

**Underlying supplement no. 10a-I**  
*To the prospectus dated November 7, 2014 and  
the prospectus supplement dated November 7, 2014*

**Registration Statement No. 333-199966**  
**Dated March 16, 2015**  
**Rule 424(b)(2)**

# JPMORGAN CHASE & CO.

## ***Notes Linked to One or More J.P. Morgan Contag Beta Indices***

JPMorgan Chase & Co. may, from time to time, offer and sell notes linked in whole or in part to one or more J.P. Morgan Contag Beta Indices (the "Indices"). This underlying supplement no. 10a-I describes the Indices, the relationship between JPMorgan Chase & Co. and the sponsor of the Indices and other relevant information. This underlying supplement no. 10a-I supplements the terms described in the accompanying product supplement, the prospectus supplement and the prospectus. A separate term sheet or pricing supplement, as the case may be, will describe terms that apply to specific issuances of the notes, including any changes to the terms specified below. We refer to these term sheets and pricing supplements generally as terms supplements. The accompanying product supplement, the relevant terms supplement or another relevant underlying supplement will describe any other index or reference asset to which the notes are linked. A separate underlying supplement will describe the S&P GSCI™ Index Excess Return, the S&P GSCI™ Light Energy Index Excess Return, the applicable S&P GSCI™ sector index or the Bloomberg Commodity Index<sup>SM</sup>, as applicable, referenced in the calculation of any relevant Index. If the terms described in the relevant terms supplement are inconsistent with those described in this underlying supplement, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement or the prospectus, the terms described in the relevant terms supplement will control. In addition, if this underlying supplement no. 10a-I and the accompanying product supplement or another relevant underlying supplement contain information relating to the same index to which the notes are linked, the information contained in the document with the most recent date will control.

**The notes are not commodity futures contracts or swaps and are not regulated under the Commodity Exchange Act of 1936, as amended (the "Commodity Exchange Act").** The notes are offered pursuant to an exemption from regulation under the Commodity Exchange Act, commonly known as the hybrid instrument exemption, that is available to securities that have one or more payments indexed to the value, level or rate of one or more commodities, as set out in section 2(f) of that statute. Accordingly, you are not afforded any protection provided by the Commodity Exchange Act or any regulation promulgated by the Commodity Futures Trading Commission.

**Investing in the notes involves a number of risks. See "Risk Factors" in the accompanying product supplement and "Risk Factors" beginning on page US-2.**

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 the relevant terms supplement, this underlying supplement no. 10a-I, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement or the prospectus. Any representation to the contrary is a criminal offense.

***The notes are not bank deposits, are not insured by the Federal Deposit Insurance Corporation or any other governmental agency and are not obligations of, or guaranteed by, a bank.***

**J.P.Morgan**

March 16, 2015

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We have not authorized anyone to provide any information other than that contained or incorporated by reference in the relevant terms supplement, this underlying supplement no. 10a-l, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement or the prospectus with respect to the notes offered by the relevant terms supplement and with respect to JPMorgan Chase & Co. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The relevant terms supplement, together with this underlying supplement no. 10a-l, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement and the prospectus, will contain the terms of the notes and will supersede all other prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, fact sheets, brochures or other educational materials of ours. The information in each of the relevant terms supplement, this underlying supplement no. 10a-l, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement and the prospectus may only be accurate as of the date of that document.

The notes are not appropriate for all investors and involve important legal and tax consequences and investment risks that should be discussed with your professional advisers. You should be aware that the regulations of Financial Industry Regulatory Authority, Inc., 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 underlying supplement no. 10a-l, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement and the prospectus do not constitute an offer to sell or a solicitation of an offer to buy the notes in any circumstances in which that offer or solicitation is unlawful.

In the relevant terms supplement, this underlying supplement no. 10a-l, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement and the prospectus, "we," "us" and "our" refer to JPMorgan Chase & Co., unless the context requires otherwise. To the extent applicable, each index described in this underlying supplement no. 10a-l is deemed to be one of the "Indices" referred to in the accompanying product supplement.

## SUPPLEMENTAL TERMS OF THE NOTES

*The following supplemental terms of the notes supplement, and to the extent they are inconsistent, supersede, the description of the general terms of the debt securities set forth in the accompanying product supplement and under the headings "Description of Notes" in the prospectus supplement and "Description of Debt Securities" in the prospectus. Capitalized terms used but not defined in this underlying supplement no. 9a-I have the meanings assigned in the relevant terms supplement, this underlying supplement no. 9a-I, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement and the prospectus.*

### General

This underlying supplement no. 10a-I describes the Indices, the relationship between JPMorgan Chase & Co. and the sponsor of the Indices and other relevant information. This underlying supplement no. 10a-I supplements the terms described in the accompanying product supplement, the prospectus supplement and the prospectus. A separate term sheet or pricing supplement, as the case may be, will describe terms that apply to specific issuances of the notes, including any changes to the terms specified below. We refer to these term sheets and pricing supplements generally as terms supplements. The accompanying product supplement, the relevant terms supplement or another relevant underlying supplement will describe any other index or reference asset to which the notes are linked. A separate underlying supplement will describe the S&P GSCI™ Index Excess Return, the S&P GSCI™ Light Energy Index Excess Return or the applicable S&P GSCI™ sector index (each, an "**S&P GSCI Index**" and collectively, the "**S&P GSCI Indices**") or the Bloomberg Commodity Index<sup>SM</sup> (together with the S&P GSCI Indices, each, an "**Underlying Index**" and collectively, the "**Underlying Indices**"), as applicable, referenced in the calculation of any relevant Index. If the terms described in the relevant terms supplement are inconsistent with those described in this underlying supplement, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement or the prospectus, the terms described in the relevant terms supplement will control. In addition, if this underlying supplement no. 10a-I and the accompanying product supplement or another relevant underlying supplement contain information relating to the same index to which the notes are linked, the information contained in the document with the most recent date will control.

The notes are unsecured and unsubordinated obligations of JPMorgan Chase & Co. linked in whole or in part to one or more of the indices set forth in Table 1 of "The J.P. Morgan Contag Beta Indices" in this underlying supplement (each, a "**Index**" and collectively, the "**Indices**").

The "**index sponsor**" means J.P. Morgan Securities plc ("**JPMS plc**"), and the "**index calculation agent**" means any affiliate or subsidiary designated by JPMS plc to calculate and publish the official closing level of the Index. The index calculation agent is currently our Global Index Research Group ("**GIRG**"). GIRG is a part of our Global Research division and resides within J.P. Morgan Securities LLC and will use only employees of JPMorgan Chase Bank, National Association for purposes of calculating the Indices. See "The J.P. Morgan Contag Beta Indices" below. JPMS plc and GIRG are our affiliates and may have interests adverse to you. Please see "Risk Factors — The index sponsor and index calculation agent of each Index are affiliates of ours, may adjust the relevant Index in a way that affects its level and have no obligation to consider your interests."

## RISK FACTORS

*Your investment in the notes will involve certain risks. Investing in the notes is not equivalent to investing directly (or taking a short position) in an Index, any of the commodity futures contracts underlying an Index or any commodity futures contracts or exchange-traded or over-the-counter instruments based on, or other instruments linked to, any of the foregoing. You should consider carefully the following discussion of risks, as well as the discussion of risks included in the relevant terms supplement, the accompanying product supplement and any accompanying underlying supplement, before you decide that an investment in the notes is suitable for you.*

**There may be potential conflicts between your interests and those of JPMorgan Chase & Co., the calculation agent, the index sponsor, the index calculation agent and other affiliates of ours.**

We and our affiliates play a variety of roles in connection with notes linked to an Index, including acting as the issuer and the calculation agent for the notes, and as the sponsor and the calculation agent of that Index, as well as hedging our obligations under the notes. In performing these duties, the economic interests of ours, the calculation agent, the index calculation agent, the index sponsor and other affiliates of ours would be potentially adverse to your interests as an investor in the notes. Additionally, we and our affiliates may from time to time develop other indices or sell products that may take positions that are contrary to your economic interests.

**The index sponsor and index calculation agent of each Index are affiliates of ours, may adjust the relevant Index in a way that affects its level and have no obligation to consider your interests.**

JPMS plc, one of our affiliates, currently acts as the index sponsor for the Indices and is responsible for maintaining the Indices and developing the guidelines and policies governing their composition and calculation. In addition, our Global Index Research Group (“GIRG”) currently acts as the index calculation agent for the Indices and is responsible for calculating the Indices. GIRG is part of our Global Research division and resides within J.P. Morgan Securities LLC. The index sponsor and/or the index calculation agent of each Index is entitled to exercise discretion in good faith and in a commercially reasonable manner in relation to that Index, including, but not limited to:

- the interpretation of the rules governing that Index;
- the calculation of the level of that Index in the event of certain market disruptions and the determination of the values of one or more commodity futures contracts in the event of market disruptions or as a result of manifest errors in, or unavailability of, certain values;
- the removal, replacement or replication of a commodity futures contract underlying that Index or of the Underlying Index referenced in the calculation of that Index upon the occurrence of certain extraordinary events, including changes in law, relating to that commodity futures contract or that Underlying Index; or
- the cancellation of that Index.

The index sponsor of an Index may also amend the rules governing that Index in its discretion. See “The J.P. Morgan Contag Beta Indices” in this underlying supplement for additional information. Although the relevant index sponsor and index calculation agent will make all determinations and take all action in relation to the relevant Index acting in good faith, it should be noted that the policies and judgments for which the index sponsor and/or the index calculation agent are responsible could have an impact, positive or negative, on the level of the relevant Index and the value of your notes. For example, the changing of a commodity futures contract may affect the performance of the relevant Index, and therefore, the return on the notes, as the replacement commodity futures contract may perform significantly better or worse than the affected commodity futures contract.

Although judgments, policies and determinations concerning the Indices are made by JPMS plc and/or GIRG, as applicable, JPMorgan Chase & Co. is the ultimate parent company of JPMS plc and GIRG and ultimately controls JPMS plc and GIRG. Unlike other indices, the maintenance of the Indices is not governed by an independent committee. The index sponsor and index calculation agent of each Index have no obligation to consider your interests in taking any actions that might affect the value of your notes. Furthermore, the inclusion of any commodity futures contract in an Index is not an investment recommendation by us, the index sponsor or the index calculation agent of that commodity futures contract.

**The commodity futures contracts underlying the Indices are subject to legal and regulatory regimes that may change in ways that could result in the index calculation agent making changes to the Indices or the index sponsor modifying the rules governing the Indices, either of which would impact the level of the Index and, therefore, affect any payments under the notes.**

Changes to the legal or regulatory regimes applicable to the commodity futures contracts that underlie the Indices may result in the index calculation agent exercising its discretionary right under the rules governing the Indices to exclude or substitute any futures contract underlying, or substitute for a commodity the futures contracts of which underlie, the Indices, which may, in turn, have a negative effect on the value of any payments under the notes. The exclusion or substitution of futures contracts or commodities as described above could also affect the diversity of the Indices. 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 Indices.

In addition, changes to the legal or regulatory regimes applicable to the commodity futures contracts that underlie the Indices could also result in the index sponsor modifying the rules governing the Indices or canceling the Indices, which could, in turn, have an adverse effect on any payments under the notes.

**The Indices do not represent fully diversified portfolios, are not representative of a pure commodities allocation and are not designed to replicate or track commodities markets generally or any or all of the futures contracts underlying the Indices.**

The Indices seek to reflect a notional basket containing a single futures contract or certain futures contracts that display the highest degree of backwardation (or, in the absence of backwardation, the least amount of contango). The Indices are not designed to replicate or track commodities markets generally or any or all of the futures contracts underlying the Indices. For any given period, the commodities markets or any or all of the futures contracts underlying the Indices may have positive or significantly positive performance, and the Indices may have negative or significantly negative performance, in absolute terms or relative to the commodities markets. An increase in the value of any commodity futures contract included in an Index or any related commodity will not necessarily result in an increase in the level of that Index. In addition, while diversification is generally considered to reduce the amount of risk associated with generating returns, there can be no assurance that any Index will be sufficiently diversified at any time to reduce or minimize such risks to any extent.

**The Indices comprise notional assets.**

The exposures to the commodity futures contracts underlying each Index are purely notional 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 commodity futures contracts underlying any Index.

**Each Index may not be successful and may not outperform any alternative strategy that might be employed with respect to the futures contracts underlying that Index.**

The Indices follow a proprietary strategy that operates on the basis of predetermined rules. No assurance can be given that the investment strategy on which the Indices are based will be successful or that any Index will outperform any alternative strategy that might be employed with respect to the futures contracts underlying that Index. The methodology underlying the Indices includes complicated mathematical calculations. Accordingly, an investment in notes linked to the Index may not be appropriate for all investors. You should discuss any investment in the notes with your professional advisers.

**An investment in the notes carries the risks associated with the methodology used to calculate the Indices.**

The Indices are constructed, in part, using a rules-based methodology that uses, along with other criteria, the slope of the commodity 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 the highest level of "backwardation" is selected for each eligible commodity (each, a "**Contag Contract**"), subject to certain limitations. "Backwardation" refers to the situation where commodity 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 commodity 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 Indices seek to capitalize on such "roll yield" and on the fact that contracts with backwardation tend to appreciate as those futures contracts draw nearer to expiration over time. The presence of "contango" in the commodity futures market (*i.e.*, where the prices for the relevant futures contracts included in an 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. While the Selection Methodology is intended to select futures contracts with the highest level of backwardation (or, in the absence of backwardation, the least amount of contango), commodity futures contracts generally have historically been in contango and no assurance can be given that the Selection Methodology will be successful in mitigating or avoiding contango and negative roll yields. Contango could adversely affect the level of the Indices and thus the value of notes linked to an Index.

In addition, the 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 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 Indices may not perform as well as an index linked to the spot prices of the relevant commodities.

No assurance can be given that the investment strategy on which an Index is based will be successful or that such Index will outperform any alternative strategy that might be employed.

**The Indices may have limited operating histories and may perform in unanticipated ways.**

The first Index was established on May 29, 2009, and subsequent Indices were introduced since then. As a result, the Indices may have limited historical performance. Any back-testing or similar analysis in respect of any Index must be considered illustrative only and may be based on estimates or assumptions not used by the index calculation agent when determining the level of the Contract Beta Indices. Past performance should not be considered indicative of future performance.

**Index calculation disruption events may require an adjustment to the calculation of the Indices.**

At any time during the term of the notes, the daily calculation of the Indices may be adjusted in the event that the index calculation agent determines that any of the following index calculation disruption events exists: the termination or suspension of, or material limitation or disruption in the trading of any exchange-traded futures contract used in the calculation of the Indices on that day; the settlement price of any exchange-traded futures contract used in the calculation of the Indices reflects the maximum permitted price change from the previous day's settlement price; or the failure of an exchange to publish official settlement prices for any futures contract used in the calculation of the Indices. Any such index calculation disruption events may have an impact on the level of the Indices.

**The relevant Underlying Index Sponsor may add new, or substitute for existing, commodities in the relevant Underlying Index which could affect the calculation and composition of the Indices.**

A futures contract known as a "Designated Contract" has been selected as the reference contract for each of the underlying physical commodities included in the relevant Underlying 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. In the event that a Designated Contract is added to the calculation of the relevant Underlying Index that is not currently in the set of eligible commodities for that Index, that Designated Contract will be added as an eligible commodity for purposes of calculating that Index. The relevant Underlying Index Sponsor may also substitute for an existing commodity, which would also result in a change to the set of eligible commodities for the Indices. The addition of a new eligible commodity, or the substitution for an existing commodity, could adversely affect the level of the Indices and therefore, the value of your notes. See "The J.P. Morgan Contag Beta Indices — Modifications to, or Cancellation of, the S&P GSCI Family-Index or the Bloomberg Commodity Index<sup>SM</sup>" and the description of the relevant Underlying Index set forth in another accompanying underlying supplement.

**The sponsor of the relevant Underlying Index has no obligation to consider your interests.**

The sponsor of the relevant Underlying Index (an "**Underlying Index Sponsor**") is responsible for calculating and maintaining the relevant Underlying Index, including the contract production weights or commodity index percentages, as applicable, of the relevant Underlying Index. The weights assigned to the commodities referenced in the Indices (other than the Indices that track futures contracts on a single commodity) are based on those contract production weights or commodity index percentages, as applicable. The relevant Underlying Index Sponsor can make methodological changes that could change the contract production weights or commodity index percentages, as applicable, or their method of determination at any time and they have no obligation to consider your interests. The relevant Underlying Index Sponsor may discontinue or suspend calculation or dissemination of the relevant Underlying Index, including the contract production weights or commodity index percentages, as applicable. Any of these actions could adversely affect market value and/or any payments under the notes. See the description of the relevant Underlying Index set forth in another accompanying underlying supplement for additional information. The relevant Underlying Index Sponsor has no obligation to consider your interests in calculating or revising the methodology of the relevant Underlying Index.

