense or fee to acquire, establish, re-establish, substitute, maintain, unwind or dispose of the relevant Futures Contract to synthetically hedge the Tracker Level, then such additional amount shall be deemed to have been added (or deducted) to the level of the Adjustment Factor on Re-weighting Date <sub>k</sub> .

Unless a Market Disruption Event has occurred and is continuing, the Tracker Level will be published in respect of each Tracker Business Day by the Calculation Agent on the relevant Price Source.

## 8. Market Disruption

### 8.1 On a Re-weighting Date

If any Re-weighting Date is a Disrupted Day in respect of any relevant Futures Contract (each such Futures Contract for these purposes, an “**Affected Futures Contract**”), then the relevant Re-weighting Date for the Affected Futures Contract shall be deemed to be the first following Dealing Day for the Affected Futures Contract which is not a Disrupted Day, unless the four Dealing Days for an Affected Futures Contract immediately following the day originally scheduled to be the Re-weighting Date are Disrupted Days for such Affected Futures Contract, in which case the fourth Dealing Day following the day originally scheduled to be the relevant Re-weighting Date shall be deemed to be the relevant Re-weighting Date (notwithstanding that it is a Disrupted Day in respect of the Affected Futures Contract), and the Calculation Agent shall re-weight the Futures Tracker acting in good faith using such information and/or methods as it determines, in its reasonable discretion, are appropriate.

### 8.2 On a Tracker Business Day

Notwithstanding Section 8.1, if any Tracker Business Day is a Disrupted Day for any relevant Futures Contract, the Calculation Agent may either:

- (a) calculate its good faith estimate of the Tracker Level for such Tracker Business Day, using its good faith estimate of the level of the Affected Futures Contract. Any such estimated level may be subject to correction on the first succeeding Tracker Business Day which is not a Disrupted Day in respect of any Affected Futures Contract; or
- (b) suspend the calculation and publication of the Tracker Level until the first succeeding Tracker Business Day which is not a Disrupted Day in respect of any relevant Futures Contract.

## 9. Extraordinary Events

### 9.1 *Successor Futures Contract*

If any Futures Contract is:

- (a) not calculated and quoted by the Relevant Exchange but by a successor exchange acceptable to the Calculation Agent; or
- (b) replaced by a successor futures contract using, in the determination of the Calculation Agent, the same or substantially similar formula and method of calculation as used in the calculation of the relevant Futures Contract,

then in each case that successor futures contract (the “**Successor Futures Contract**”) shall replace the relevant Futures Contract with effect from a date determined by the Calculation Agent who may make such adjustment to these Rules, as it determines in good faith is appropriate, to account for such change.

### 9.2 *Material change to Futures Contracts*

Without prejudice to the ability of the Calculation Agent to amend the Rules (see Section 1), the Calculation Agent may, acting in good faith and in a commercially reasonable manner:

- (a) exclude; or
- (b) substitute,

any Futures Contract following the occurrence (and/or continuation) of a Change in Law or in circumstances where it considers it reasonably necessary to do so to reflect the intention of the Futures Tracker, including (without prejudice to the generality of the foregoing) changes announced by the Relevant Exchange relating to the modification, exclusion, inclusion or substitution of any one Futures Contracts or any perception among market participants generally that the published price of the relevant Futures Contract is inaccurate (and the Relevant Exchange fails to correct such level), and if it so excludes or substitutes for any Futures Contract, then the Calculation Agent may adjust the Rules as it determines in good faith to be appropriate to account for such exclusion or substitution on such date(s) selected by the Calculation Agent. The Calculation Agent is under no obligation to continue the calculation and publication of any Futures Tracker upon the occurrence or existence of a Change in Law; and the Calculation Agent may decide to cancel any Futures Tracker if it determines, acting in good faith, that the objective of the relevant Futures Tracker can no longer be achieved.

### 9.3 *Cancellation or non-publication*

If, at any time, any Relevant Exchange:

- (a) announces that it will make a material change in the definition of any Futures Contract or in any other way materially modifies such contract (other than a modification prescribed in the definition of such contract); or
- (b) (i) permanently cancels any Futures Contract and no Successor Futures Contract exists or (ii) is otherwise unable or unwilling to publish levels of the Futures Contract,

then the Calculation Agent may remove such futures contract from the Futures Tracker and may adjust the Rules as it determines in good faith to be appropriate to account for such change(s) (including, without limitation, selecting (a) a replacement underlying futures contract traded on an equivalent exchange and having similar characteristics to the Affected Contract; and (b) the date of such replacement) on such date(s) as selected by the Calculation Agent.

## 10. Corrections

If (i) the Closing Price of any Futures Contract as of any date which is published or otherwise made available by or on behalf of the Relevant Exchange is subsequently corrected and such correction is published or otherwise made available by or on behalf of such Futures Contract; or (ii) the Calculation Agent identifies an error or omission in any of its calculations or determinations in respect of the Futures Tracker, then the Calculation Agent may, if practicable and the Calculation Agent determines acting in good faith that such correction, error or omission (as the case may be) is material, adjust or correct the relevant calculation or determination and/or the Tracker Level as of any Tracker Business Day to take into account such correction, if such correction is practicable.

## **11. Responsibility**

The Calculation Agent shall act in good faith and in a commercially reasonable manner with respect to the performance of its obligations and the exercise of its discretions pursuant to these Rules.

Whilst these Rules are intended to be comprehensive, ambiguities may arise. In such circumstances, the Calculation Agent will resolve such ambiguities in a reasonable manner and, if necessary, amend these Rules to reflect such resolution.

Neither the Calculation Agent nor any of its affiliates or subsidiaries or any of their respective directors, officers, employees, representatives, delegates or agents (each a “**Relevant Person**”) shall have any responsibility to any person (whether as a result of negligence or otherwise) for any determinations made or anything done (or omitted to be determined or done) in respect of the Futures Tracker and any use to which any person may put the Futures Tracker or the Tracker Level. All determinations of the Calculation Agent in respect of the Futures Tracker shall be final, conclusive and binding and no person shall be entitled to make any claim against any of the Relevant Persons in respect thereof. Once a determination or calculation is made or action taken by the Calculation Agent in respect of the Futures Tracker, neither the Calculation Agent or any other Relevant Person shall be under any obligation to revise any determination or calculation made or action taken for any reason.

## **12. Information specified in Part B**

In respect of each Futures Tracker, the following items are listed in Part B:

- Additional Risk Factors, if applicable
- The Adjustment Factor
- The Base Date
- The Expiry Date for each Futures Contract (and table)
- The Futures Tracker Currency
- The Initial Tracker Level
- The name of the Base Underlying
- The Number of Contracts p.a.
- The Official Settlement Price
- The Price Source
- The Relevant Exchange
- The Re-weighting Date

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## Definitions

Terms not otherwise defined herein, shall have the following meanings:

**“Adjustment Factor”** see Part B;

**“Base Date”** see Part B;

**“Base Underlying”** see Part B;

**“Calculation Agent”** see Section 3;

**“Change in Law”** means:

(a) due to:

- (i) the adoption of, or any change in, any applicable law, regulation or rule (including, without limitation, any tax law); 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 U.S. Commodity and Futures Trading Commission or exchange or trading facility),

in each case, the Calculation Agent determines in good faith that (x) it is contrary to such law, rule, regulation or order for any market participants that are brokers or financial intermediaries (individually or collectively) to hold, acquire or dispose of (in whole or in part) any Futures Contract or any transaction referencing any Futures Contract or, (y) holding a position in any Futures Contract or any transaction referencing any Futures Contract is (or, but for the consequent disposal or termination thereof, would otherwise be) in excess of any allowable position limit(s) applicable to any market participants that are brokers or financial intermediaries (individually or collectively) under any such law, rule, regulation in relation to such Futures Contract traded on any exchange(s) or other trading facility (including, without limitation, any relevant Exchange); or

(b) the occurrence or existence of any:

- (i) suspension or limitation imposed on trading commodities futures contracts (including, without limitation the Futures Contracts); or
- (ii) any other event that causes trading in commodity futures contracts (including, without limitation, the Futures Contracts) to cease;

**“Closing Price”** means, in respect of a Futures Contract and a Dealing Day, the Official Settlement Price;

**“Dealing Day”** means, in respect of a Futures Contract, a day upon which the Official Settlement Price for such Futures Contract is, or but for the occurrence of a Market Disruption Event would have been, scheduled to be calculated and published by the Relevant Exchange;