**The relevant terms supplement or a separate underlying supplement will provide additional risk factors relating to any Index or any other index or reference assets to which the notes are linked.**

## THE J.P. MORGAN CONTAG BETA INDICES

### General

The J.P. Morgan Contag Beta indices specified in the table below (each, a “Contag Beta Index” and collectively, the “Contag Beta Indices”) were developed and are maintained by J.P. Morgan Securities Ltd. (which we refer to as “JPMS plc”) and are calculated by our Global Index Research Group (“GIRG”). GIRG is a part of our Global Research division and resides within J.P. Morgan Securities LLC and will use only employees of JPMorgan Chase Bank, National Association for purposes of calculating the Contag Beta Indices. Each Contag Beta Index is a notional rules-based proprietary index that is intended to capture the return of the synthetic exposure to a notional basket consisting of commodities (which may consist of a single commodity), each of which is represented by a commodity futures contract selected by a methodology developed by JPMS plc, 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 (or, in the absence of backwardation, the least amount of contango), 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. “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 description of the strategy and methodology underlying the Contag Beta Indices (including the Selection Methodology) included in this underlying supplement is based on rules formulated by JPMS plc (which we refer to as the “Rules”) and is qualified by the full text of the Rules. The Rules, and not this description, will govern the calculation and constitution of the Contag Beta Indices and other decisions and actions related to their maintenance. The Rules in effect as of the date of this underlying supplement are attached as Annex A to this underlying supplement. The Rules are the intellectual property of JPMS plc, and JPMS plc reserves all rights with respect to its ownership of the Contag Beta Indices. The first Contag Beta Index was established on May 29, 2009, and subsequent Contag Beta Indices were introduced since then. As a result, the Contag Beta Indices may have limited historical performance.

Table 1 below sets out the Contag Beta Indices and their respective Bloomberg tickers.

**Table 1: The Contag Beta Indices**

|    |           | Contag Beta Index   | Bloomberg Ticker  |
|----|-----------|---|---|
|    |           | Excess Return   |   |
| 1  | Benchmark | J.P. Morgan Contag Beta Full Energy Class A Excess Return Index         | JCTABFEE  |
| 2  |           | J.P. Morgan Contag Beta Light Energy Class A Excess Return Index        | JCTABLEE  |
| 3  |           | J.P. Morgan Contag Beta Alternate Benchmark Class A Excess Return Index | JCTABDJE  |
| 4  | Sector    | J.P. Morgan Contag Beta Agriculture Class A Excess Return Index         | JCTABAGE  |
| 5  |           | J.P. Morgan Contag Beta Energy Class A Excess Return Index              | JCTABENE  |
| 6  |           | J.P. Morgan Contag Beta Industrial Metals Class A Excess Return Index   | JCTABIME  |
| 7  |           | J.P. Morgan Contag Beta Livestock Class A Excess Return Index           | JCTABLVE  |
| 8  |           | J.P. Morgan Contag Beta Non-Energy Class A Excess Return Index          | JCTABNEE  |
| 9  |           | J.P. Morgan Contag Beta Petroleum Class A Excess Return Index           | JCTABPTE  |
| 10 |           | J.P. Morgan Contag Beta Precious Metals Class A Excess Return Index     | JCTABPME  |
| 11 |           | Co  | J.P. Morgan Contag Beta WTI Crude Oil Excess Return Index |



|    |   | Contag Beta Index   | Bloomberg Ticker |
|----|---|---|------------------|
|    |   | Excess Return   |                  |
| 12 | Single Commodity  | J.P. Morgan Contag Beta Brent Crude Oil Excess Return Index | JCTABCOE         |
| 13 |   | J.P. Morgan Contag Beta Heating Oil Excess Return Index     | JCTABHOE         |
| 14 |   | J.P. Morgan Contag Beta Gas Oil Excess Return Index         | JCTABQSE         |
| 15 |   | J.P. Morgan Contag Beta Gasoline Excess Return Index        | JCTABXBE         |
| 16 |   | J.P. Morgan Contag Beta Natural Gas Excess Return Index     | JCTABNGE         |
| 17 |   | J.P. Morgan Contag Beta Wheat Excess Return Index           | JCTABWE          |
| 18 |   | J.P. Morgan Contag Beta Kansas Wheat Excess Return Index    | JCTABKWE         |
| 19 |   | J.P. Morgan Contag Beta Soybeans Excess Return Index        | JCTABSE          |
| 20 |   | J.P. Morgan Contag Beta Soybean Meal Excess Return Index    | JCTABSME         |
| 21 |   | J.P. Morgan Contag Beta Soybean Oil Excess Return Index     | JCTABBOE         |
| 22 |   | J.P. Morgan Contag Beta Corn Excess Return Index            | JCTABCE          |
| 23 |   | J.P. Morgan Contag Beta Coffee Excess Return Index          | JCTABKCE         |
| 24 |   | J.P. Morgan Contag Beta Sugar Excess Return Index           | JCTABSBE         |
| 25 |   | J.P. Morgan Contag Beta Cotton Excess Return Index          | JCTABCTE         |
| 26 |   | J.P. Morgan Contag Beta Cocoa Excess Return Index           | JCTABCCE         |
| 27 |   | J.P. Morgan Contag Beta Aluminum Excess Return Index        | JCTABLAE         |
| 28 |   | J.P. Morgan Contag Beta Copper Excess Return Index          | JCTABLPE         |
| 29 |   | J.P. Morgan Contag Beta Lead Excess Return Index            | JCTABLLE         |
| 30 |   | J.P. Morgan Contag Beta Nickel Excess Return Index          | JCTABLNE         |
| 31 |   | J.P. Morgan Contag Beta Zinc Excess Return Index            | JCTABLXE         |
| 32 | J.P. Morgan Contag Beta Gold Excess Return Index          | JCTABGCE  |                  |
| 33 | J.P. Morgan Contag Beta Silver Excess Return Index        | JCTABSIE  |                  |
| 34 | J.P. Morgan Contag Beta Comex Copper Excess Return Index  | JCTABHGE  |                  |
| 35 | J.P. Morgan Contag Beta Lean Hogs Excess Return Index     | JCTABLHE  |                  |
| 36 | J.P. Morgan Contag Beta Live Cattle Excess Return Index   | JCTABLCE  |                  |
| 37 | J.P. Morgan Contag Beta Feeder Cattle Excess Return Index | JCTABFCE  |                  |

|    |           | Contag Beta Index  | Bloomberg Ticker |
|----|-----------|--|------------------|
|    |           | Total Return   |                  |
| 38 | Benchmark | J.P. Morgan Contag Beta Full Energy Class A Total Return Index         | JCTABFET         |
| 39 |           | J.P. Morgan Contag Beta Light Energy Class A Total Return Index        | JCTABLET         |
| 40 |           | J.P. Morgan Contag Beta Alternate Benchmark Class A Total Return Index | JCTABDJT         |
| 41 | Sector    | J.P. Morgan Contag Beta Agriculture Class A Excess Return Index        | JCTABAGT         |
| 42 |           | J.P. Morgan Contag Beta Energy Class A Excess Return Index             | JCTABENT         |
| 43 |           | J.P. Morgan Contag Beta Industrial Metals Class A Excess Return Index  | JCTABIMT         |
| 44 |           | J.P. Morgan Contag Beta Livestock Class A Excess Return Index          | JCTABLVT         |
| 45 |           | J.P. Morgan Contag Beta Non-Energy Class A Excess Return Index         | JCTABNET         |
| 46 |           | J.P. Morgan Contag Beta Petroleum Class A Excess Return Index          | JCTABPTT         |
| 47 |           | J.P. Morgan Contag Beta Precious Metals Class A Excess Return Index    | JCTABPMT         |

Each Contag Beta Index is either an excess return index or total return index that is intended to capture the return of synthetic long exposure to a Nominal Basket consisting of the Contag Contracts for the relevant Eligible Commodities during each relevant month selected by the Selection Methodology, including the effect of the monthly composition change of such Contag Beta Index due to the roll from the Contag Contract for each relevant commodity listed in *Table 3: Eligible Commodities* under “— Selection Methodology” below (which we refer to as an “Eligible Commodity”) for a relevant month to the Contag Contract for each relevant 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 (or, in the absence of backwardation, the least amount of contango), subject to certain limitations. The “Eligible Commodities” are the 26 commodities that are currently represented by the S&P GSCI™ and the Bloomberg Commodity Index<sup>SM</sup> set forth in *Table 3: Eligible Commodities* under “— Selection Methodology” below. However, the Contag Beta Indices are linked to only a subset of the 26 Eligible Commodities. Each month, the Selection Methodology will determine the Contag Contracts to which the Contag Beta Indices 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, each 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 level of the relevant Contag Beta Index. The Selection Methodology is described in further detail under “— Selection Methodology” below.

The Contag Beta Indices are rebalanced monthly on the Rebalancing Date, which is the first day of each calendar month on which the NYSE Euronext is scheduled to be open for its regular trading session.

The Selection Methodology uses, among 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 each of the full energy, light energy and sector indices are determined, on an annual basis, by reference to the contract production weights calculated by Standard & Poor’s Financial Services LLC (“S&P”) for the S&P GSCI™ Index Excess Return or the S&P GSCI™ Light Energy Index. The weights for each alternate benchmark index are determined, on an annual basis, by reference to the commodity index percentages calculated by Bloomberg Finance L.P. (“Bloomberg”) for the Bloomberg Commodity Index<sup>SM</sup>. Each single commodity index has a 100% weight in the relevant Eligible Commodity.

The Contag Beta Index is described as a “notional” or “synthetic” portfolio or basket because its 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 each excess return 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 level of each total return Contag Beta Index at any point is the return of the hypothetical collateralized portfolio of the relevant Contag Contracts, which are weighted in accordance with the weighting algorithm described below, plus interest that could be earned on funds committed to the trading of the underlying futures contracts, as represented by the 3-month Treasury Bill rate. Each Contag Beta Index had an initial level of 100 as of December 30, 1994 (which we refer to as the “Initial Index Day”).

## Calculation and Publication of the Index Level

JPMS plc, the sponsor of the Contag Beta Indices (the "Index Sponsor"), has designated GIRG to act as calculation agent for the Contag Beta Indices (the "Index Calculation Agent").

Subject to the occurrence of a Market Disruption (as described below), the Index Calculation Agent will calculate and publish the level of each 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 identified for the relevant Contag Beta Index in the table above.

### *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." One difference between one particular Contag Beta Index as compared to another Contag Beta Index is the way in which the Commodity Weights are determined.

#### *Determining Commodity Weights Based on the Commodity Production Weights in the S&P GSCI Methodology*

The Commodity Weight for each Eligible Commodity for some of the Contag Beta Indices is based on the Contract Production Weight, determined 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 GSCI Index Sponsor" (the "S&P GSCI Methodology").

The Commodity Weight for each Eligible Commodity in the J.P. Morgan Contag Beta Full Energy Class A Excess Return Index and the J.P. Morgan Contag Beta Full Energy Class A Total Return 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 J.P. Morgan Contag Beta Full Energy Class A Excess Return Index and the J.P. Morgan Contag Beta Full Energy Class A Total Return Index, respectively.

The Commodity Weight for each Eligible Commodity in the J.P. Morgan Contag Beta Light Energy Class A Excess Return Index and the J.P. Morgan Contag Beta Light Energy Class A Total Return 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 J.P. Morgan Contag Beta Light Energy Class A Excess Return Index and the J.P. Morgan Contag Beta Light Energy Class A Total Return Index, respectively.

The S&P GSCI™ and S&P GSCI™ Light Energy Index include only 24 commodities, all of which are included in the Eligible Commodities; in addition, two of the Eligible Commodities are not included in the S&P GSCI™ and S&P GSCI™ Light Energy Index: copper (COMEX) and soybean oil.

The Commodity Weight for each Eligible Commodity in the applicable Sector Index is equal to the Contract Production Weight of the relevant Designated Contract in the applicable S&P GSCI™ Sub-Index in the table set forth below for the S&P GSCI Period corresponding to the relevant Weights Period for the applicable Sector Index (as defined below), as specified in the S&P GSCI Methodology.

Each Commodity Weight for an Eligible Commodity is calculated with respect to a "Weights Period." The "Weights Period" for the J.P. Morgan Contag Beta Full Energy Class A Excess Return Index, the J.P. Morgan Contag Beta Full Energy Class A Total Return Index, the J.P. Morgan Contag Beta Light Energy Class A Excess Return Index, the J.P. Morgan Contag Beta Light Energy Class A Total Return Index and each Sector 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. The "Weights Period" for each Single Commodity Index is only one Weights Period for all applicable months in connection with the calculation of such index.

“Contract Production Weight,” with respect to each Eligible Commodity, means the Contract Production Weight assigned to the relevant Designated Contract included in the S&P GSCI™ or the S&P GSCI™ Light Energy Index, as applicable, in accordance with the S&P GSCI Methodology. For the avoidance of doubt, Contract Production Weights calculated with respect to a S&P GSCI™ Sub-Index will be calculated only with respect to the S&P GSCI Commodities (as defined in the S&P GSCI Methodology) included in the relevant S&P GSCI™ Sub-Index. As at the date of this underlying 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. The CPW for the energy-related commodities in the S&P GSCI™ is divided by 4 to get the CPW for the Designated Contracts included in the S&P GSCI™ Light Energy Index.

For purposes of this subsection:

“Designated Contract” has the same meaning as in the S&P GSCI Methodology. As at the date of this underlying 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 underlying 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.

“S&P GSCI™ Sub-Index” means each index specified in Table 2 below, as applicable. Each Contag Beta Index below (we also refer to each as a “Sector Index”) relates to a S&P GSCI Sub-Index, as follows:

**Table 2: Contag Beta Sector Indices**

| Sector Index  | S&P GSCI™ Sub-Index                             | Bloomberg Ticker for the S&P GSCI™ Sub-Index |
|---|---|--|
| J.P. Morgan Contag Beta Agriculture Class A Excess Return Index       | S&P GSCI™ Agriculture Index Excess Return       | SPGSAGP                                      |
| J.P. Morgan Contag Beta Energy Class A Excess Return Index            | S&P GSCI™ Energy Index Excess Return            | SPGSENP                                      |
| J.P. Morgan Contag Beta Industrial Metals Class A Excess Return Index | S&P GSCI™ Industrial Metals Index Excess Return | SPGSINP                                      |
| J.P. Morgan Contag Beta Livestock Class A Excess Return Index         | S&P GSCI™ Livestock Index Excess Return         | SPGSLVP                                      |
| J.P. Morgan Contag Beta Non-Energy Class A Excess Return Index        | S&P GSCI™ Non-Energy Index Excess Return        | SPGSNEP                                      |
| J.P. Morgan Contag Beta Petroleum Class A Excess Return Index         | S&P GSCI™ Petroleum Index Excess Return         | SPGSPTP                                      |
| J.P. Morgan Contag Beta Precious Metals Class A Excess Return Index   | S&P GSCI™ Precious Metals Index Excess Return   | SPGSPMP                                      |
| J.P. Morgan Contag Beta Agriculture Class A Total Return Index        | S&P GSCI™ Agriculture Index Total Return        | SPGSAGTR                                     |
| J.P. Morgan Contag Beta Energy Class A Total Return Index             | S&P GSCI™ Energy Index Total Return             | SPGSENTR                                     |

| Sector Index   | S&P GSCI™ Sub-Index                            | Bloomberg Ticker for the S&P GSCI™ Sub-Index |
|--|--|--|
| J.P. Morgan Contag Beta Industrial Metals Class A Total Return Index | S&P GSCI™ Industrial Metals Index Total Return | SPGSINTR                                     |
| J.P. Morgan Contag Beta Livestock Class A Total Return Index         | S&P GSCI™ Livestock Index Total Return         | SPGSLVTR                                     |
| J.P. Morgan Contag Beta Non-Energy Class A Total Return Index        | S&P GSCI™ Non-Energy Index Total Return        | SPGSNETR                                     |
| J.P. Morgan Contag Beta Petroleum Class A Total Return Index         | S&P GSCI™ Petroleum Index Total Return         | SPGSPTRR                                     |
| J.P. Morgan Contag Beta Precious Metals Class A Total Return Index   | S&P GSCI™ Precious Metals Index Total Return   | SPGSPMTR                                     |

*Determining Commodity Weights Based on the Commodity Index Percentages in the Bloomberg Methodology*

The Commodity Weight for each Eligible Commodity for some of the Contag Beta Indices is based on the Commodity Index Percentage, determined as specified in the document setting out the rules of the Bloomberg Commodity Index<sup>SM</sup>, as updated, modified and superseded from time to time by Bloomberg, the sponsor of the Bloomberg Commodity Index<sup>SM</sup>, which we refer to as the “Bloomberg Index Sponsor,” and each of the Bloomberg Index Sponsor and the S&P GSCI Index Sponsor is an “Underlying Index Sponsor” (the “Bloomberg Methodology”).