<b>“Disrupted Day”</b>	means, in respect of a Futures Contract, a Dealing Day on which a Market Disruption Event occurs or exists;
<b>“Early Closure”</b>	means the closure on any Tracker Business Day of the Relevant Exchange prior to its scheduled closing time unless such earlier closing time is announced by such exchange(s) at least one hour prior to the actual closing time for the regular trading session on such exchange(s) on such Tracker Business Day;
<b>“Exchange Disruption”</b>	means any event (other than an Early Closure) that disrupts or impairs (as determined by the Calculation Agent) the ability of market participants in general to effect transactions in, or obtain market values for, futures (including, without limitation, the Futures Contracts) or options contracts relating to the Base Underlying on any Relevant Exchange;
<b>“Expiry Date”</b>	see Part B;
<b>“Far Futures Contracts”</b>	see Section 2;
<b>“Futures Contracts”</b>	see Part B;
<b>“Futures Tracker Currency”</b>	means, in respect of a Futures Contract, the currency in which such Futures Contract is reported, as specified in respect of such Futures Contract in Part B;
<b>“JPMSL”</b>	means J.P. Morgan Securities Ltd.;
<b>“Market Disruption Event”</b>	means, in respect of a Futures Contract and a Dealing Day, a failure by the Relevant Exchange to calculate and publish the Closing Price for the Futures Contract on such Dealing Day, or any event that, in the determination of the Calculation Agent, disrupts or impairs the ability of market participants generally to effect transactions in or obtain market values for such Futures Contract. Such events may include, but not be limited to, the occurrence of any of a Trading Disruption, Exchange Disruption or Early Closure;
<b>“Near Futures Contract”</b>	see Section 2;
<b>“Number of Contracts p.a.”</b>	see Part B;
<b>“Official Settlement Price”</b>	see Part B;
<b>“Price Source”</b>	see Part B;
<b>“Relevant Exchange”</b>	see Part B;
<b>“Re-weighting Date”</b>	see Part B;
<b>“Rules”</b>	means this document, as may be supplemented, amended or restated from time to time;
<b>“Successor Futures Contract”</b>	see Section 9.1;
<b>“Tracker Business Day”</b>	means a day on which the Relevant Exchange is open for trading during its regular trading session;
<b>“Tracker Level”</b>	see Sections 2 and 7; and
<b>“Trading Disruption”</b>	means any suspension of or limitation imposed on trading by the Relevant Exchange or otherwise and whether by reason of movements in price exceeding limits permitted by the Relevant Exchange or otherwise in futures (including,

without limitation, the Futures Contracts) or options contracts relating to the Base Underlying on any Relevant Exchange.

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## **Risk Factors**

**The following list of risk factors does not purport to be a complete enumeration or explanation of all the risks associated with each of the Futures Trackers.**

### **(a) Proprietary and Rules-Based Trading Strategy**

The Futures Tracker follows a notional rules-based proprietary trading strategy that operates on the basis of pre-determined rules. Accordingly, potential investors in financial products which are linked to the performance of the Futures Tracker should determine whether those rules as described in the Rules of the Futures Tracker are appropriate in light of their individual circumstances and investment objectives.

**No assurance can be given that the investment strategy on which the Futures Tracker is based will be successful or that the Futures Tracker will outperform any alternative strategy that might be employed in respect of the Futures Contracts.**

### **(b) Notional Exposures**

The Futures Tracker comprises notional assets and liabilities. The exposures to the Futures Contracts are purely notional and will exist solely in the records maintained by or on behalf of the Calculation Agent. Consequently, investors in financial products which are linked to the performance of the Futures Tracker will not have any claim against any of the reference assets which comprise the Futures Tracker. The Futures Tracker tracks returns of a Futures Contract and as such constitutes an unfunded investment.

### **(c) Lack of Operating History**

The Futures Tracker is only recently established and therefore has no history to evaluate its likely performance. Any back-testing or similar analysis performed by any person in respect of the Futures Tracker must be considered illustrative only and may be based on estimates or assumptions not used by the Calculation Agent when determining the Tracker Level of the Futures Tracker.

**Past performance should not be considered indicative of future performance.**

### **(d) Market Risks**

The performance of the Futures Tracker is dependent on the performance of the relevant Futures Contract. As a consequence, investors in financial products the return of which is linked to the Futures Tracker should appreciate that their investment is exposed to the price performance of the Futures Contracts.

A futures contract often displays on any given day considerably higher volatility than an index comprising equities such as the Base Underlying and investors should be willing to accept additional risks such as increased volatility, futures contract liquidity and supply and demand factors. These factors are likely to influence the Tracker Level, whereas such factors may not be relevant in respect of the level or volatility of the Base Underlying. The exposure of the Futures Tracker to the relevant Futures Contract is affected by the roll return. Additionally, the Tracker Level is affected by the magnitude of the Adjustment Factor.

Generally, futures contracts are often less liquid than the Base Underlying.