On July 1, 2014, Bloomberg became responsible for the governance, calculation, distribution and licensing of the Bloomberg Commodity Indices. The Dow Jones-UBS Commodity Index<sup>SM</sup> was renamed to the Bloomberg Commodity Index<sup>SM</sup> and the ticker changed from “DJUBS” to “BCOM.” Accordingly, all references in the Rules to the DJ-UBS Commodity Index<sup>SM</sup> shall be deemed to refer to the Bloomberg Commodity Index<sup>SM</sup>, and each reference in the Rules to Dow Jones or UBS shall be deemed to refer to Bloomberg.

For the J.P. Morgan Contag Beta Alternate Benchmark Class A Excess Return Index and the J.P. Morgan Contag Beta Alternate Benchmark Class A Total Return Index, the Commodity Weight of each Eligible Commodity is equal to:

$$\frac{CIP_c}{CPO_d^c(d-1)}$$

where:

$CIP_c$  is the Commodity Index Percentage (as defined in the Bloomberg Methodology) for Eligible Commodity c;

$CPO_d^c(d-1)$  is the Contract Price Outgoing for c with Valuation Day d-1 and Composition Day d; and

$d$  is the first day of the roll period in the first month of the new Weights Period.

*provided, however,* that if an Eligible Commodity is not a commodity included in the Bloomberg Commodity Index<sup>SM</sup>, then such Eligible Commodity will have a Commodity Weight equal to zero.

The Bloomberg Commodity Index<sup>SM</sup> includes only 19 commodities, all of which are included in the Eligible Commodities; in addition, seven of the Eligible Commodities are not included in the Bloomberg Commodity Index<sup>SM</sup>: Brent Crude Oil, Gas Oil, Kansas Wheat, Cocoa, Lead, Copper (LME) and Feeder Cattle.

As of the date of this underlying supplement, “Commodity Index Percentage” with respect to each Eligible Commodity means the Commodity Index Percentage assigned to the relevant Designated Contract included in the Bloomberg Commodity Index<sup>SM</sup>. As at the date of this underlying supplement, the Commodity Index Percentage for each Eligible Commodity is the combination of the relative commodity liquidity percentage and the commodity production percentage (using a ratio of 2:1) for the relevant Eligible Commodity for potential inclusion in The Bloomberg Commodity Index<sup>SM</sup>. The commodity liquidity percentage for each commodity is determined by taking a five-year average of the

product of trading volume and the historical dollar value of the Designated Contract for that commodity, and dividing the result by the sum of such products for all commodities which were designated for potential inclusion in the Bloomberg Commodity Index<sup>SM</sup>. The commodity production percentage is determined for each commodity by taking a five-year average of annual world production figures, adjusted by the historical dollar value of the Designated Contract, and dividing the result by the sum of such production figures for all the commodities which were designated for potential inclusion in the Bloomberg Commodity Index<sup>SM</sup>.

For purposes of this subsection, "Designated Contract" has the same meaning as in the Bloomberg Methodology. As at the date of this underlying supplement, "Designated Contract" means a particular contract included in the Bloomberg Commodity Index<sup>SM</sup>, based on eligibility criteria set forth in the Bloomberg Methodology.

The "Weights Period" for the J.P. Morgan Contag Beta Alternate Benchmark Class A Excess Return Index and the J.P. Morgan Contag Beta Alternate Benchmark Class A Total Return Index is, with respect to the Bloomberg Commodity Index<sup>SM</sup>, the period from and including the first Dealing Day of the calendar month on which the CIM Determination Date (as defined in accordance with the Bloomberg Methodology) occurs through and including the first Dealing Day of the calendar month in which the immediately following CIM Determination Date occurs. As at the date of this underlying supplement, the CIM Determination Date is the fourth business day of January following the calculation of the Commodity Index Percentages.

#### *Determining Commodity Weights for the Single Commodity Indices*

The Commodity Weight of the Relevant Commodity is 1 and the Commodity Weight for all other Eligible Commodities is 0 for the J.P. Morgan Contag Beta WTI Crude Oil Excess Return Index, the J.P. Morgan Contag Beta Brent Crude Oil Excess Return Index, the J.P. Morgan Contag Beta Heating Oil Excess Return Index, the J.P. Morgan Contag Beta Gas Oil Excess Return Index, the J.P. Morgan Contag Beta Gasoline Excess Return Index, the J.P. Morgan Contag Beta Natural Gas Excess Return Index, the J.P. Morgan Contag Beta Wheat Excess Return Index, the J.P. Morgan Contag Beta Kansas Wheat Excess Return Index, the J.P. Morgan Contag Beta Soybeans Excess Return Index, the J.P. Morgan Contag Beta Corn Excess Return Index, the J.P. Morgan Contag Beta Coffee Excess Return Index, the J.P. Morgan Contag Beta Sugar Excess Return Index, the J.P. Morgan Contag Beta Cotton Excess Return Index, the J.P. Morgan Contag Beta Cocoa Excess Return Index, the J.P. Morgan Contag Beta Aluminum Excess Return Index, the J.P. Morgan Contag Beta Copper Excess Return Index, the J.P. Morgan Contag Beta Lead Excess Return Index, the J.P. Morgan Contag Beta Nickel Excess Return Index, the J.P. Morgan Contag Beta Zinc Excess Return Index, the J.P. Morgan Contag Beta Gold Excess Return Index, the J.P. Morgan Contag Beta Silver Excess Return Index, the J.P. Morgan Contag Beta Lean Hogs Excess Return Index, the J.P. Morgan Contag Beta Live Cattle Excess Return Index and the J.P. Morgan Contag Beta Feeder Cattle Excess Return Index (we also refer to each as a "Single Commodity Index").

As used herein, "Relevant Commodity" means, for a Single Commodity Index, the Eligible Commodity to which such index takes exposure through the appropriate Contag Contract.

#### *Regular Amendments to Commodity Weights*

The Commodity Weights in respect of the Contag Beta Indices (other than the Single Commodity Indices) are determined by reference to the Contract Production Weights or Commodity Index Percentages, as the case may be, as specified in the S&P GSCI Methodology and the Bloomberg Methodology as described above. The Commodity Weights for these Contag Beta Indices are expected to change on an annual basis in line with the frequency with which the Contract Production Weights or Commodity Index Percentages, as the case may be, are routinely updated by the relevant Underlying Index Sponsor. From time to time the relevant Underlying Index Sponsor may change the Contract Production Weights or Commodity Index Percentages, as the case may be, on an intra-annual basis, in which case a new S&P GSCI Period or Weights Period will begin, in which case corresponding changes

will be made by the Index Calculation Agent to the Weights Period for the Contag Beta Indices. For a Contag Beta Index using the Bloomberg Methodology, the new Weights Period will begin on the first Dealing Day of the calendar month in which the CIM Determination Date occurs for the Commodity Index Percentages. The Commodity Weights for these Contag Beta 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 or will always be determined by reference to the Commodity Index Percentages in respect of the corresponding CIM Determination Date.

***Normalizing Constant***

The “Normalizing 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 each Contag Beta Index is the first 10 Dealing Days of the relevant month.

A new Normalizing Constant (which we refer to as the “New Normalizing 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 Normalizing Constant associated with the Old Weights Period (which we refer to as the “Old Normalizing Constant”).

The Normalizing 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 Normalizing Constant;

$NC_{old}$  means the Old Normalizing Constant, being 1,000 if the Old Weights Period is the first Weights Period;

- $CWI_d^c$  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 Normalizing 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 Normalizing Constant to the Old Normalizing Constant as described further in " — The Nominal Basket."

### ***Contract Roll Weights***

The exposure of each 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.

#### *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.

*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 each 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<br>(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                          |
| 9   | 0.10                          | 0.90                          |
| 10<br>(the tenth and last Dealing Day of Roll Period) | 0.0                           | 1.0                           |
| 11  | 0.0                           | 1.0                           |
| etcetera  | etcetera                      | etcetera                      |

***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 Indices”) 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<br>(the tenth and last Dealing Day of Roll Period)            | 0.0        | 1.0        |
| 11   | 0.0        | 1.0        |
| etcetera   | etcetera   | etcetera   |

***The Nominal Basket***

The Nominal Basket for each Contag Beta Index is a nominal basket of Futures Contracts representing the synthetic exposure of that Contag Beta Index. A particular composition of the Nominal Basket is associated with each Composition Day, which is the Dealing Day in respect of which the Nominal Basket is composed. Furthermore, a level of the Nominal Basket composed in respect of that Composition Day is associated with each Valuation Day, which is the Dealing Day on which the Nominal Basket is valued, 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  $cd$  (“Composition Day”), valued as at Dealing Day  $vd$  (“Valuation Day”);
- $NCO$  means the Normalizing Constant in respect of the Weights Period including the previous month as at Dealing Day  $cd$ ;
- $NCI$  means the Normalizing 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 is adjusted by the Normalizing Constants.

#### ***The Index Level***

The Index Level for each Contag Beta Index on the Initial Index Day was 100 (the “Initial Index Level”).

The Index Level for each 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 such 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 Indices.”

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

#### ***The Index Level for an Excess Return Index***

In respect of each Dealing Day following the Initial Index Day, the Index Level for each excess return Contag Beta Index will be determined by the Index Calculation Agent. The Index Level of a excess return Contag Beta Index represents the cumulative effect of the Investment Return (as described below) since the Initial Index Day, calculated 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, which is  $NB_{d-1}(d-1)$ , the level of the Nominal Basket composed in respect of Dealing Day d-1, valued as at Dealing Day d-1; and

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

*The Index Level for a Total Return Index*

In respect of each Dealing Day following the Initial Index Day, the Index Level for each total return Contag Beta Index will be determined by the Index Calculation Agent. The Index Level of a total return Contag Beta Index represents the cumulative effect of the Investment Return (as described below) since the Initial Index Day, calculated in accordance with the following formula:

$$IndexTR_d = IndexTR_{d-1} \times [1 + IR_d + TBR_d] \times (1 + TBR_d)^{A(d)}$$

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

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

$TBR_d$  means the Treasury Bill return on Dealing day d, calculated using the following formula:

$$\left( \left( 1 - \frac{91}{360} \times TBILL_{d-1} \right)^{\frac{-1}{91}} \right) - 1$$

$TBILL_{d-1}$  means the T-Bill Rate on Dealing Day d-1;

*T-Bill Rate* means, in respect of a Dealing Day, the 3-month weekly Auction High Discount Rate for United States Treasury Bills on the Dealing Day immediately preceding the relevant Dealing Day, as reported on the Bloomberg® Ticker USB3MTA and expressed as a money market rate; provided, however if such rate is not available at the applicable

Bloomberg Ticker, the rate will be determined in accordance with “Extraordinary Events—T-Bill Rate Abnormalities” below; and

A(d) means the number of calendar days which are not Dealing Days from (and excluding) Dealing Day d-1 to (and including) Dealing Day d.

### Selection Methodology

The Selection Methodology is an algorithmic methodology developed by JPMS plc, 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 commodity futures contracts with a Delivery Month further away in time have lower settlement prices than commodity futures contracts with a Delivery Month closer in time. If plotted on a graph, the curve of the settlement prices of commodity futures contracts would be downward sloping.

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

**Table 3: Eligible Commodities**

| Sector            | Eligible Commodity | Relevant Exchange | Deferring Commodity (D) or Non-Deferring Commodity (N)* | Liquid Contract Months |
|-------------------|--------------------|-------------------|---|------------------------|
| Energy            | WTI Crude Oil      | NYMEX             | D   | Z                      |
|                   | RBOB Gasoline      | NYMEX             | D   | None                   |
|                   | Heating Oil        | NYMEX             | D   | None**                 |
|                   | Natural Gas        | NYMEX             | D   | F, H, J, V             |
|                   | Brent Crude Oil    | ICE               | D   | Z                      |
|                   | Gas Oil            | ICE               | D   | M, Z                   |
| Precious Metals   | Gold               | COMEX             | N   | Not Applicable         |
|                   | Silver             | COMEX             | N   | Not Applicable         |
|                   | Copper             | COMEX             | D   | None                   |
| Industrial Metals | Aluminium          | LME               | D   | Z                      |
|                   | Copper             | LME               | D   | Z                      |
|                   | Lead               | LME               | D   | Z                      |
|                   | Nickel             | LME               | D   | Z                      |
|                   | Zinc               | LME               | D   | Z                      |
| Agriculture       | Corn               | CBOT              | D   | Z                      |
|                   | Soybeans           | CBOT              | D   | X                      |
|                   | Wheat              | CBOT              | D   | N, Z                   |
|                   | Soybean Oil        | CBOT              | D   | Z                      |
|                   | Soybean Meal       | CBOT              | D   | Z                      |
|                   | Kansas Wheat       | KCBOT             | D   | N, Z                   |
|                   | Cocoa              | NYBOT             | D   | None                   |
|                   | Coffee             | NYBOT             | D   | None                   |
|                   | Cotton             | NYBOT             | N   | Not Applicable         |
|                   | Sugar              | NYBOT             | D   | H                      |

| Sector    | Eligible Commodity | Relevant Exchange | Deferring Commodity (D) or Non-Deferring Commodity (N)* | Liquid Contract Months |
|-----------|--------------------|-------------------|---|------------------------|
| Livestock | Feeder Cattle      | CME               | N   | Not Applicable         |
|           | Lean Hogs          | CME               | N   | Not Applicable         |
|           | Live Cattle        | CME               | D   | None                   |

\* See “— Eligible Contracts” below.

\*\* Prior to the Roll Period occurring in May 2012, the Eligible Set for Heating Oil included the June (M) and December (Z) as Liquid Contract Months. With respect to any Roll Period occurring on or after May 2012, the Eligible Set for Heating Oil does not include any Liquid Contract Months.

Not all of the Eligible Commodities will be represented in each Contag Beta Index. A Single Commodity Index will only include one Eligible Commodity. A Sector Index will include only the Eligible Commodities in the relevant commodity sector indentified above, except that (a) the J.P. Morgan Contag Beta Petroleum Class A Excess Return Index and the J.P. Morgan Contag Beta Petroleum Class A Total Return Index currently include only petroleum, WTI Crude Oil, Brent Crude Oil, heating oil and RBOB gasoline, (b) the J.P. Morgan Contag Beta Non-Energy Class A Excess Return Index and the J.P. Morgan Contag Beta Non-Energy Class A Total Return Index currently include only non-energy commodities and currently do not include copper (COMEX) or soybean oil, (c) the J.P. Morgan Contag Beta Precious Metals Class A Excess Return Index and the J.P. Morgan Contag Beta Precious Metals Class A Total Return Index currently include only gold and silver and (d) the J.P. Morgan Contag Beta Agriculture Class A Excess Return Index and the J.P. Morgan Contag Beta Agriculture Class A Total Return Index currently do not include soybean oil.

The J.P. Morgan Contag Beta Full Energy Class A Excess Return Index, the J.P. Morgan Contag Beta Light Energy Class A Excess Return Index, the J.P. Morgan Contag Beta Full Energy Class A Total Return Index and the J.P. Morgan Contag Beta Light Energy Class A Total Return Index each currently includes all of the Eligible Commodities other than copper (COMEX) and soybean oil, as these two commodities currently are not included in the S&P GSCI™ and S&P GSCI™ Light Energy Index.

The J.P. Morgan Contag Beta Alternate Benchmark Class A Excess Return Index and the J.P. Morgan Contag Beta Alternate Benchmark Class A Total Return Index currently includes only 19 Eligible Commodities (WTI crude oil, RBOB gasoline, heating oil, natural gas, gold, silver, aluminum, copper (COMEX), nickel, zinc, corn, soybeans, wheat, soybean oil, coffee, cotton, sugar, lean hogs, live cattle) as the other seven Eligible Commodities (Brent crude oil, gas oil, lead, copper (LME), Kansas wheat, cocoa, feeder cattle) are not included in the Bloomberg Commodity Index<sup>SM</sup>.

### ***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 4 (*Futures Contracts entering into the Base Set*) below.

Each row of Table 4 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 5 (*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 4, 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 4: Futures Contracts entering into the Base Set**

| Eligible Commodity<br>(Relevant Exchange) | Contract at Month Start |             |             |             |             |         |         |             |             |             |             |             |
|---|-------------------------|-------------|-------------|-------------|-------------|---------|---------|-------------|-------------|-------------|-------------|-------------|
|   | Ja<br>n                 | F<br>e<br>b | M<br>a<br>r | A<br>p<br>r | M<br>a<br>y | Ju<br>n | Ju<br>l | A<br>u<br>g | S<br>e<br>p | O<br>c<br>t | N<br>o<br>v | D<br>e<br>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           |
| Copper (COMEX)                            | H                       | H           | K           | K           | N           | N       | U       | U           | Z           | Z           | Z           | H           |
| Soybean Oil (CBOT)                        | H                       | H           | K           | K           | N           | N       | Z       | Z           | Z           | Z           | F           | F           |
| Soybean Meal (CBOT)                       | H                       | H           | K           | K           | N           | N       | Z       | Z           | Z           | Z           | F           | F           |

**Table 5: 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 4 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 2012, the Base Set consists of the 13 Futures Contracts with Delivery Months of February 2012 (the Contract at Month Start for the relevant month), March 2012, April 2012, May 2012, June 2012, July 2012, August 2012, September 2012, October 2012, November 2012, December 2012, January 2013 and February 2013.

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 4 (*Futures Contracts entering into the Base Set*) above.

For example, for the Eligible Commodity Corn (CBOT) and the relevant month of January 2012, the Base Set consists of the six Futures Contracts with Delivery Months of March 2012 (the Contract at Month Start for the relevant month), May 2012, July 2012, September 2012, December 2012 and March 2013.

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 2012 Base Contract is numbered 1 and the February 2013 Base Contract is numbered 13. In the second example above, the March 2012 Base Contract is numbered 1 and the March 2013 Base Contract is numbered 6.

#### ***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 3 (*Eligible Commodities*) above, based on the characteristics of such commodity. Each Futures Contract which is a member of such the Eligible Set is an "Eligible Contract."

In respect of Deferring Commodities, the Eligible Contracts in the Eligible Set are the Base Contracts that are:

- (a) not earlier than the second Base Contract in the Base Set ( $F_2$ ); and
- (b) either with a Delivery Month:
  - (1) not more than six months following the relevant month; or
  - (2) 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 3 (*Eligible Commodities*) above.

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.

#### ***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:

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

where:

- $Level(F_i)$  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  $(i-1)^{\text{th}}$  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,  $m$  will 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 will 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.

***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:

- (a)  $F_{PS}$  is not in the Eligible Set; or
- (b) 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; and
- $SBT$  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 Contact Contract for the relevant month.

### ***Market Disruptions / Disrupted Days***

If, on any Contract Selection Date, any of the conditions (a) to (c) below apply to a Futures Contract due to comprise the Base Set, then such day will be regarded as a "Long Constituent 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; or
- (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**

The provisions below apply to all Contag Beta Indices, other than the Single Commodity Indices.

#### ***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™ Index, the S&P GSCI™ Light Energy Index or S&P GSCI™ Sub-Index (each, an "S&P GSCI Family-Index") or the Bloomberg Commodity Index<sup>SM</sup>, as the case may be, corresponding changes will be made by the Index Sponsor to the Eligible Commodities that correspond to the Designated Contracts used in the calculation of the relevant S&P GSCI Family-Index or the Bloomberg Commodity Index<sup>SM</sup>, as the case may be (the "Relevant Eligible Commodities") contained in the relevant Contag Beta Index. Such amendments will be published by the Index Sponsor and will be effective for the Weights Period corresponding to either the S&P GSCI Period in respect of which such Designated Contract is added or removed from the calculation of the relevant S&P GSCI Family-Index or the CIM Determination Date immediately following the beginning of the Weights Period in respect of which such Designated Contract is added or removed from the calculation of the Bloomberg Commodity Index<sup>SM</sup>, as the case may be.

### ***Addition of Eligible Commodities***

In the event that a Designated Contract is added to the calculation of either the S&P GSCI™ Index, the S&P GSCI™ Light Energy Index or the Bloomberg Commodity Index<sup>SM</sup> 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 relevant Contag Beta Index, effective as of the Weights Period corresponding to the S&P GSCI Period or Weights Period for which the addition is set to take effect in the S&P GSCI™ Index, the S&P GSCI™ Light Energy Index or the Bloomberg Commodity Index<sup>SM</sup>, as applicable. 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 Sponsor.

### **Modifications to, or Cancellation of, the S&P GSCI Family-Index or the Bloomberg Commodity Index<sup>SM</sup>**

With respect to all Contag Beta Indices (other than the Single Commodity Indices), if either the S&P GSCI Family-Index or the Bloomberg Commodity Index<sup>SM</sup> is (a) not calculated and announced by the relevant Underlying Index Sponsor, but is calculated and announced by a successor sponsor acceptable to the Index Sponsor, or (b) replaced by a successor index using, in the determination of the Index Sponsor, the same or substantially similar formula for and method of calculation as used in the calculation of such S&P GSCI Family-Index or the Bloomberg Commodity Index<sup>SM</sup>, 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 Indices (other than the Single Commodity Indices), the relevant Underlying Index Sponsor makes a material change in the formula for or the method of calculating the relevant S&P GSCI Family-Index or the Bloomberg Commodity Index<sup>SM</sup> (other than a modification prescribed in that formula or method to maintain such index in the S&P GSCI Family-Index, the Bloomberg Commodity Index<sup>SM</sup> or prescribed routine events) that affects the ability of the Index Calculation Agent to define the Commodity Weights or Weights Periods or any externally specified particular in respect of any Contag Beta Index, then the Index Sponsor will, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation, methodology, externally specified particular, specified inputs or any other rule in relation to the Contag Beta Indices 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 Indices (other than the Single Commodity Indices), the relevant Underlying Index Sponsor permanently cancels either the S&P GSCI Family-Index or the Bloomberg Commodity Index<sup>SM</sup>, and no successor index exists, the Index Calculation Agent will, in good faith, either:

- (a) continue to calculate the Index Level of the relevant Contag Beta Index using the latest available Commodity Weights or Weights Periods or externally specified particulars at the time the S&P GSCI Family-Index or the Bloomberg Commodity Index<sup>SM</sup> was cancelled; or
- (b) 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 Indices to account for such cancellation.

## **Publication of the Index Level**

The Index Calculation Agent may calculate the Contag Beta Index levels 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 levels by any alternative method if publication of the relevant Bloomberg ticker identified in the table 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 any of the Contag Beta Indices or any Index Level.

## **Market Disruptions to the Contag Beta Indices**

If there is a Market Disruption on any Dealing Day:

- (a) during a Roll Period, the portion of the roll which was scheduled to take place on such Dealing Day will be postponed as described above under “— Calculation and Publication of the Index Level — Adjustment of the roll for Disrupted Days”; or
- (b) on which the Nominal Basket or the Normalizing Constant is determined, the Index Calculation Agent will calculate the Nominal Basket or the Normalizing 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 Sponsor; or
- (b) replaced by a successor futures contract referencing, in the determination of the Index Sponsor, a substantially similar commodity as used in the relevant Futures Contract,

then, in each case, the successor futures contract (the “Successor Futures Contract”) will replace the relevant Futures Contract and the Index Sponsor will determine in good faith the adjustments to the Rules, as it determines appropriate, to account for such change.

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

Without prejudice to the ability of the Index Sponsor to amend the Rules, the Index Sponsor 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 Sponsor 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 Sponsor. The Index Calculation Agent is under no obligation to continue the calculation and publication of any Contag Beta Index upon the occurrence or existence of a Change in Law; and the Index Calculation Agent or Index Sponsor may decide to cancel any Contag Beta Index if they determine, acting in good faith, that the objective of the relevant Contag Beta Indices 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 Sponsor 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 commodity 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 Sponsor 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 Sponsor.

*T-Bill Rate Abnormalities*

With respect to any total return Contag Beta Index, the following actions will be taken by the Index Calculation Agent following any abnormalities in the publication of the T-Bill Rate.

If, in respect of a Dealing Day, such rate for such date does not appear on Bloomberg® ticker USB3MTA (or any official successor page thereto), the rate for that date will be the Bond Equivalent Yield of the rate displayed in H.15 Daily Update, currently <http://www.federalreserve.gov/releases/h15/update/>, (or any official successor page thereto), or such other recognized electronic source used for the purpose of displaying such 3-month T-bill rate for that day under the caption "U.S. Government Securities/Treasury bills/Auction high" converted by the Index Calculation Agent in a commercially reasonable manner to bank discount basis such that it is expressed in the same manner as the T-Bill Auction High Rate.

If such rate for such date does not appear on Bloomberg® ticker USB3MTA (or any official successor page thereto) and such 3-month rate is not displayed in the H.15 Daily Update under the caption "U.S. Government securities/Treasury bills/Auction high" or another recognized electronic source, the rate for that date will be the Bond Equivalent Yield of the auction rate for those Treasury Bills as announced by the United States Department of Treasury, converted by the Index Calculation Agent in a commercially reasonable manner to bank discount basis such that it is expressed in the same manner as the T-Bill Auction High Rate.

If the rate for United States 3-month Treasury Bills is still not available, the rate will be determined by Index Sponsor in good faith and in a commercially reasonable manner.

**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 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.

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

The Index Calculation Agent is appointed by the Index Sponsor to calculate and maintain the Contag Beta Indices from and until such time that the Index Sponsor terminates its relationship with the current Index Calculation Agent and appoints a successor index calculation agent.

The Index Sponsor will maintain all ownership rights, expressed or otherwise, with respect to the Contag Beta Indices, including the ability to license, sell or transfer any or all of its ownership rights with respect to any Contag Beta Index, including but not limited to terminating and appointing any successor index calculation agent.

The Rules provide that the Index Sponsor must act in good faith and in a commercially reasonable manner. In the event that ambiguities arise in interpreting or applying the Rules, the Index Calculation Agent and the Index Sponsor will resolve ambiguities in a reasonable manner and, if necessary, the Index Sponsor will amend the Rules to reflect such resolution.

None of the Index Sponsor, the Index Calculation Agent and their respective affiliates and subsidiaries and none of their respective directors, officers, employees, delegates and agents (each, 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 Contag Beta Indices 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 Indices or the Index Levels.

Neither JPMS plc nor any Relevant Person will 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 Indices, or for delays, omissions or interruptions in the delivery of the Contag Beta Indices or related data. Neither JPMS plc 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 Indices, including but not limited to the trading of or investments in products based on or indexed or otherwise related to the Contag Beta Indices, any data related thereto or any components thereof.

Neither JPMS plc 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 Indices or any data related thereto. Without limitation to any of the foregoing, in no event will any of the Index Sponsor, the Index Calculation Agent nor 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 Indices 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 Indices will be final, conclusive and binding, and no person will 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, the Index Sponsor or any other Relevant Person in respect of the Contag Beta Indices, none of the Index Sponsor, the Index Calculation Agent and any Relevant Person will be under any obligation to revise any determination or calculation made or action taken for any reason.

### **Background on the S&P GSCI™ Index Excess Return, the S&P GSCI™ Light Energy Index Excess Return, the applicable S&P GSCI™ sector index and the Bloomberg Commodity Index<sup>SM</sup>**

Please see the descriptions of the S&P GSCI™ Index Excess Return, the S&P GSCI™ Light Energy Index Excess Return, the applicable S&P GSCI™ sector index and the Bloomberg Commodity Index<sup>SM</sup> in another accompanying underlying supplement for additional information.

## The Commodity Futures Markets

Futures contracts on physical commodities are traded on regulated futures exchanges, in the over-the-counter market and on various types of physical and electronic trading facilities and markets. As of the date of this underlying supplement, all of the contracts included in the Contag Beta Indices are exchange-traded futures contracts. An exchange-traded futures contract provides for the purchase and sale of a specified type and quantity of a commodity or financial instrument during a stated delivery month for a fixed price. A futures contract provides for a specified settlement month in which cash settlement is made or in which the commodity or financial instrument is to be delivered by the seller (whose position is therefore described as "short") and acquired by the purchaser (whose position is therefore described as "long").

No purchase price is paid or received on the purchase or sale of a futures contract. Instead, an amount of cash or cash equivalents must be deposited with the broker as "initial margin." This amount varies based on the requirements imposed by the exchange clearing houses, but it may be lower than 5% of the notional value of the contract. This margin deposit provides collateral for the obligations of the parties to the futures contract.

By depositing margin, which may vary in form depending on the exchange, with the clearing house or broker involved, a market participant may be able to earn interest on its margin funds, thereby increasing the total return that it may realize from an investment in futures contracts.

Futures contracts are traded on organized exchanges, known as "contract markets" in the United States. At any time prior to the expiration of a futures contract, a trader may elect to close out its position by taking an opposite position on the exchange on which the trader obtained the position, subject to the availability of a liquid secondary market. This operates to terminate the position and fix the trader's profit or loss. Futures contracts are cleared through the facilities of a centralized clearing house and a brokerage firm, referred to as a "futures commission merchant," which is a member of the clearing house.

Unlike equity securities, futures contracts, by their terms, have stated expirations at a specified point in time prior to expiration. At a specific point in time prior to expiration, trading in a futures contract for the current delivery month will cease. As a result, a market participant wishing to maintain its exposure to a futures contract on a particular commodity or financial instrument with the nearest expiration must close out its position in the expiring contract and establish a new position in the contract for the next delivery month, a process referred to as "rolling." For example, a market participant with a long position in a futures contract expiring in November who wishes to maintain a position in the nearest delivery month will, as the November contract nears expiration, sell the November contract, which serves to close out the existing long position, and buy a futures contract expiring in December. This will "roll" the November position into a December position, and, when the November contract expires, the market participant will still have a long position in the nearest delivery month.

Futures exchanges and clearing houses in the United States are subject to regulation by the Commodity Futures Trading Commission. Exchanges may adopt rules and take other actions that affect trading, including imposing speculative position limits, maximum price fluctuations and trading halts and suspensions and requiring liquidation of contracts in certain circumstances.

Futures markets outside the United States are generally subject to regulation by comparable regulatory authorities. The structure and nature of trading on non-U.S. exchanges may differ from this description. From their inception to the present, the Contag Beta Indices have been composed exclusively of futures contracts traded on regulated exchanges.



# ANNEX A

## J.P. Morgan Contag Module A: Selection Methodology

Last Modified: December 2012<sup>1</sup>

**J.P.Morgan**

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<sup>1</sup> As of April 20, 2012, pursuant to the Extraordinary Event provisions set forth in the applicable module(s) that are read together with this Module A the Index Sponsor hereby amends this Module A in response to the CME's announcement that it will amend the grade and quality specifications of the NYMEX New York Harbor No. 2 Heating Oil futures contract beginning with the May 2013 HO contract month. As a result of this Extraordinary Event, the Index Sponsor reserves the right to (a) cease publication of such Contag Index or (b) change Heating Oil to a Non-Deferring Contract. The Index Sponsor will announce such change on or prior to the first anniversary of this amendment. If the Index Sponsor does not make a change on or prior to the first anniversary of this amendment, the Index Sponsor will not make a change to the Index relating to Heating Oil without an additional Extraordinary Event.

## 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: Mapping of Contract Letter to Delivery Months), 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, JPMorgan Global Index Research Group (“ <b>GIRG</b> ”), a separate division of J.P. Morgan Securities LLC, which will use only employees of JPMorgan Chase Bank, National Association for purposes of calculating the Contag Indices. The Index Calculation Agent is appointed by the Index Sponsor to calculate and maintain the Index from and until such time that the Index Sponsor terminates its relationship with the current Index Calculation Agent and appoints a successor index calculation agent. |
| Index Sponsor           | means J.P. Morgan Securities plc. The Index Sponsor will maintain all ownership rights, expressed or otherwise, with respect to the Contag Indices, including the ability to license, sell or transfer any or all of its ownership rights with respect to any Contag Index, including but not limited to terminating and appointing any successor Index Calculation Agent.  |
| J.P. Morgan             | means J.P. Morgan Securities plc, 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 down-sloping.