### **(e) Extraordinary Events**

Following the occurrence of certain extraordinary events as described in Section 9 of the Rules, with respect to a Futures Contract, the affected Futures Contract may be replaced by a substitute Futures Contract. Such substitution may have a material effect on the economics of the Futures Tracker.

**(f) Calculation Agent Discretion**

The Rules of the Futures Tracker confer on the Calculation Agent discretion in making certain determinations and calculations from time to time. The exercise of such discretion in the making of calculations and determinations may adversely affect the performance of the Futures Tracker. Without limitation to the generality of the foregoing, the Calculation Agent has a discretion in relation to the calculation of the Tracker Level in the event of a Market Disruption Event.

**(g) Potential Conflicts of Interest**

Potential conflicts of interest may exist in the structure and operation of the Futures Tracker and in the course of the normal business activities of JPMorgan or any of its affiliates or subsidiaries or their respective directors, officers, employees, representatives, delegates or agents. Further information is set out in the disclaimer below.

**The foregoing list of risk factors is not intended to be exhaustive. All persons should seek such advice as they consider necessary from their professional advisors, legal, tax or otherwise, without reliance on the Calculation Agent or any of its affiliates or subsidiaries or any of their respective directors, officers, employees, representatives, delegates or agents.**



## **Notices, Disclaimers and Conflicts of Interest**

These Rules have been prepared solely for informational purposes and nothing in these Rules constitutes an offer to buy or sell any securities, participate in any transaction or adopt any investment Index or as legal, tax, regulatory, financial or accounting advice. These Rules may change at any time without prior notice.

Neither the Calculation Agent nor any of its affiliates or subsidiaries or their respective directors, officers, employees, representatives, delegates or agents (each a "**Relevant Person**") make any representation or warranty, whatsoever, express or implied, as to the results that may be obtained through the use of this document or the Futures Tracker. Each Relevant Person hereby expressly disclaims, to the fullest extent permitted by law, all warranties of accuracy, completeness, merchantability, or fitness for a particular purpose with respect to any information contained in this document and no Relevant Person shall have any liability (direct or indirect, special, punitive consequential or otherwise) to any person even if notified of the possibility of any such damages.

The Calculation Agent is under no obligation to continue the calculation, publication and dissemination of the Futures Tracker or the Tracker Level.

During the course of their normal business, the Calculation Agent or any of the other Relevant Persons may (i) enter into or promote, offer or sell transactions or investments (structured or otherwise) linked to the Futures Tracker. In addition, any Relevant Person may have, or may have had, interests or positions, or may buy, sell or otherwise trade positions in or relating to the Futures Tracker, or may invest or engage in transactions with other persons, or on behalf of such persons relating to such contracts. Such activity may or may not have an impact on the Tracker Level but all persons reading this document should be aware that a conflict of interest could arise where anyone is acting in more than one capacity, and such conflict may have an impact, positive or negative on the Tracker Level. Neither the Calculation Agent nor any other Relevant Person has any duty to consider the circumstances of any person when participating in such transactions or to conduct themselves in a manner that is favourable to anyone with exposure to the Futures Tracker.

The Rules have been developed with the possibility of the Calculation Agent or any of the other Relevant Persons entering into or promoting, offering or selling transactions or investments (structured or otherwise) linked to the Futures Tracker and hedging such transactions or investments in any manner that they see fit.

As mentioned above, the Futures Tracker is synthetic index because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. The Futures Tracker merely identifies certain reference assets, the performance of which will be used as a reference point calculating the Tracker Level.

No one may reproduce or disseminate the information contained in this document or the Tracker Level of the Futures Tracker without the prior written consent of the Calculation Agent. This document is not intended for distribution to, or use by any person in, a jurisdiction where such distribution is prohibited by law or regulation.

The Rules shall be governed by and construed in accordance with the laws of England.

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## PART B

### APPENDIX 1.1

#### The US Equity Futures (G) Tracker

##### 1. Introduction

This Appendix comprises the variables required to complete the Rules for the J.P. Morgan US Equity Futures (G) Tracker (the “**Variables**” and the “**Futures Tracker**”). The Variables may be amended from time to time at the discretion of J.P. Morgan Securities Ltd. (“**JPMSL**”) in its capacity as Calculation Agent. The Variables will be re-published no later than one calendar month following amendment to reflect any such changes. This document must be read in conjunction with Part A of the Rules of the J.P. Morgan Futures Tracker Series.

##### 2. Definitions

Variables	
Tracker Name	The J.P. Morgan US Equity Futures (G) Tracker
Price Source	Bloomberg page FTJGUSEE
Base Underlying	The S&P 500 Index (Bloomberg Ticker SPX)
Re-weighting Date	Five (5) Tracker Business Days prior to the Expiry Date of the Near Futures Contract
Adjustment Factor	Shall equal 0
Futures Tracker Currency	US Dollars (USD)
Relevant Exchange	Means, as at the Base Date, the Chicago Mercantile Exchange (CME) or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time
Initial Tracker Level	1303.80
Official Settlement Price	Means the closing price published on the price source given by the relevant Bloomberg Code for the Futures Contract (defined below)
Base Date	12 March 1999
Expiry Dates	Expected to be the 3rd Friday of March, June, September and December
Futures Contract	Means the futures contract identified by the following Bloomberg Codes from time to time

<b><i>Futures Contracts</i></b>				
<b><i>i</i></b>	<b>Futures Contract</b>	<b>Bloomberg Month Code</b>	<b>Currency</b>	<b>Expected Bloomberg Code*</b>
1	March	H	USD	SPH&”Year” <Index>
2	June	M	USD	SPM&”Year” <Index>
3	September	U	USD	SPU&”Year” <Index>
4	December	Z	USD	SPZ&”Year” <Index>

\*The Bloomberg codes are typically constructed as “SP” followed by the Bloomberg Month Code followed by the year in which the Expiry Date falls, so that the March 09 Futures Contract shall have ticker SPH09 Index or SPH9 Index. If the Relevant Exchange publishes any modification to the composition of the Bloomberg code referenced in the table above, such new Bloomberg code shall be deemed to be Bloomberg code in respect of the Futures Contract. If the Calculation Agent determines that a successor Futures Contract is to replace the existing Futures Contract, then, on and from the date of such replacement, the Bloomberg code for the successor Futures Contract shall be deemed to be the relevant Bloomberg code for the futures contract in question.

### **3. Additional Risk Factors**

Not Applicable

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## PART B

### APPENDIX 1.2

#### European Equity Futures (G) Tracker

##### 1. Introduction

This Appendix comprises the variables required to complete the Rules for the J.P. Morgan European Equity Futures (G) Tracker (the “**Variables**” and the “**Futures Tracker**”). The Variables may be amended from time to time at the discretion of J.P. Morgan Securities Ltd. (“**JPMSL**”) in its capacity as Calculation Agent. The Variables will be re-published no later than one calendar month following amendment to reflect any such changes. This document must be read in conjunction with Part A of the Rules of the J.P. Morgan Futures Tracker Series.

##### 2. Definitions

Variables	
Tracker Name	The J.P. Morgan European Equity Futures (G) Tracker
Price Source	Bloomberg page FTJGEUEE
Base Underlying	The Dow Jones EURO STOXX 50 Index (Bloomberg Ticker SX5E)
Re-weighting Date	Five (5) Tracker Business Days prior to the Expiry Date of the Near Futures Contract
Adjustment Factor	Shall equal 0
Futures Tracker Currency	Euros (EUR)
Relevant Exchange	Means, as at the Base Date, Eurex or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time
Initial Tracker Level	3573.00
Official Settlement Price	Means the closing price published on the price source given by the relevant Bloomberg Code for the Futures Contract (defined below)
Base Date	12 March 1999
Expiry Dates	Expected to be the 3rd Friday of March, June, September and December
Futures Contract	Means the futures contract identified by the following Bloomberg Codes from time to time

<b><i>Futures Contracts</i></b>				
<b><i>i</i></b>	<b>Futures Contract</b>	<b>Bloomberg Month Code</b>	<b>Currency</b>	<b>Expected Bloomberg Code*</b>
1	March	H	EUR	VGH&"Year" <Index>
2	June	M	EUR	VGM&"Year" <Index>
3	September	U	EUR	VGU&"Year" <Index>
4	December	Z	EUR	VGZ&"Year" <Index>

\*The Bloomberg codes are typically constructed as "VG" followed by the Bloomberg Month Code followed by the year in which the Expiry Date falls, so that the March 09 Futures Contract shall have ticker VGH09 Index or VGH9 Index. If the Relevant Exchange publishes any modification to the composition of the Bloomberg code referenced in the table above, such new Bloomberg code shall be deemed to be Bloomberg code in respect of the Futures Contract. If the Calculation Agent determines that a successor Futures Contract is to replace the existing Futures Contract, then, on and from the date of such replacement, the Bloomberg code for the successor Futures Contract shall be deemed to be the relevant Bloomberg code for the futures contract in question.