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 |     |     |     |     |     |     |     |     |     |     |     |
|--|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|  | Jan                     | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| 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   |
| Copper (COMEX)                         | H                       | H   | K   | K   | N   | N   | U   | U   | Z   | Z   | Z   | H   |
| Soybean Oil (CBOT)                     | H                       | H   | K   | K   | N   | N   | Z   | Z   | Z   | Z   | F   | F   |
| Soybean Meal (CBOT)                    | H                       | H   | K   | K   | N   | N   | Z   | Z   | Z   | Z   | 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 paragraphs 4.4.1 (*Deferring Commodity*) and 4.4.2 (*Non-Deferring Commodity*) below. Each Futures Contract which is a member of such subset is an Eligible Contract.

Each Eligible Commodity is classified as either a Deferring Commodity or a Non-Deferring Commodity as specified in Table 3 (*Eligible Commodities*) below.

##### 4.4.1 Deferring Commodity

In respect of Deferring Commodities, the Eligible Contracts are the Base Contracts which are:

- (1) not earlier than the second Base Contract in the Base Set ( $F_2$ ); and
- (2) either with a Delivery Month:
  - (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.

##### 4.4.2 Non-Deferring Commodity

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 Set.

## 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; and

$SBT$  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  | None <sup>2</sup>      |
| 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         |
| Copper             | COMEX             | D  | None                   |
| 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                   |
| Soybean Oil        | CBOT              | D  | Z                      |
| Soybean Meal       | CBOT              | D  | 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; or
- (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:

<sup>2</sup> Prior to the Roll Period occurring in May 2012, the Eligible Set for Heating Oil included the June (M) and December (Z) as Liquid Contract Months pursuant to Section 4.4.1 (1)(b) of this Module A. With respect to any Roll Period occurring on or after May 2012, the Eligible Set for Heating Oil will not include any Liquid Contract Months specified in 4.4.1(1)(b).

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**

**Last Modified December 2012**

**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 Sponsor and will be re-published no later than thirty (30) calendar days following such amendment or supplement.

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Each of the Index Sponsor, the Index Calculation Agent and their 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 Sponsor 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 Index Calculation Agent as follows:

$$CRWI_{d_i}^c = \frac{i}{\text{Roll Period Length}}$$

$$CRWO_{d_i}^c = 1 - \frac{i}{\text{Roll Period Length}}$$

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 Index 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<sub>d</sub>* 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<sub>d-1</sub>* means the Nominal Amount Invested as at Dealing Day *d* – 1;

*NAR<sub>d</sub>* 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 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

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 Sponsor; or
- (b) replaced by a successor futures contract referencing, in the determination of the Index Sponsor, 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 Index Sponsor 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 Sponsor to amend the Rules (see Section 2 (*This Document*) above), the Index Sponsor 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 Sponsor 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 Sponsor. 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 and Index Sponsor may decide to cancel any Contag Beta Indices if they determine, 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 Sponsor 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 Sponsor.

## **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. *Index Sponsor and Index Calculation Agent discretion*

The Index Sponsor and the Index Calculation Agent are 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 Sponsor and 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  
Updated July 2011

**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 Sponsor and will be re-published no later than thirty (30) calendar days following such amendment or supplement. Moreover the Index Sponsor 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 Sponsor. A copy of the Rules is available from the Index Calculation Sponsor.

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 the Index Sponsor, the Index Calculation Agent and their respective 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 superseded 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 [http://www2.standardandpoors.com/spf/pdf/index/SP\\_GSCI\\_Methodology\\_Web.pdf](http://www2.standardandpoors.com/spf/pdf/index/SP_GSCI_Methodology_Web.pdf).

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 of the S&P GSCI™ 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 Sponsor to the Relevant Eligible Commodities contained in the Contag Beta FE and LE Class A Indices. Such amendments shall be published by the Index Sponsor 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 Sponsor.

## 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 Sponsor, or (b) replaced by a successor index using, in the determination of the Index Sponsor, 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 of the relevant S&P GSCI™ index 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 Sponsor 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 the Index Sponsor and Index Calculation Agent

The Index Sponsor’s and 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.

Both the Index Sponsor and 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 Sponsor will resolve such ambiguities in a reasonable manner and, if necessary, amend these Rules to reflect such resolution. Moreover the Index Sponsor 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.

None of the Index Sponsor, the Index Calculation Agent or any of their 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 Sponsor or 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 Sponsor, the Index Calculation Agent or any other Relevant Person in respect of the Contag Beta FE and LE Class A Indices none of the 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.

These Rules shall be governed by and construed in accordance with the laws of England.

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J. P. Morgan Contag  
Module B(ii): J.P. Morgan Contag Beta  
Single Commodity Indices

August 2009, updated November 2012 and  
March 2013

**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 the document “J.P. Morgan Contag Module A: Selection Methodology”)

## 2. This Document

This document, Module B(ii) (*J.P. Morgan Contag Beta Single Commodity Indices*), explains the J.P. Morgan Contag Beta Single Commodity Indices, 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 J.P. Morgan Contag Beta Single Commodity Index. At its discretion, the Index Sponsor may create additional J.P. Morgan Contag Beta Single Commodity Indices, the rules of which will be included in a later Module that will be made available by the Index Sponsor and which will supplement this document.

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 Beta Indices” (the “Beta Index Document”) and together they comprise the rules (the “Rules”) of the J. P. Morgan Contag Beta Single Commodity Indices. These Rules may be amended or supplemented from time to time at the discretion of the Index Sponsor and will be re-published no later than thirty (30) calendar days following such amendment or supplement.

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## 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.

|                    |   |
|--------------------|---|
| Relevant Commodity | In respect of each J.P. Morgan Contag Beta Single Commodity Index, the Eligible Commodity to which such index takes exposure through the appropriate Contag Contract. |
|--------------------|---|

## 4. Overview

Each J.P. Morgan Contag Beta Single Commodity Index reflects the return of synthetic exposure in an investment in a single Eligible Commodity (the “Relevant Commodity”), following the Selection Methodology described in the Selection Methodology Document to determine the Contag Contract to which the 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.



## 5. Externally Specified Particulars in Common to each J.P. Morgan Contag Beta Single Commodity Index

The Externally Specified Particulars shown in Table 1 (*Externally Specified Particulars common to each J.P. Morgan Contag Beta Single Commodity Index*) below are common to each J.P. Morgan Contag Beta Single Commodity Index.

| <i>Externally Specified Particular</i> | <i>Definition in respect of each J.P. Morgan Contag Beta Single Commodity Index</i>  |
|--|--|
| Commodity Weights                      | The Commodity Weight of the Relevant Commodity is 1 and the Commodity Weight of all other Eligible Commodities is 0.                                 |
| Initial Index Level                    | 100  |
| Roll Period Starting Day               | 1  |
| Roll Period Length                     | 10   |
| Weights Period                         | There is only one Weights Period for all applicable months in connection with the calculation of the J.P. Morgan Contag Beta Single Commodity Index. |

**Table 1: Externally Specified Particulars common to each J.P. Morgan Contag Beta Single Commodity Index**

## 6. Externally Specified Particulars Specific to each J.P. Morgan Contag Beta Single Commodity Index

The Externally Specified Particulars shown in Table 2: (*Externally Specified Particulars specific to each J. P. Morgan Contag Beta Single Commodity Index*) below are specific to each J.P. Morgan Contag Beta Single Commodity Index.

| <i>Relevant Commodity (Relevant Exchange)</i> | <i>Initial Index Day</i> | <i>Index Name</i>   | <i>Index Ticker</i> |
|---|--------------------------|---|---------------------|
| WTI Crude Oil (NYMEX)                         | 3-Jan-1991               | J.P. Morgan Contag Beta WTI Crude Oil Excess Return Index   | JCTABCLE            |
| Brent Crude Oil (ICE)                         | 3-Jan-1991               | J.P. Morgan Contag Beta Brent Crude Oil Excess Return Index | JCTABCOE            |
| Heating Oil (NYMEX)                           | 3-Jan-1991               | J.P. Morgan Contag Beta Heating Oil Excess Return Index     | JCTABHOE            |
| Gas Oil (ICE)                                 | 3-Jan-1991               | J.P. Morgan Contag Beta Gas Oil Excess Return Index         | JCTABQSE            |
| RBOB Gasoline (NYMEX)                         | 3-Jan-1991               | J.P. Morgan Contag Beta Gasoline Excess Return Index        | JCTABXBE            |
| Natural Gas (NYMEX)                           | 3-Jan-1991               | J.P. Morgan Contag Beta Natural Gas Excess Return Index     | JCTABNGE            |
| Wheat (CBOT)                                  | 3-Jan-1991               | J.P. Morgan Contag Beta Wheat Excess Return Index           | JCTABWE             |
| Kansas Wheat (KCBOT)                          | 3-Jan-1991               | J.P. Morgan Contag Beta Kansas Wheat Excess Return Index    | JCTABKWE            |
| Soybeans (CBOT)                               | 3-Jan-1991               | J.P. Morgan Contag Beta Soybeans Excess Return Index        | JCTABSE             |
| Soybean Meal (CBOT)                           | 2-Jan-1997               | J.P. Morgan Contag Beta Soybean Meal Excess Return Index    | JCTABSME            |
| Soybean Oil (CBOT)                            | 30-Dec-1994              | J.P. Morgan Contag Beta Soybean Oil Excess Return Index     | JCTABBOE            |
| Corn (CBOT)                                   | 3-Jan-1991               | J.P. Morgan Contag Beta Corn Excess Return Index            | JCTABCE             |
| Coffee (NYBOT)                                | 3-Jan-1991               | J.P. Morgan Contag Beta Coffee Excess Return Index          | JCTABKCE            |
| Sugar (NYBOT)                                 | 3-Jan-1991               | J.P. Morgan Contag Beta Sugar Excess Return Index           | JCTABSBE            |
| Cotton (NYBOT)                                | 3-Jan-1991               | J.P. Morgan Contag Beta Cotton Excess Return Index          | JCTABCTE            |
| Cocoa (NYBOT)                                 | 3-Jan-1991               | J.P. Morgan Contag Beta Cocoa Excess                        | JCTABCCE            |

|                     |             |   |            |
|---------------------|-------------|---|------------|
|                     |             | Return Index  |            |
| Aluminium (LME)     | 3-Jan-1997  | J.P. Morgan Contag Beta Aluminium Excess Return Index     | JCTABLAE   |
| Copper (LME)        | 3-Jan-1997  | J.P. Morgan Contag Beta Copper Excess Return Index        | JCTABLPE   |
| Lead (LME)          | 3-Jan-1997  | J.P. Morgan Contag Beta Lead Excess Return Index          | JCTABLELLE |
| Nickel (LME)        | 3-Jan-1997  | J.P. Morgan Contag Beta Nickel Excess Return Index        | JCTABLNE   |
| Zinc (LME)          | 3-Jan-1997  | J.P. Morgan Contag Beta Zinc Excess Return Index          | JCTABLXE   |
| Gold (COMEX)        | 3-Jan-1991  | J.P. Morgan Contag Beta Gold Excess Return Index          | JCTABGCE   |
| Silver (COMEX)      | 3-Jan-1991  | J.P. Morgan Contag Beta Silver Excess Return Index        | JCTABSIE   |
| Copper (COMEX)      | 30-Dec-1994 | J.P. Morgan Contag Beta Comex Copper Excess Return Index  | JCTABHGE   |
| Lean Hogs (CME)     | 3-Jan-1991  | J.P. Morgan Contag Beta Lean Hogs Excess Return Index     | JCTABLHE   |
| Live Cattle (CME)   | 3-Jan-1991  | J.P. Morgan Contag Beta Live Cattle Excess Return Index   | JCTABLCE   |
| Feeder Cattle (CME) | 3-Jan-1991  | J.P. Morgan Contag Beta Feeder Cattle Excess Return Index | JCTABFCE   |

**Table 2: Externally Specified Particulars specific to each J. P. Morgan Contag Beta Single Commodity Index**

### **7. Responsibility of the Index Sponsor and Index Calculation Agent**

The Index Sponsor's and the Index Calculation Agent's determinations in respect of the J.P. Morgan Contag Beta Single Commodity Indices and interpretation of the Rules shall be final.

The Index Sponsor and 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 and the Index Sponsor will resolve such ambiguities in a reasonable manner and, if necessary, amend these Rules to reflect such resolution.

None of the Index Sponsor, the Index Calculation Agent nor any of their respective 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 J.P. Morgan Contag Beta Single Commodity 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 J.P. Morgan Contag Beta Single Commodity Indices or the Index Levels. All determinations of the Index Calculation Agent and Index Sponsor in respect of the J.P. Morgan Contag Beta Single Commodity 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, the Index Sponsor or any other Relevant Person in respect of the J.P. Morgan Contag Beta Single Commodity Indices, none of the Index Sponsor, 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

### **8. 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 J.P. Morgan Contag Beta Single Commodity Indices, then the Index Calculation Agent may, if practicable and the correction is deemed material by the Index Sponsor, 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.

## **9. Notices, Disclaimers and Conflicts**

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The Index Calculation Agent is under no obligation to continue the calculation, publication and dissemination of any of the J.P. Morgan Contag Beta Single Commodity Indices or any Index Level.

During the course of their normal business, the Index Sponsor, 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 J.P. Morgan Contag Beta Single Commodity 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 J.P. Morgan Contag Beta Single Commodity 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. None of the Index Sponsor, 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 Sponsor, 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 J.P. Morgan Contag Beta Single Commodity 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.

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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.

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**J.P. Morgan Contag**  
**Module B(iv): J.P. Morgan Contag Beta Full**  
**Energy Class A Total Return Index and the**  
**J.P. Morgan Contag Beta Light Energy**  
**Class A Total Return Index**

September 2009  
Updated July 2011

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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(iv) (*J.P. Morgan Contag Beta Full Energy Class A Total Return Index and the J.P. Morgan Contag Beta Light Energy Class A Total Return Index*), explains the J.P. Morgan Contag Beta Full Energy Class A Total Return Index (“Contag Beta FE Class A TR”) and the J.P. Morgan Contag Beta Light Energy Class A Total Return Index (“Contag Beta LE Class A TR”), 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 TR and Contag Beta LE Class A TR.

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 Total Return Index and the J.P. Morgan Contag Beta Light Energy Class A Total Return Index. These Rules may be amended or supplemented from time to time at the discretion of the Index Sponsor and will be re-published no later than thirty (30) calendar days following such amendment or supplement. Moreover the Index Sponsor 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 Sponsor. A copy of the Rules is available from the Index Sponsor.

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## 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 superseded from time to time by the Index Sponsor.<br><br>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.   |
| T-Bill Rate            | means, in respect of a Dealing Day, the 3 month weekly Auction High Discount Rate for United States Treasury Bills on the Dealing Day immediately preceding the relevant Dealing Day, as reported on the Bloomberg® Ticker USB3MTA and expressed as a money market rate; provided, however if such rate is not available at the applicable Bloomberg Ticker, the rate will be determined in accordance with section 10 below.  |

#### 4. Overview

Contag Beta FE Class A TR and Contag Beta LE Class A TR 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. In addition to the returns of the Contag Contracts held each month, each index also provides exposure to the returns of 3-month T-Bills. 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 TR 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 TR 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 TR and Contag Beta LE Class A TR 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 TR*) and Section 6 (*Externally Specified Particulars: Contag Beta LE Class A TR*) below.

#### 5. Calculation of Class A Total Return Indices

The following section 5.1 (“The Index Level”) replaces section 5.6 (“The Index Level”) of the Beta Index Document for the purposes of calculating the Contag Beta FE Class A TR and Contag Beta LE Class A TR:

##### 5.1 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:

$$IndexTR_d = IndexTR_{d-1} \times [1 + IR_d + TBR_d] \times (1 + TBR_d)^{A(d)}$$

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.

$TBR_d$  means the Treasury Bill return on Dealing day d, calculated using the following formula:

$$\left( \left( 1 - \frac{91}{360} \times TBILL_{d-1} \right)^{\frac{-1}{91}} \right) - 1$$

$TBILL_{d-1}$  means the T-Bill Rate on Dealing Day d-1 as defined in section 3

$A(d)$  means the number of calendar days which are not Dealing Days from (and excluding) Dealing Day d-1 to (and including) Dealing Day d.



6. Externally Specified Particulars: Contag Beta FE Class A TR

The Externally Specified Particulars in respect of Contag Beta FE Class A TR are shown in Table 1 (*Externally Specified Particulars in respect of Contag Beta FE Class A TR*) below:

| <i>Externally Specified Particular</i> | <i>Definition in respect of Contag Beta FE Class A TR (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 Total Return Index   |
| Index Ticker                           | JCTABFET   |
| 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 TR**

7. Externally Specified Particulars: Contag Beta LE Class A TR

The Externally Specified Particulars in respect of Contag Beta LE Class A TR are shown in Table 2 (*Externally Specified Particulars in respect of Contag Beta LE Class A TR*) below:

| <i>Externally Specified Particular</i> | <i>Definition in respect of the Contag Beta LE Class A TR (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 Total Return Index  |
| Index Ticker                           | JCTABLET   |
| 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 TR**

8. Regular amendments to Commodity Weights

The Commodity Weights in respect of each of Contag Beta FE Class A TR and Contag Beta LE Class A TR (together, in this document, the “Contag Beta FE and LE Class A TR 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 TR 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 of the S&P GSCI™ 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 TR Indices. The Commodity Weights for the Contag Beta FE and LE Class A TR 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.

## 9. Changes to the Relevant Eligible Commodities

### 9.1 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 Sponsor to the Relevant Eligible Commodities contained in the Contag Beta FE and LE Class A TR Indices. Such amendments shall be published by the Index Sponsor 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.

### 9.2 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 TR 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 Sponsor.

## 10. Additional Extraordinary Events

In addition to the Extraordinary Events section of the Beta Index Document, the following actions will be taken by the Calculation Agent following any abnormalities in the publication of the T-Bill Rate.

If, in respect of a Dealing Day, such rate for such date does not appear on Bloomberg® ticker USB3MTA (or any official successor page thereto), the rate for that date will be the Bond Equivalent Yield of the rate displayed in H.15 Daily Update, currently <http://www.federalreserve.gov/releases/h15/update/>, (or any official successor page thereto), or such other recognized electronic source used for the purpose of displaying such 3-month T-bill rate for that day under the caption "U.S. Government Securities/Treasury bills/Auction high" converted by the Calculation Agent in a commercially reasonable manner to bank discount basis such that it is expressed in the same manner as the T-Bill Auction High Rate.

If such rate for such date does not appear on Bloomberg® ticker USB3MTA (or any official successor page thereto) and such 3-month rate is not displayed in the H.15 Daily Update under the caption "U.S. Government securities/Treasury bills/Auction high" or another recognized electronic source, the rate for that date will be the Bond Equivalent Yield of the auction rate for those Treasury Bills as announced by the United States Department of Treasury, converted by the Calculation Agent in a commercially reasonable manner to bank discount basis such that it is expressed in the same manner as the T-Bill Auction High Rate.

If the rate for United States 3-month Treasury Bills is still not available, the rate will be determined by Calculation Agent in good faith and in a commercially reasonable manner.

## 11. Modifications to or Cancellation of the S&P GSCI™ Index and the S&P GSCI™ Light Energy Index

### 11.1

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 Sponsor, or (b) replaced by a successor index using, in the determination of the Index Sponsor, 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.

## 11.2

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 TR Indices the index sponsor of the relevant S&P GSCI™ index 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 TR Indices, then the Index Sponsor 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 TR Indices to account for such modification.

## 11.3

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 TR 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:

- (iii) continue to calculate the Index Level of the relevant Contag Beta FE and LE Class A TR Indices using the latest available Externally Specified Particulars at the time the S&P GSCI Family-Index was cancelled; or
- (iv) 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 TR Indices to account for such cancellation.

## 12. Responsibility of the Index Sponsor and Index Calculation Agent

The Index Sponsor's and the Index Calculation Agent's determinations in respect of the Contag Beta FE and LE Class A TR Indices and interpretation of the Rules shall be final.

Both the Index Sponsor and 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 Sponsor will resolve such ambiguities in a reasonable manner and, if necessary, amend these Rules to reflect such resolution. Moreover the Index Sponsor 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.

None of the Index Sponsor, the Index Calculation Agent or any of their respective 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 TR 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 TR Indices or the Index Levels. All determinations of the Index Sponsor or the Index Calculation Agent in respect of the Contag Beta FE and LE Class A TR 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 Sponsor, the Index Calculation Agent or any other Relevant Person in respect of the Contag Beta FE and LE Class A TR Indices, none of the Relevant Person shall be under any obligation to revise any determination or calculation made or action taken for any reason.

## 13. 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 TR 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.

#### 14. Risk Factors specific to the Contag Beta FE and LE Class A TR Indices – Adjustment to the Beta Index Document

The Contag Beta FE and LE Class A TR Indices are total return indices. As a result, paragraph 3 of the Risk Factors in the Beta Index Document should be replaced with the following:

Contag Beta Indices are “total 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 “total return” indices which means that they synthetically replicate the returns accrued from a collateralized investment in commodity futures or, in other words, the sum of the price return, the roll return and the collateral return associated with an investment in such futures contracts.

#### 15. 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 TR Indices, or for delays, omissions or interruptions in the delivery of the Contag Beta FE and LE Class A TR 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 TR 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 TR 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 TR 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 TR 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 TR 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 TR 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 TR 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 TR 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 TR 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 TR 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 Class A Total Return Index", "J.P. Morgan Contag Beta Light Energy Class A Total Return Index", "Contag Beta FE and LE Class A TR 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 B(v): J.P. Morgan Contag Beta  
Alternate Benchmark Class A Excess Return  
Index**

Last modified December 2012

**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(v) (*J.P. Morgan Contag Beta Alternate Benchmark Class A Excess Return Index*), explains the J.P. Morgan Contag Beta Alternate Benchmark Class A Excess Return Index (“Contag Beta AB Class A ER”), which is 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 Contag Beta AB Class A ER.

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 Alternate Benchmark Class A Excess Return Index. These Rules may be amended or supplemented from time to time at the discretion of the Index Sponsor and will be re-published no later than thirty (30) calendar days following such amendment or supplement. The Index Sponsor 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 plc. (“JPMS”) of 25 Bank Street, London EC14 5JP, UK in its capacity as Index Sponsor. A copy of the Rules is available from the Index Sponsor.

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 the Index Sponsor, the Index Calculation Agent, and their affiliates may have positions or engage in transactions in securities or other financial instruments based on or indexed or otherwise related to Contag Beta AB Class A ER.

## 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.

|                            |  |
|----------------------------|--|
| CIM Determination Date     | has the meaning given in the DJ-UBS CI Methodology.  |
| Commodity Index Percentage | has the meaning given in the DJ-UBS CI Methodology.  |
| Designated Contract        | has the meaning given in the DJ-UBS CI Methodology.  |
| DJ-UBS CI Methodology      | means the document setting out the rules of the DJ-UBS CI <sup>SM</sup> Indices entitled “DJ-UBS CI <sup>SM</sup> Index Methodology” as updated, modified and superseded from time to time by the DJ-UBS Index Sponsor and available at <a href="http://www.djindexes.com/ubs/index.cfm?go=handbook">www.djindexes.com/ubs/index.cfm?go=handbook</a> . |



At the time of publication of this document the relevant edition is dated June 2009 Edition.

|                               |   |
|-------------------------------|---|
| DJ-UBS Index Commodity        | has the meaning ascribed to the defined term “Index Commodity” in the DJ-UBS CI Methodology.  |
| DJ-UBS Index Sponsor          | means Dow Jones & Company, Inc. (“Dow Jones”) and UBS Securities LLC (“UBS”) and their respective successors.                         |
| Relevant Eligible Commodities | means the Eligible Commodities which correspond to the Designated Contracts used in the calculation of DJ-UBS CI <sup>SM</sup> Index. |

4. Overview

Contag Beta AB Class A ER reflects 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 the 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 AB Class A ER 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 DJ-UBS CI<sup>SM</sup> Index (Bloomberg ticker: DJUBS).

5. Externally Specified Particulars: Contag Beta AB Class A ER

The Externally Specified Particulars in respect of Contag Beta AB Class A ER are shown in Table 1 (*Externally Specified Particulars in respect of Contag Beta AB Class A ER*) below:

| <i>Externally Specified Particular</i> | <i>Definition in respect of Contag Beta AB Class A ER (in this table, the “Index”)</i>  |
|--|---|
| Commodity Weights                      | <p>The Commodity Weight of each Eligible Commodity <math>c</math> in Contag Beta AB Class A ER is equal to:</p> $\frac{CIP_c}{CPO_d^c(d-1)}$ <p>where:</p> <p><math>CIP_c</math> is, with respect to DJ-UBS CI<sup>SM</sup> Index (Bloomberg ticker: DJUBS), the Commodity Index Percentage for Exchange Commodity <math>c</math>;</p> <p><math>CPO_d^c(d-1)</math> is the Contract Price Outgoing for <math>c</math> with Valuation Day <math>d-1</math> and Composition Day <math>d</math>; and</p> <p><math>d</math> is the first day of the roll period in the first month of the new Weights Period,</p> <p><i>provided, however, that if an Eligible Commodity <math>c</math> (as defined in Module A) is not a DJ-UBS Index Commodity, then such Eligible Commodity <math>c</math> will have a Commodity Weight equal to zero.</i></p> |

|                          |   |
|--------------------------|---|
| Eligible Commodity       | means, unless otherwise specified herein and with respect to the Contag Beta AB Class A ER, a DJ-UBS Index Commodity.   |
| Initial Index Day        | 30th December 1994  |
| Initial Index Level      | 100   |
| Index Name               | J.P. Morgan Contag Beta Alternate Benchmark Class A Excess Return Index   |
| Index Ticker             | JCTABDJE  |
| Roll Period Starting Day | 1   |
| Roll Period Length       | 10  |
| Weights Periods          | means, with respect to DJ-UBS CI <sup>SM</sup> Index (Bloomberg ticker: DJUBS), the period from and including the first Dealing Day of the calendar month in which the CIM Determination Date t occurs through and including the first Dealing Day of the calendar month in which the CIM Determination Date t +1 occurs. |

**Table 1: Externally Specified Particulars in respect of Contag Beta AB Class A ER**

#### 6. Regular amendments to Commodity Weights

The Commodity Weights in respect of the Contag Beta AB Class A ER are determined by reference to the Commodity Index Percentages as specified in the DJ-UBS CI Methodology and as detailed above. The Commodity Weights for the Contag Beta AB Class A ER Index are expected to change on an annual basis in line with the frequency with which the Commodity Index Percentages are routinely updated by the DJ-UBS Index Sponsor in respect of the DJ-UBS CI<sup>SM</sup> Index. Furthermore, from time to time the DJ-UBS Index Sponsor may change the Commodity Index Percentages on an intra-annual basis, in which case a new Weights Period will begin on the first Dealing Day of the calendar month in which the CIM Determination Date t occurs for the Commodity Index Percentages. Corresponding changes will be made by the Index Sponsor to the Weights Period for the Contag Beta AB Class A ER Index. The Commodity Weights for the Contag Beta AB Class A ER Index in respect of a given Weights Period will always be determined by reference to the Commodity Index Percentages in respect of the corresponding CIM Determination Date.

#### 7. Changes to the Relevant Eligible Commodities

##### 7.1 Amendment to Relevant Eligible Commodities

In the event that a Designated Contract is added to or removed from the calculation of the DJ-UBS CI<sup>SM</sup> Index, corresponding changes shall be made by the Index Sponsor to the Relevant Eligible Commodities contained in the Contag Beta AB Class A ER Index. Such amendments shall be published by the Index Sponsor and shall be effective for the Weights Period corresponding to the CIM Determination Date immediately following the beginning of the Weights Period in respect of which such Designated Contract is added or removed from the calculation of DJ-UBS CI<sup>SM</sup> Index.

## 7.2 Addition of Eligible Commodities

In the event that a Designated Contract is added to the calculation of the DJ-UBS CI<sup>SM</sup> 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 AB Class A ER Index, effective as of the Weights Period corresponding to the DJ-UBS CI Period for which the addition is set to take effect in the DJ-UBS CI<sup>SM</sup> 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 Sponsor.

## 8. Modifications to or Cancellation of the DJ-UBS CI<sup>SM</sup> Index

### 8.1

If the DJ-UBS CI<sup>SM</sup> Index is (a) not calculated and announced by the DJ-UBS Index Sponsor but is calculated and announced by a successor sponsor acceptable to the Index Sponsor, or (b) replaced by a successor index using, in the determination of the Index Sponsor, the same or substantially similar formula for and method of calculation as used in the calculation of the DJ-UBS CI<sup>SM</sup> 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.

### 8.2

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 AB Class A ER Index the DJ-UBS Index Sponsor makes a material change in the formula for or the method of calculating the DJ-UBS CI<sup>SM</sup> Index (other than a modification prescribed in that formula or method to maintain such index in the the DJ-UBS CI<sup>SM</sup> Index or prescribed routine events) which affects the ability of the Index Calculation Agent to define an Externally Specified Particular in respect of the Contag Beta AB Class A ER Index, then the Index Sponsor 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 AB Class A ER 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 the Contag Beta AB Class A ER Index, the DJ-UBS Index Sponsor permanently cancels the DJ-UBS CI<sup>SM</sup> Index and no successor index exists, the Index Sponsor shall, in good faith, either:

- (v) ensure that the Index Calculation Agent continues to calculate the Index Level of the Contag Beta AB Class A ER Index using the latest available Externally Specified Particulars at the time the DJ-UBS CI<sup>SM</sup> Index was cancelled; or
- (vi) 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 AB Class A ER Index to account for such cancellation.

## 9. Responsibility of the Index Sponsor and Index Calculation Agent

The Index Sponsor’s and the Index Calculation Agent’s determinations in respect of the Contag Beta AB Class A ER Index and interpretation of the Rules shall be final.

The Index Sponsor and 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 and Index Sponsor will resolve such ambiguities in a reasonable manner and, if necessary, the Index Sponsor will amend these Rules to reflect such resolution. The Index Sponsor 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.

None of the Index Sponsor, the Index Calculation Agent nor any of their respective 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 AB Class A ER Index 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 AB Class A ER Index or the Index Levels. All determinations of the Index Calculation Agent and Index Sponsor in respect of the Contag Beta AB Class A ER 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, the Index Sponsor or any other Relevant Person in respect of the Contag Beta AB Class A ER Index, none of the Index Sponsor, 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.

#### 10. 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 AB Class A ER Index, then the Index Calculation Agent may, if practicable and the correction is deemed material by the Index Sponsor, 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.

#### 11. Notices, Disclaimers and Conflicts

None of the Index Sponsor, 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 Rules or the Contag Beta AB Class A ER Index, or for delays, omissions or interruptions in the delivery of the Contag Beta AB Class A ER Index or related data. None of the Index Sponsor, 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 AB Class A ER Index, including but not limited to the trading of or investments in products based on or indexed or otherwise related to the Contag Beta AB Class A ER Index, any data related thereto or any components thereof. None of the Index Sponsor, 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 Contag Beta AB Class A ER Index or any data related thereto. Without limitation to any of the foregoing, in no event shall any of the Index Sponsor, the Index Calculation Agent nor 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 AB Class A ER Index 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 AB Class A ER Index or any Index Level.

During the course of their normal business, the Index Sponsor, 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 AB Class A ER Index 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 AB Class A ER Index 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. None of the Index Sponsor, 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 Sponsor, 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 AB Class A ER Index, 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 AB Class A ER Index is described as having exposure to 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 AB Class A ER Index 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 Sponsor. "J.P. Morgan Contag Beta Alternate Benchmark Class A Excess Return Index", "Contag Beta AB Class A ER Index" and "J.P. Morgan Contag" are the intellectual property of the Index Sponsor 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 Sponsor. 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 English law.

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**J.P. Morgan Contag  
Module B(vi): J.P. Morgan Contag Beta  
Alternate Benchmark Class A Total Return  
Index**

January 2010,  
updated December 2012

**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(vi) (*J.P. Morgan Contag Beta Alternate Benchmark Class A Total Return Index*), explains the J.P. Morgan Contag Beta Alternate Benchmark Class A Total Return Index (“Contag Beta AB Class A TR”), which is 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 Contag Beta AB Class A TR.

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 Alternate Benchmark Class A Total Return Index. These Rules may be amended or supplemented from time to time at the discretion of the Index Sponsor and will be re-published no later than thirty (30) calendar days following such amendment or supplement. The Index Sponsor 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 plc. (“JPMS”) of 25 Bank Street, London EC14 5JP, UK in its capacity as Index Sponsor. A copy of the Rules is available from the Index Sponsor.

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 the Index Sponsor, the Index Calculation Agent and their affiliates may have positions or engage in transactions in securities or other financial instruments based on or indexed or otherwise related to Contag Beta AB Class A TR.