### **3. Additional Risk Factors**

Not Applicable

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## PART B

### APPENDIX 1.3

#### The Japanese Equity Futures (G) Tracker

##### 1. Introduction

This Appendix comprises the variables required to complete the Rules for the J.P. Morgan Japanese Equity Futures (G) Tracker (the “**Variables**” and “**Futures Tracker**”). The Variables may be amended from time to time at the discretion of J.P. Morgan Securities Ltd. (“**JPMSL**”) in its capacity as Calculation Agent. The Variables will be re-published no later than one calendar month following amendment to reflect any such changes. This document must be read in conjunction with Part A of the Rules of the J.P. Morgan Futures Tracker Series.

##### 2. Definitions

Variables	
Tracker Name	The J.P. Morgan Japanese Equity Futures (G) Tracker
Price Source	Bloomberg page FTJGJPEE
Base Underlying	The Nikkei 225 Index (Bloomberg Ticker NKY)
Re-weighting Date	Two (2) Tracker Business Days prior to the Expiry Date of the Near Futures Contract
Adjustment Factor	Shall equal 0
Futures Tracker Currency	Japanese Yen (JPY)
Relevant Exchange	Means, as at the Base Date, the Osaka Securities Exchange or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time
Initial Tracker Level	15150.00
Official Settlement Price	Means the opening price published on the price source given by the relevant Bloomberg Code for the Futures Contract (defined below)
Base Date	10 March 1999
Expiry Dates	Expected to be the 2nd Friday of March, June, September and December
Futures Contract	Means the futures contract identified by the following Bloomberg Codes from time to time

<b><i>Futures Contracts</i></b>				
<b><i>i</i></b>	<b>Futures Contract</b>	<b>Bloomberg Month Code</b>	<b>Currency</b>	<b>Expected Bloomberg Code*</b>
1	March	H	JPY	NK&”Year” <Index>
2	June	M	JPY	NK&”Year” <Index>
3	September	U	JPY	NK&”Year” <Index>
4	December	Z	JPY	NK&”Year” <Index>

\*The Bloomberg codes are typically constructed as “NK” followed by the Bloomberg Month Code followed by the year in which the Expiry Date falls, so that the March 09 Futures Contract shall have ticker NKH09 Index or NKH9 Index. If the Relevant Exchange publishes any modification to the composition of the Bloomberg code referenced in the table above, such new Bloomberg code shall be deemed to be Bloomberg code in respect of the Futures Contract. If the Calculation Agent determines that a successor Futures Contract is to replace the existing Futures Contract, then, on and from the date of such replacement, the Bloomberg code for the successor Futures Contract shall be deemed to be the relevant Bloomberg code for the futures contract in question.

### **3. Additional Risk Factors**

Not Applicable

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## PART B

### APPENDIX 1.4

#### The US Small Cap Equity Futures (G) Tracker

##### 1. Introduction

This Appendix comprises the variables required to complete the Rules for the J.P. Morgan US Small Cap Equity Futures (G) Tracker (the “**Variables**” and the “**Futures Tracker**”). The Variables may be amended from time to time at the discretion of J.P. Morgan Securities Ltd. (“**JPMSL**”) in its capacity as Calculation Agent. The Variables will be re-published no later than one calendar month following amendment to reflect any such changes. This document must be read in conjunction with Part A of the Rules of the J.P. Morgan Futures Tracker Series.

##### 2. Definitions

Variables	
Tracker Name	The J.P. Morgan US Small Cap Equity Futures (G) Tracker
Price Source	Bloomberg page FTJGUSSE
Base Underlying	The Russell 2000 Index (Bloomberg Ticker RTY)
Re-weighting Date	Five (5) Tracker Business Days prior to the Expiry Date of the Near Futures Contract
Adjustment Factor	Shall equal 0
Futures Tracker Currency	US Dollars (USD)
Relevant Exchange	Means, as at the Base Date, the InterContinental Exchange (ICE) or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time
Initial Tracker Level	472.30
Official Settlement Price	Means the closing price published on the price source given by the relevant Bloomberg Code for the Futures Contract (defined below)
Base Date	14 December 2001
Expiry Dates	Expected to be the 3rd Friday of March, June, September and December
Futures Contract	Means the futures contract identified by the following Bloomberg Codes from time to time