## 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.

|                            |  |
|----------------------------|--|
| CIM Determination Date     | has the meaning given in the DJ-UBS CI Methodology.  |
| Commodity Index Percentage | has the meaning given in the DJ-UBS CI Methodology.  |
| Designated Contract        | has the meaning given in the DJ-UBS CI Methodology.  |
| DJ-UBS CI Methodology      | means the document setting out the rules of the DJ-UBS CI <sup>SM</sup> Indices entitled “DJ-UBS CI <sup>SM</sup> Index Methodology” as updated, modified and superseded from time to time by the DJ-UBS Index Sponsor and available at <a href="http://www.djindexes.com/ubs/index.cfm?go=handbook">www.djindexes.com/ubs/index.cfm?go=handbook</a> . |

At the time of publication of this document the relevant edition is dated June 2009 Edition.

|                               |   |
|-------------------------------|---|
| DJ-UBS Index Commodity        | has the meaning ascribed to the defined term “Index Commodity” in the DJ-UBS CI Methodology.  |
| Relevant Eligible Commodities | means the Eligible Commodities which correspond to the Designated Contracts used in the calculation of DJ-UBS CI <sup>SM</sup> Index.   |
| DJ-UBS Index Sponsor          | means UBS Securities LLC (“UBS”) and CME Group Index Services LLC (“CME Indices”) and their respective successors.  |
| T-Bill Rate                   | means, in respect of a Dealing Day, the 3 month weekly Auction High Discount Rate for United States Treasury Bills on the Dealing Day immediately preceding the relevant Dealing Day, as reported on the Bloomberg® Ticker USB3MTA and expressed as a money market rate; <i>provided, however</i> if such rate is not available at the applicable Bloomberg Ticker, the rate will be determined in accordance with section 9 below. |

#### 4. Overview

Contag Beta AB Class A TR reflects 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 the Index gains exposure. In addition to the returns of the Contag Contracts held each month, the index also provides exposure to the returns of 3-month T-Bills. 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 AB Class A TR 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 DJ-UBS CI<sup>SM</sup> Index (Bloomberg ticker: DJUBS).

#### 5. Calculation of the Class A Total Return Index

The following section 5.1 (“The Index Level”) replaces section 5.6 (“The Index Level”) of the Beta Index Document for the purposes of calculating the Contag Beta AB Class A TR:

##### 5.1 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:

$$IndexTR_d = IndexTR_{d-1} \times [1 + IR_d + TBR_d] \times (1 + TBR_d)^{A(d)}$$

Where:

*IR<sub>d</sub>* means the Investment Return for Dealing Day *d*, 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  $d-1$ ;

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  $d$ ;

$TBR_d$  means the Treasury Bill return on Dealing day  $d$ , calculated using the following formula:

$$\left( \left( 1 - \frac{91}{360} \times TBILL_{d-1} \right)^{\frac{-1}{91}} \right) - 1;$$

$TBILL_{d-1}$  means the T-Bill Rate on Dealing Day  $d-1$  as defined in section 3; and

$A(d)$  means the number of calendar days which are not Dealing Days from (and excluding) Dealing Day  $d-1$  to (and including) Dealing Day  $d$ .

#### 6. Externally Specified Particulars: Contag Beta AB Class A TR

The Externally Specified Particulars in respect of Contag Beta AB Class A TR are shown in Table 1 (*Externally Specified Particulars in respect of Contag Beta AB Class A TR*) below:

| <i>Externally Specified Particular</i> | <i>Definition in respect of Contag Beta AB Class A TR (in this table, the "Index")</i>  |
|--|---|
| Commodity Weights                      | <p>The Commodity Weight of each Eligible Commodity <math>c</math> in Contag Beta AB Class A TR is equal to:</p> $\frac{CIP_c}{CPO_d^c(d - 1)}$ <p>where:</p> <p><math>CIP_c</math> is, with respect to DJ-UBS CI<sup>SM</sup> Index (Bloomberg ticker: DJUBS), the Commodity Index Percentage for Eligible Commodity <math>c</math>;</p> <p><math>CPO_d^c(d - 1)</math> is the Contract Price Outgoing for <math>c</math> with Valuation Day <math>d-1</math> and Composition Day <math>d</math>; and</p> <p><math>d</math> is the first day of the roll period in the first month of the new Weights Period,</p> <p><i>provided, however, that if an Eligible Commodity <math>c</math> (as defined</i></p> |

|                          |   |
|--------------------------|---|
|                          | in Module A) is not a DJ-UBS Index Commodity, then such Eligible Commodity c will have a Commodity Weight equal to zero.  |
| Eligible Commodity       | means, unless otherwise specified herein and with respect to the Contag Beta AB Class A TR, a DJ-UBS Index Commodity.   |
| Initial Index Day        | 30th December 1994  |
| Initial Index Level      | 100   |
| Index Name               | J.P. Morgan Contag Beta Alternate Benchmark Class A Total Return Index  |
| Index Ticker             | JCTABDJT  |
| Roll Period Starting Day | 1   |
| Roll Period Length       | 10  |
| Weights Periods          | means, with respect to DJ-UBS CI <sup>SM</sup> Index (Bloomberg ticker: DJUBS), the period from and including the first Dealing Day of the calendar month in which the CIM Determination Date t occurs through and including the first Dealing Day of the calendar month in which the CIM Determination Date t +1 occurs. |

**Table 1: Externally Specified Particulars in respect of Contag Beta AB Class A TR**

#### 7. Regular amendments to Commodity Weights

The Commodity Weights in respect of the Contag Beta AB Class A TR are determined by reference to the Commodity Index Percentages as specified in the DJ-UBS CI Methodology and as detailed above. The Commodity Weights for the Contag Beta AB Class A TR Index are expected to change on an annual basis in line with the frequency with which the Commodity Index Percentages are routinely updated by the DJ-UBS Index Sponsor in respect of the DJ-UBS CI<sup>SM</sup> Index. Furthermore, from time to time the DJ-UBS Index Sponsor may change the Commodity Index Percentages on an intra-annual basis, in which case a new Weights Period will begin on the first Dealing Day of the calendar month in which the CIM Determination Date t occurs for the Commodity Index Percentages. Corresponding changes will be made by the Index Sponsor to the Weights Period for the Contag Beta AB Class A TR Index. The Commodity Weights for the Contag Beta AB Class A TR Index in respect of a given Weights Period will always be determined by reference to the Commodity Index Percentages in respect of the corresponding CIM Determination Date.

#### 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 the DJ-UBS CI<sup>SM</sup> Index, corresponding changes shall be made by the Index Sponsor to the Relevant Eligible Commodities contained in the Contag Beta AB Class A TR Index. Such amendments shall be published by the Index Sponsor and shall be effective for the Weights Period corresponding to the CIM Determination Date immediately following the beginning of the Weights Period in respect of which such Designated Contract is added or removed from the calculation of DJ-UBS CI<sup>SM</sup> Index.

##### 8.2 Addition of Eligible Commodities

In the event that a Designated Contract is added to the calculation of the DJ-UBS CI<sup>SM</sup> 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 AB Class A TR Index, effective as of the Weights Period corresponding to the DJ-UBS CI Period for which the addition is set to take effect in the DJ-UBS CI<sup>SM</sup> 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 Sponsor.

#### 9. Additional Extraordinary Events

In addition to the Extraordinary Events section of the Beta Index Document, the following actions will be taken by the Index Calculation Agent following any abnormalities in the publication of the T-Bill Rate.

If, in respect of a Dealing Day, such rate for such date does not appear on Bloomberg® ticker USB3MTA (or any official successor page thereto), the rate for that date will be the Bond Equivalent Yield of the rate displayed in H.15 Daily Update, currently <http://www.federalreserve.gov/releases/h15/update/>, (or any official successor page thereto), or such other recognized electronic source used for the purpose of displaying such 3-month T-bill rate for that day under the caption "U.S. Government Securities/Treasury bills/Auction high" converted by the Index Calculation Agent in a commercially reasonable manner to bank discount basis such that it is expressed in the same manner as the T-Bill Auction High Rate.

If such rate for such date does not appear on Bloomberg® ticker USB3MTA (or any official successor page thereto) and such 3-month rate is not displayed in the H.15 Daily Update under the caption "U.S. Government Securities/Treasury bills/Auction high" or another recognized electronic source, the rate for that date will be the Bond Equivalent Yield of the auction rate for those Treasury Bills as announced by the United States Department of Treasury, converted by the Index Calculation Agent in a commercially reasonable manner to bank discount basis such that it is expressed in the same manner as the T-Bill Auction High Rate.

If the rate for United States 3-month Treasury Bills is still not available, the rate will be determined by Index Sponsor in good faith and in a commercially reasonable manner.

## 10. Modifications to or Cancellation of the DJ-UBS CI<sup>SM</sup> Index

### 10.1

If the DJ-UBS CI<sup>SM</sup> Index is (a) not calculated and announced by the DJ-UBS Index Sponsor but is calculated and announced by a successor sponsor acceptable to the Index Sponsor, or (b) replaced by a successor index using, in the determination of the Index Sponsor, the same or substantially similar formula for and method of calculation as used in the calculation of the DJ-UBS CI<sup>SM</sup> 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.

### 10.2

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 AB Class A TR Index the DJ-UBS Index Sponsor makes a material change in the formula for or the method of calculating the DJ-UBS CI<sup>SM</sup> Index (other than a modification prescribed in that formula or method to maintain such index in the DJ-UBS CI<sup>SM</sup> Index or prescribed routine events) which affects the ability of the Index Calculation Agent to define an Externally Specified Particular in respect of the Contag Beta AB Class A TR Index, then the Index Sponsor 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 AB Class A TR Index to account for such modification.

### 10.3

If on or prior to any Dealing Day on which the Index Calculation Agent is determining the Index Level of the Contag Beta AB Class A TR Index, the DJ-UBS Index Sponsor permanently cancels the DJ-UBS CI<sup>SM</sup> Index and no successor index exists, the Index Sponsor shall, in good faith, either:

- (vii) ensure that the Index Calculation Agent continues to calculate the Index Level of the Contag Beta AB Class A TR Index using the latest available Externally Specified Particulars at the time the DJ-UBS CI<sup>SM</sup> Index was cancelled; or
- (viii) 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 AB Class A TR Index to account for such cancellation.

## 11. Responsibility of the Index Sponsor and Index Calculation Agent

The Index Calculation Agent's determinations in respect of the Contag Beta AB Class A TR Index and interpretation of the Rules shall be final.

The Index Sponsor 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 and the Index Sponsor will resolve such ambiguities in a reasonable manner and, if necessary, the Index Sponsor will amend these Rules to reflect such resolution. The Index Sponsor 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.

None of the Index Sponsor, the Index Calculation Agent nor any of their respective 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 AB Class A TR Index 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 AB Class A TR Index or the Index Levels. All determinations of the Index Calculation Agent in respect of the Contag Beta AB Class A TR 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, the Index Sponsor or any other Relevant Person in respect of the Contag Beta AB Class A TR Index, none of the Index Sponsor, 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.

#### 12. 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 AB Class A TR Index, then the Index Calculation Agent may, if practicable and the correction is deemed material by the Index Sponsor, 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.

#### 13. Risk Factors specific to the Contag Beta AB Class A TR Index – Adjustment to the Beta Index Document

The Contag Beta AB Class A TR Index is a total return index. As a result, paragraph 3 of the Risk Factors in the Beta Index Document should be replaced with the following:

The Contag Beta AB Class A TR Index is “total 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 AB Class A TR Index is a “total return” index, which means that they synthetically replicate the returns accrued from a collateralized investment in commodity futures or, in other words, the sum of the price return, the roll return and the collateral return associated with an investment in such futures contracts.

#### 14. Notices, Disclaimers and Conflicts

None of the Index Sponsor, 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 Rules or the Contag Beta AB Class A TR Index, or for delays, omissions or interruptions in the delivery of the Contag Beta AB Class A TR Index or related data. None of the Index Sponsor, 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 AB Class A TR Index, including but not limited to the trading of or investments in products based on or indexed or otherwise related to the Contag Beta AB Class A TR Index, any data related thereto or any components thereof. None of the Index Sponsor, 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 Contag Beta AB Class A TR Index or any data related thereto. Without limitation any of the foregoing, in no event shall either of the Index Sponsor, 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 AB Class A TR Index 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 AB Class A TR Index or any Index Level.

During the course of their normal business, the Index Sponsor, 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 AB Class A TR Index 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 AB Class A TR Index 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. None of the Index Sponsor, 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 Sponsor, 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 AB Class A TR Index, 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 AB Class A TR Index is described as having exposure to 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 AB Class A TR Index 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 Sponsor. "J.P. Morgan Contag Beta Alternate Benchmark Class A Total Return Index", "Contag Beta AB Class A TR Index" and "J.P. Morgan Contag" are the intellectual property of the Index Sponsor 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 Sponsor. 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 English law.

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## **J.P. Morgan Contag Module B(viii):**

The J.P. Morgan Contag Beta Agriculture Class A Excess Return Index,  
The J.P. Morgan Contag Beta Energy Class A Excess Return Index,  
The J.P. Morgan Contag Beta Industrial Metals Class A Excess Return Index,  
The J.P. Morgan Contag Beta Livestock Class A Excess Return Index,  
The J.P. Morgan Contag Beta Non-Energy Class A Excess Return Index,  
The J.P. Morgan Contag Beta Petroleum Class A Excess Return Index,  
The J.P. Morgan Contag Beta Precious Metals Class A Excess Return Index,  
The J.P. Morgan Contag Beta Agriculture Class A Total Return Index,  
The J.P. Morgan Contag Beta Energy Class A Total Return Index,  
The J.P. Morgan Contag Beta Industrial Metals Class A Total Return Index,  
The J.P. Morgan Contag Beta Livestock Class A Total Return Index,  
The J.P. Morgan Contag Beta Non-Energy Class A Total Return Index,  
The J.P. Morgan Contag Beta Petroleum Class A Total Return Index, and  
The J.P. Morgan Contag Beta Precious Metals Class A Total Return Index

January 2010,  
Updated July 2011

# **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 the document “J.P. Morgan Contag Module A: Selection Methodology”.

## 2. This Document

This document, Module B(viii), explains each of the J.P. Morgan Contag Beta Agriculture Class A Excess Return Index (“Contag Beta Agriculture ER Class A”), the J.P. Morgan Contag Beta Energy Class A Excess Return Index (“Contag Beta Energy ER Class A”), the J.P. Morgan Contag Beta Industrial Metals Class A Excess Return Index (“Contag Beta Industrial Metals ER Class A”), the J.P. Morgan Contag Beta Livestock Class A Excess Return Index (“Contag Beta Livestock ER Class A”), the J.P. Morgan Contag Beta Non-Energy Class A Excess Return Index (“Contag Beta Non-Energy ER Class A”), the J.P. Morgan Contag Beta Petroleum Class A Excess Return Index (“Contag Beta Petroleum ER Class A”), the J.P. Morgan Contag Beta Precious Metals Class A Excess Return Index (“Contag Beta Precious Metals ER Class A” and collectively, with Contag Beta Agriculture ER Class A, Contag Beta Energy ER Class A, Contag Beta Industrial Metals ER Class A, Contag Beta Non-Energy ER Class A and Contag Beta Petroleum ER Class A, the “Contag Beta Sector ER Class A Indices” and each, individually, a “Contag Beta Sector ER Class A Index”), the J.P. Morgan Contag Beta Agriculture Class A Total Return Index (“Contag Beta Agriculture TR Class A”), the J.P. Morgan Contag Beta Energy Class A Total Return Index (“Contag Beta Energy TR Class A”), the J.P. Morgan Contag Beta Industrial Metals Class A Total Return Index (“Contag Beta Industrial Metals TR Class A”), the J.P. Morgan Contag Beta Livestock Class A Total Return Index (“Contag Beta Livestock TR Class A”), the J.P. Morgan Contag Beta Non-Energy Class A Total Return Index (“Contag Beta Non-Energy TR Class A”), the J.P. Morgan Contag Beta Petroleum Class A Total Return Index (“Contag Beta Petroleum TR Class A”), the J.P. Morgan Contag Beta Precious Metals Class A Total Return Index (“Contag Beta Precious Metals TR Class A” and collectively, with Contag Beta Agriculture TR Class A, Contag Beta Energy TR Class A, Contag Beta Industrial Metals TR Class A, Contag Beta Livestock TR Class A, Contag Beta Non-Energy TR Class A and Contag Beta Petroleum TR Class A, the “Contag Beta Sector TR Class A Indices” and each, individually, a “Contag Beta Sector TR Class A Index”), each a “Contag Beta Sector 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 Contag Beta Sector Index.

This document should be read in conjunction with the following 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”) for each of the Contag Beta Sector Indices. These Rules may be amended or supplemented from time to time at the discretion of the Index Sponsor and will be re-published no later than thirty (30) calendar days following such amendment or supplement. Moreover, the Index Sponsor 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 Sponsor. A copy of the Rules is available from the Index Sponsor.