<b><i>Futures Contracts</i></b>				
<b><i>i</i></b>	<b>Futures Contract</b>	<b>Bloomberg Month Code</b>	<b>Currency</b>	<b>Expected Bloomberg Code*</b>
1	March	H	USD	RTAH&"Year" <Index>
2	June	M	USD	RTAM&"Year" <Index>
3	September	U	USD	RTAU&"Year" <Index>
4	December	Z	USD	RTAZ&"Year" <Index>

\*The Bloomberg codes are typically constructed as "RTA" followed by the Bloomberg Month Code followed by the year in which the Expiry Date falls, so that the March 09 Futures Contract shall have ticker RTAH09 Index or RTAH9 Index. If the Relevant Exchange publishes any modification to the composition of the Bloomberg code referenced in the table above, such new Bloomberg code shall be deemed to be Bloomberg code in respect of the Futures Contract. If the Calculation Agent determines that a successor Futures Contract is to replace the existing Futures Contract, then, on and from the date of such replacement, the Bloomberg code for the successor Futures Contract shall be deemed to be the relevant Bloomberg code for the futures contract in question.

### **3. Additional Risk Factors**

Not Applicable

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## PART B

### APPENDIX 1.5

#### The US Money Market Futures (G) Tracker

##### 1. Introduction

This Appendix comprises the variables required to complete the Rules for of the J.P. Morgan US Money Market Futures (G) Tracker (the “**Variables**” and the “**Futures Tracker**”). Variables may be amended from time to time at the discretion of J.P. Morgan Securities Ltd. (“**JPMSL**”) in its capacity as Calculation Agent. The Variables will be re-published no later than one calendar month following amendment to reflect any such changes. This document must be read in conjunction with Part A of the Rules of the J.P. Morgan Futures Tracker Series.

##### 2. Definitions

Variables	
Tracker Name	The J.P. Morgan US Money Market Futures (G) Tracker
Price Source	Bloomberg page RFJGUSME
Base Underlying	CME Eurodollar Futures (Bloomberg Ticker ED1)
Re-weighting Date	1st Tracker Business Day of March, June, September and December
Adjustment Factor	Shall equal 0
Futures Tracker Currency	US Dollars (USD)
Relevant Exchange	Means, as at the Base Date, the Chicago Mercantile Exchange (CME) or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time;
Initial Tracker Level	94.79
Official Settlement Price	Means the closing price published on the price source given by the relevant Bloomberg Code for the Futures Contract (defined below)
Base Date	1 March 1999
Expiry Dates	Expected to be the 3rd Wednesday of March, June, September and December
Futures Contract	Means the futures contract identified by the following Bloomberg Codes from time to time

<b><i>Futures Contracts</i></b>				
<b><i>i</i></b>	<b>Futures Contract</b>	<b>Bloomberg Month Code</b>	<b>Currency</b>	<b>Expected Bloomberg Code*</b>
1	March	H	USD	EDH&"Year" <Comdty>
2	June	M	USD	EDM&"Year" <Comdty>
3	September	U	USD	EDU&"Year" <Comdty>
4	December	Z	USD	EDZ&"Year" <Comdty>

\*The Bloomberg codes are typically constructed as "ED" followed by the Bloomberg Month Code followed by the year in which the Expiry Date falls, so that the March 09 Futures Contract shall have ticker EDH09 Index or EDH9 Index. If the Relevant Exchange publishes any modification to the composition of the Bloomberg code referenced in the table above, such new Bloomberg code shall be deemed to be Bloomberg code in respect of the Futures Contract. If the Calculation Agent determines that a successor Futures Contract is to replace the existing Futures Contract, then, on and from the date of such replacement, the Bloomberg code for the successor Futures Contract shall be deemed to be the relevant Bloomberg code for the futures contract in question.

### **3. Additional Risk Factors**

Not Applicable

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## PART B

### APPENDIX 1.6

#### The European Money Market Futures (G) Tracker

##### 1. Introduction

This Appendix comprises the variables required to complete the Rules for the J.P. Morgan European Money Market Futures (G) Tracker (the “**Variables**” and the “**Futures Tracker**”). The Variables may be amended from time to time at the discretion of J.P. Morgan Securities Ltd. (“**JPMSL**”) in its capacity as Calculation Agent. The Variables will be re-published no later than one calendar month following amendment to reflect any such changes. This document must be read in conjunction with Part A of the Rules of the J.P. Morgan Futures Tracker Series.