**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 the Index Sponsor, the Index Calculation Agent and their respective 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 Sector Indices.

## 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. For the avoidance of doubt, Contract Production Weights calculated with respect to a S&P GSCI™ Sub-Index will be calculated only with respect to the S&P GSCI Commodities included in the relevant S&P GSCI™ Sub-Index.  |
| Designated Contract           | has the meaning given in the S&P GSCI Methodology.  |
| Index Sponsor                 | means Standard and Poor's, a division of the McGraw-Hill Companies, Inc.  |
| Relevant Eligible Commodities | means the Eligible Commodities which correspond to the Designated Contracts used in the calculation of the applicable S&P GSCI™ Sub-Index.  |
| S&P GSCI Commodities          | has the meaning given in the S&P GSCI Methodology.  |
| 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 superseded from time to time by the Index Sponsor.<br><br>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.  |
| S&P GSCI™ Sub-Index           | means the S&P GSCI™ Agriculture Index Excess Return, the S&P GSCI™ Energy Index Excess Return, the S&P GSCI™ Industrial Metals Index Excess Return, the S&P GSCI™ Livestock Index Excess Return, the S&P GSCI™ Non-Energy Index Excess Return, the S&P GSCI™ Petroleum Index Excess Return, the S&P GSCI™ Precious Metals Index Excess Return, the S&P GSCI™ Agriculture Index Total Return, the S&P GSCI™ Energy Index Total Return, the S&P GSCI™ Industrial Metals Index Total Return, the S&P GSCI™ Livestock Index Total Return, the S&P GSCI™ Non-Energy Index Total Return, the S&P GSCI™ Petroleum Index Total Return or the S&P GSCI™ Precious Metals Index Total Return, as applicable. |
| T-Bill Rate                   | means, in respect of a Dealing Day, the 3 month weekly Auction High Discount Rate for United States Treasury Bills on such Dealing Day, as reported on the Bloomberg® Ticker USB3MTA and expressed as a money market rate; <i>provided, however</i> if such rate is not available at the applicable Bloomberg Ticker, the rate will be determined in accordance with section 9 below.   |

#### 4. Overview

The Contag Beta Sector ER Class A Indices and the Contag Beta Sector TR Class A Indices 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. In addition to the returns of the Contag Contracts held each month, the Contag Beta Sector TR Class A Indices also provide exposure to the returns of 3-month T-Bills. 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.

Each Contag Beta Sector ER Class A Index 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 Contracts of the applicable S&P GSCI™ Sub-Index set forth in Table 1 (Contag Beta Sector Indices and their corresponding S&P GSCI™ Sub-Index) herein.

Each Contag Beta Sector TR Class A Index aims to achieve a long-only synthetic exposure to T-Bills and commodity futures contract prices, with Commodity Weights for the Relevant Eligible Commodities equal to the Contract Production Weights for the relevant Designated Contracts of the applicable S&P GSCI™ Sub-Index set forth in Table 1 (Contag Beta Sector Indices and their corresponding S&P GSCI™ Sub-Index) herein.

**Table 1: Contag Beta Sector Indices and their corresponding S&P GSCI™ Sub-Index**

| Contag Beta Sector Index                 | S&P GSCI™ Sub-Index                             | Bloomberg Ticker for the S&P GSCI™ Sub-Index |
|--|---|--|
| Contag Beta Agriculture ER Class A       | S&P GSCI™ Agriculture Index Excess Return       | SPGSAGP                                      |
| Contag Beta Energy ER Class A            | S&P GSCI™ Energy Index Excess Return            | SPGSENP                                      |
| Contag Beta Industrial Metals ER Class A | S&P GSCI™ Industrial Metals Index Excess Return | SPGSINP                                      |
| Contag Beta Livestock ER Class A         | S&P GSCI™ Livestock Index Excess Return         | SPGSLVP                                      |
| Contag Beta Non-Energy ER Class A        | S&P GSCI™ Non-Energy Index Excess Return        | SPGSNEP                                      |
| Contag Beta Petroleum ER Class A         | S&P GSCI™ Petroleum Index Excess Return         | SPGSPTP                                      |
| Contag Beta Precious Metals ER Class A   | S&P GSCI™ Precious Metals Index Excess Return   | SPGSPMP                                      |
| Contag Beta Agriculture TR Class A       | S&P GSCI™ Agriculture Index Total Return        | SPGSAGTR                                     |
| Contag Beta Energy TR Class A            | S&P GSCI™ Energy Index Total Return             | SPGSENTR                                     |
| Contag Beta Industrial Metals TR Class A | S&P GSCI™ Industrial Metals Index Total Return  | SPGSINTR                                     |
| Contag Beta Livestock TR Class A         | S&P GSCI™ Livestock Index Total Return          | SPGSLVTR                                     |
| Contag Beta Non-Energy TR Class A        | S&P GSCI™ Non-Energy Index Total Return         | SPGSNETR                                     |
| Contag Beta Petroleum TR Class A         | S&P GSCI™ Petroleum Index Total Return          | SPGSPTTR                                     |
| Contag Beta Precious Metals TR Class A   | S&P GSCI™ Precious Metals Index Total Return    | SPGSPMTR                                     |

5. Externally Specified Particulars: Contag Beta Sector Indices

The Externally Specified Particulars in respect of each of the Contag Beta Sector Indices are shown in Table 2 (*Externally Specified Particulars in respect of each of the Contag Beta Sector Indices*) below:

**Table 2: Externally Specified Particulars in respect of each of the Contag Beta Sector Indices**

| Externally Specified Particulars  |                   |                   |                     |              |                          |                    |                 |
|---|-------------------|-------------------|---------------------|--------------|--------------------------|--------------------|-----------------|
| Index Name  | Commodity Weights | Initial Index Day | Initial Index Level | Index Ticker | Roll Period Starting Day | Roll Period Length | Weights Periods |
| The J.P. Morgan Contag Beta Agriculture Class A Excess Return Index       | See footnote 1    | 30 December 1994  | 100                 | JCTABAGE     | 1                        | 10                 | See footnote 2  |
| The J.P. Morgan Contag Beta Energy Class A Excess Return Index            | See footnote 1    | 30 December 1994  | 100                 | JCTABENE     | 1                        | 10                 | See footnote 2  |
| The J.P. Morgan Contag Beta Industrial Metals Class A Excess Return Index | See footnote 1    | 30 December 1994  | 100                 | JCTABIME     | 1                        | 10                 | See footnote 2  |
| The J.P. Morgan Contag Beta Livestock Class A Excess Return Index         | See footnote 1    | 30 December 1994  | 100                 | JCTABLVE     | 1                        | 10                 | See footnote 2  |
| The J.P. Morgan Contag Beta Non-Energy Class A Excess Return Index        | See footnote 1    | 30 December 1994  | 100                 | JCTABNEE     | 1                        | 10                 | See footnote 2  |
| The J.P. Morgan Contag Beta Petroleum Class A Excess Return Index         | See footnote 1    | 30 December 1994  | 100                 | JCTABPTE     | 1                        | 10                 | See footnote 2  |
| The J.P. Morgan Contag Beta Precious Metals Class A Excess Return Index   | See footnote 1    | 30 December 1994  | 100                 | JCTABPME     | 1                        | 10                 | See footnote 2  |
| The J.P. Morgan Contag Beta Agriculture Class A Total Return Index        | See footnote 1    | 30 December 1994  | 100                 | JCTABAGT     | 1                        | 10                 | See footnote 2  |
| The J.P. Morgan Contag Beta Energy Class A Total Return Index             | See footnote 1    | 30 December 1994  | 100                 | JCTABENT     | 1                        | 10                 | See footnote 2  |
| The J.P. Morgan Contag Beta Industrial Metals Class A Total Return Index  | See footnote 1    | 30 December 1994  | 100                 | JCTABIMT     | 1                        | 10                 | See footnote 2  |
| The J.P. Morgan Contag Beta Livestock Class A Total Return Index          | See footnote 1    | 30 December 1994  | 100                 | JCTABLVT     | 1                        | 10                 | See footnote 2  |
| The J.P. Morgan Contag Beta Non-Energy Class A Total Return Index         | See footnote 1    | 30 December 1994  | 100                 | JCTABNET     | 1                        | 10                 | See footnote 2  |
| The J.P. Morgan Contag Beta Petroleum Class A Total Return Index          | See footnote 1    | 30 December 1994  | 100                 | JCTABPTT     | 1                        | 10                 | See footnote 2  |
| The J.P. Morgan Contag Beta Precious Metals Class A Total Return Index    | See footnote 1    | 30 December 1994  | 100                 | JCTABPMT     | 1                        | 10                 | See footnote 2  |

Footnote 1: The “Commodity Weight” of each Eligible Commodity in the applicable Contag Beta Sector Index is equal to the Contract Production Weight of the relevant Designated Contract in the applicable S&P GSCI™ Sub-Index set forth in Table 1 (*Contag Beta Sector Indices and their corresponding S&P GSCI™ Sub-Index*) for the S&P GSCI Period corresponding to the relevant Weights Period for the applicable Contag Beta Sector Index, as specified in the S&P GSCI Methodology.

Footnote 2: The “Weights Periods” are equal to the S&P GSCI Periods of the applicable S&P GSCI™ Sub-Index set forth in Table 1 (*Contag Beta Sector Indices and their corresponding S&P GSCI™ Sub-Index*) with the modification that each Weights Period of the applicable Contag Beta Sector 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.

6. Calculation of the Contag Beta Sector TR Class A Indices

This section replaces section 5.6 (“The Index Level”) of the Beta Index Document for the purposes of calculating a Contag Beta Sector Class A TR Index.

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:

$$IndexTR_d = IndexTR_{d-1} \times [1 + IR_d + TBR_d] \times (1 + TBR_d)^{A(d)}$$

Where:

$IR_d$  means the Investment Return for Dealing Day  $d$ , 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  $d-1$ ;

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  $d$ ;

$TBR_d$  means the Treasury Bill return on Dealing day  $d$ , calculated using the following formula:

$$\left( \left( 1 - \frac{91}{360} \times TBILL_{d-1} \right)^{\frac{-1}{91}} \right) - 1;$$

$TBILL_{d-1}$  means the T-Bill Rate on Dealing Day  $d-1$  as defined in section 3; and

$A(d)$  means the number of calendar days which are not Dealing Days from (and excluding) Dealing Day  $d-1$  to (and including) Dealing Day  $d$ .

## 7. Regular amendments to Commodity Weights

The Commodity Weights in respect of each of Contag Beta Sector Index are determined by reference to the Contract Production Weights as calculated with respect to the relevant S&P GSCI™ Sub-Index and in accordance with the S&P GSCI Methodology. The Commodity Weights for each Contag Beta Sector 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 Index Sponsor with respect to the relevant S&P GSCI™ Sub-Index. Furthermore, from time to time the index sponsor of the S&P GSCI™ 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 applicable Contag Beta Sector Index. The Commodity Weights for each Contag Beta Sector Indices in respect of a given Weights Period will always be equal to the Contract Production Weights for the corresponding S&P GSCI™ Sub-Index 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 a S&P GSCI™ Sub-Index, the Index Sponsor shall make the corresponding changes to the Relevant Eligible Commodities contained in the applicable Contag Beta Sector Index. Such amendments shall be published by the Index Sponsor 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™ Sub-Index.

### 8.2 Addition of Eligible Commodities

In the event that a Designated Contract is added to the calculation of a S&P GSCI™ Sub-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 applicable Contag Beta Sector 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 relevant S&P GSCI™ Sub-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 Sponsor.

## 9. Additional Extraordinary Events

In addition to the Extraordinary Events section of the Beta Index Document, the following actions will be taken by the Index Calculation Agent following any abnormalities in the publication of the T-Bill Rate.

If, in respect of a Dealing Day, such rate for such date does not appear on Bloomberg® ticker USB3MTA (or any official successor page thereto), the rate for that date will be the Bond Equivalent Yield of the rate displayed in H.15 Daily Update, currently <http://www.federalreserve.gov/releases/h15/update/>, (or any official successor page thereto), or such other recognized electronic source used for the purpose of displaying such 3-month T-bill rate for that day under the caption "U.S. Government Securities/Treasury bills/Auction high" converted by the Index Calculation Agent in a commercially reasonable manner to bank discount basis such that it is expressed in the same manner as the T-Bill Auction High Rate.

If such rate for such date does not appear on Bloomberg® ticker USB3MTA (or any official successor page thereto) and such 3-month rate is not displayed in the H.15 Daily Update under the caption "U.S. Government securities/Treasury bills/Auction high" or another recognized electronic source, the rate for that date will be the Bond Equivalent Yield of the auction rate for those Treasury Bills as announced by the United States Department of Treasury, converted by the Index Calculation Agent in a commercially reasonable manner to bank discount basis such that it is expressed in the same manner as the T-Bill Auction High Rate.

If the rate for United States 3-month Treasury Bills is still not available, the rate will be determined by the Index Calculation Agent in a good faith and in a commercially reasonable manner.

#### 10. Modifications to or Cancellation of a S&P GSCI™ Sub-Index

##### 10.1

If a S&P GSCI™ Sub-Index is (a) not calculated and announced by the Index Sponsor but is calculated and announced by a successor sponsor acceptable to the Index Sponsor, or (b) replaced by a successor index using, in the determination of the Index Sponsor, the same or substantially similar formula for and method of calculation as used in the calculation of such S&P GSCI™ Sub-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.

##### 10.2

If on or prior to any Dealing Day on which the Index Calculation Agent is determining the Index Level of a Contag Beta Sector Index, the index sponsor of the relevant S&P GSCI™ index makes a material change in the formula for or the method of calculating the relevant S&P GSCI™ Sub-Index (other than a modification prescribed in that formula or method to maintain such index in the S&P GSCI™ Sub-Index or prescribed routine events) which affects the ability of the Index Calculation Agent to define an Externally Specified Particular in respect of a Contag Beta Sector Index, then the Index Sponsor 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 Sector Indices to account for such modification.

##### 10.3

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

- (ix) continue to calculate the Index Level of the relevant Contag Beta Sector Index using the latest available Externally Specified Particulars at the time the S&P GSCI™ Sub-Index was cancelled; or
- (x) 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 Sector Indices to account for such cancellation.

#### 11. Responsibility of the Index Sponsor and Index Calculation Agent

The Index Sponsor's and the Index Calculation Agent's determinations in respect of the Contag Beta Sector Indices and interpretation of the Rules shall be final.

Both the Index Sponsor and the Index Calculation Agent shall act in a good faith and in a commercially reasonable manner.

Whilst these Rules are intended to be comprehensive, ambiguities may arise. In such circumstances the Index Sponsor will resolve such ambiguities in a reasonable manner and, if necessary, amend these Rules to reflect such resolution. Moreover the Index Sponsor 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.

None of the Index Sponsor, the Index Calculation Agent or any of their respective 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 Sector 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 Sector Indices or the Index Levels. All determinations of the Index Sponsor or the Index Calculation Agent in respect of the Contag Beta Sector 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 Sponsor, the Index Calculation Agent or any other Relevant Person in respect of the Contag Beta Sector Indices, none of the Relevant Person shall be under any obligation to revise any determination or calculation made or action taken for any reason.

## 12. 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 Sector 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.

## 13. 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 Sector Indices, or for delays, omissions or interruptions in the delivery of the Contag Beta Sector 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 Sector Indices, including but not limited to the trading of or investments in products based on or indexed or otherwise related to the Contag Beta Sector 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 Sector 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 Sector 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 Sector 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 Sector 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 Sector 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 Sector 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 Sector 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 Sector 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 Agriculture Class A Excess Return Index," "J.P. Morgan Contag Beta Energy Class A Excess Return Index," "J.P. Morgan Contag Beta Industrial Metals Class A Excess Return Index," "J.P. Morgan Contag Beta Livestock Class A Excess Return Index," "J.P. Morgan Contag Beta Non-Energy Class A Excess Return Index," "J.P. Morgan Contag Beta Petroleum Class A Excess Return Index," "J.P. Morgan Contag Beta Precious Metals Class A Excess Return Index," "J.P. Morgan Contag Beta Agriculture Class A Total Return Index," "J.P. Morgan Contag Beta Energy Class A Total Return Index," "J.P. Morgan Contag Beta Industrial Metals Class A Total Return Index," "J.P. Morgan Contag Beta Livestock Class A Total Return Index," "J.P. Morgan Contag Beta Non-Energy Class A Total Return Index," "J.P. Morgan Contag Beta Petroleum Class A Total Return Index," "J.P. Morgan Contag Beta Precious Metals Class A Total Return Index" 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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