##### 2. Definitions

Variables	
Tracker Name	The J.P. Morgan European Money Market Futures (G) Tracker
Price Source	Bloomberg page RFJGEUME
Base Underlying	Euronext.LIFFE Euro Euribor Futures (Bloomberg Ticker ER1)
Re-weighting Date	1st Tracker Business Day of March, June, September and December
Adjustment Factor	Shall equal 0
Futures Tracker Currency	Euros (EUR)
Relevant Exchange	Means, as at the Base Date, the Euronext.LIFFE or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time;
Initial Tracker Level	96.96
Official Settlement Price	Means the closing price published on the price source given by the relevant Bloomberg Code for the Futures Contract (defined below)
Base Date	1 March 1999
Expiry Dates	Expected to be the 3rd Wednesday of March, June, September and December
Futures Contract	Means the futures contract identified by the following Bloomberg Codes from time to time

<b><i>Futures Contracts</i></b>				
<b><i>i</i></b>	<b>Futures Contract</b>	<b>Bloomberg Month Code</b>	<b>Currency</b>	<b>Expected Bloomberg Code*</b>
1	March	H	EUR	ERH&"Year" <Comdty>
2	June	M	EUR	ERM&"Year" <Comdty>
3	September	U	EUR	ERU&"Year" <Comdty>
4	December	Z	EUR	ERZ&"Year" <Comdty>

\*The Bloomberg codes are typically constructed as "ER" followed by the Bloomberg Month Code followed by the year in which the Expiry Date falls, so that the March 09 Futures Contract shall have ticker ERH09 Index or ERH9 Index. If the Relevant Exchange publishes any modification to the composition of the Bloomberg code referenced in the table above, such new Bloomberg code shall be deemed to be Bloomberg code in respect of the Futures Contract. If the Calculation Agent determines that a successor Futures Contract is to replace the existing Futures Contract, then, on and from the date of such replacement, the Bloomberg code for the successor Futures Contract shall be deemed to be the relevant Bloomberg code for the futures contract in question.

### **3. Additional Risk Factors**

Not Applicable

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## PART B

### APPENDIX 1.7

#### The Japanese Money Market Futures (G) Tracker

##### 1. Introduction

This Appendix comprises the variables required to complete the Rules for the J.P. Morgan Japanese Money Market Futures (G) Tracker (the “**Variables**” and the “**Futures Tracker**”). The **Variables** may be amended from time to time at the discretion of J.P. Morgan Securities Ltd. (“**JPMSL**”) in its capacity as Calculation Agent. The **Variables** will be re-published no later than one calendar month following amendment to reflect any such changes. This document must be read in conjunction with Part A of the Rules of the J.P. Morgan Futures Tracker Series.

##### 2. Definitions

Variables	
Tracker Name	The J.P. Morgan Japanese Money Market Futures (G) Tracker
Price Source	Bloomberg page RFJGJPME
Base Underlying	TFX Euroyen Futures (Bloomberg Ticker ER1)
Re-weighting Date	1st Tracker Business Day of March, June, September and December
Adjustment Factor	Shall equal 0
Futures Tracker Currency	Japanese Yen (JPY)
Relevant Exchange	Means the closing price published on the price source given by the relevant Bloomberg Code for the Futures Contract (defined below)
Initial Tracker Level	99.71
Official Settlement Price	Means the closing price published on the price source given by the relevant Bloomberg Code for the Futures Contract (defined below)
Base Date	1 March 1999
Expiry Dates	Expected to be the 3rd Wednesday of March, June, September and December
Futures Contract	Means the futures contract identified by the following Bloomberg Codes from time to time

<b><i>Futures Contracts</i></b>				
<b><i>i</i></b>	<b>Futures Contract</b>	<b>Bloomberg Month Code</b>	<b>Currency</b>	<b>Expected Bloomberg Code*</b>
1	March	H	JPY	YEH&"Year" <Comdty>
2	June	M	JPY	YEM&"Year" <Comdty>
3	September	U	JPY	YEU&"Year" <Comdty>
4	December	Z	JPY	YEZ&"Year" <Comdty>

\*The Bloomberg codes are typically constructed as "YE" followed by the Bloomberg Month Code followed by the year in which the Expiry Date falls, so that the March 09 Futures Contract shall have ticker YEH09 Index or YEH9 Index. If the Relevant Exchange publishes any modification to the composition of the Bloomberg code referenced in the table above, such new Bloomberg code shall be deemed to be Bloomberg code in respect of the Futures Contract. If the Calculation Agent determines that a successor Futures Contract is to replace the existing Futures Contract, then, on and from the date of such replacement, the Bloomberg code for the successor Futures Contract shall be deemed to be the relevant Bloomberg code for the futures contract in question.

### **3. Additional Risk Factors**

Not Applicable

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