

# JPMORGAN CHASE & CO.

## *Notes Linked to One or More Indices, Converted into U.S. Dollars*

### General

- JPMorgan Chase & Co. may from time to time offer and sell notes that are linked to one or more Indices (as defined below), converted from an Underlying Currency (as defined below) into U.S. dollars. Investing in the notes is not equivalent to investing (or taking a short position) directly in any Index or Underlying Currency (relative to the U.S. dollar) or any of the securities underlying any Index.
- The notes are unsecured and unsubordinated obligations of JPMorgan Chase & Co. **Any payment on the notes is subject to the credit risk of JPMorgan Chase & Co.**
- This product supplement no. 5a-I describes terms that will apply generally to the notes and supplements the terms described in 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. A separate underlying supplement or the relevant terms supplement will describe any Index to which the notes are linked. If the terms described in the relevant terms supplement are inconsistent with those described in this product supplement, any accompanying underlying supplement, the prospectus supplement or the prospectus, the terms described in the relevant terms supplement will govern your notes.
- The notes are not appropriate for all investors and involve a number of risks and important legal and tax consequences that should be discussed with your professional advisers.
- For important information about tax consequences relating to the notes, see "Material U.S. Federal Income Tax Consequences" beginning on page PS-37 of this product supplement.
- The notes will not be listed on any securities exchange unless otherwise specified in the relevant terms supplement.

### Key Terms

Underlyings:	In this product supplement, we refer to any index (each, an " <b>Index</b> "), as converted from a specified currency (each, an " <b>Underlying Currency</b> ") into U.S. dollars, that is referenced in the determination of any payment on the notes as an " <b>Underlying</b> " and, collectively, as the " <b>Underlyings</b> ." See "The Underlyings" in this product supplement.
Payments on the Notes:	Any amount payable on the notes will be determined pursuant to the terms set forth in the relevant terms supplement. If the amount of any payment calculated as set forth in the relevant terms supplement is less than zero, the amount of that payment will be \$0.
Determination Date(s):	The relevant terms supplement will specify each date on which the value of any Underlying is to be referenced in the determination of any payment on the notes (each, a " <b>Determination Date</b> "). Unless otherwise specified in the relevant terms supplement, each Determination Date is subject to postponement as described under "General Terms of Notes — Postponement of a Determination Date."
Payment Date(s):	The relevant terms supplement will specify the maturity date and any other date on which amounts will or may be payable on the notes (each, a " <b>Payment Date</b> "). Unless otherwise specified in the relevant terms supplement, each Payment Date is subject to postponement as described under "General Terms of Notes — Postponement of a Payment Date."

**Investing in the notes involves a number of risks. See "Risk Factors" beginning on page PS-7 of this product supplement.**

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 product supplement no. 5a-I, any underlying 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

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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 product supplement no. 5a-l, any underlying 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 product supplement no. 5a-l, any underlying 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 product supplement no. 5a-l, any underlying supplement, the prospectus supplement and the prospectus may be accurate only as of the date of that document.

The notes are not appropriate for all investors and involve a number of risks and important legal and tax consequences 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 product supplement no. 5a-l, any underlying supplement, the prospectus supplement and the prospectus do not constitute an offer to sell or a solicitation of an offer to buy the notes under any circumstances in which that offer or solicitation is unlawful.

In the relevant terms supplement, this product supplement no. 5a-l, any underlying supplement, the prospectus supplement and the prospectus, "we," "us" and "our" refer to JPMorgan Chase & Co., unless the context requires otherwise.

## DESCRIPTION OF NOTES

*The following description of the terms of the notes supplements the description of the general terms of the debt securities set forth under the headings "Description of Notes" in the prospectus supplement and "Description of Debt Securities" in the prospectus. The term "note" refers to each Principal Amount (as defined below) of our Notes Linked to One or More Indices, Converted into U.S. Dollars.*

### General

The notes are our unsecured and unsubordinated obligations and will rank *pari passu* with all of our other unsecured and unsubordinated obligations. **Any payment on the notes is subject to the credit risk of JPMorgan Chase & Co.**

The notes are a series of debt securities referred to in the prospectus supplement and the prospectus and will be issued by JPMorgan Chase & Co. under an indenture dated May 25, 2001, as may be amended or supplemented from time to time, between us and Deutsche Bank Trust Company Americas (formerly Bankers Trust Company), as trustee. The notes will be represented by one or more permanent global notes registered in the name of The Depository Trust Company, or DTC, or its nominee, as described under "Description of Notes — Forms of Notes" in the prospectus supplement and "Forms of Securities — Book-Entry System" in the prospectus.

This product supplement no. 5a-I describes terms that will apply generally to the notes and supplements the terms described in 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. A separate underlying supplement or the relevant terms supplement will describe any Index (as defined below) to which the notes are linked. If the terms described in the relevant terms supplement are inconsistent with those described in this product supplement, any accompanying underlying supplement, the prospectus supplement or the prospectus, the terms described in the relevant terms supplement will govern your notes.

The notes will be issued in minimum denominations specified in the relevant terms supplement, and the principal amount of each note (the "**Principal Amount**") and the original issue price of each note will be specified in the relevant terms supplement.

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

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.

### The Underlying(s)

In this product supplement, we refer to any index (each, an "**Index**"), as converted from a specified currency (each, an "**Underlying Currency**") into U.S. dollars, that is referenced in the determination of any payment on the notes as an "**Underlying**" and, collectively, as the "**Underlyings**." See "The Underlyings" below for additional information.

The relevant terms supplement will specify the manner in which the Underlying(s) will be referenced in the determination of any payment on the notes. Payments on the notes may reflect long (or bullish) exposure to one or more Underlyings (meaning that an increase in the value of the relevant Underlying(s) would generally be expected to have a positive effect on payments on the notes) and/or short (or bearish) exposure to one or more Underlyings (meaning that a decrease in the value of the relevant Underlying(s) would generally be expected to have a positive effect on payments on the notes).

In addition, the notes may be Single Underlying Notes, Basket Notes, Least Performing Underlying Notes, Greatest Performing Underlying Notes or Relative Performance Notes or the relevant terms supplement may specify that, in the determination of any payments on the notes, the Underlyings will be referenced in a manner that does not directly correspond with any of these types of notes.

*Single Underlying Notes.* “**Single Underlying Notes**” reference the performance of a single Underlying in the determination of one or more payments on the notes.

*Basket Notes.* “**Basket Notes**” reference the performance of a weighted basket composed of two or more Underlyings (a “**Basket**”) in the determination of one or more payments on the notes.

*Least Performing Underlying Notes.* “**Least Performing Underlying Notes**” reflect long (or bullish) exposure to the Underlying with the lowest performance out of the Underlyings specified in the relevant terms supplement in the determination of one or more payments on the notes. Payments on Least Performing Underlying Notes will generally be determined by reference to the performance of the Underlying that would result in the worst performance of the notes.

*Greatest Performing Underlying Notes.* “**Greatest Performing Underlying Notes**” reflect short (or bearish) exposure to the Underlying with the highest performance out of the Underlyings specified in the relevant terms supplement in the determination of one or more payments on the notes. Payments on Greatest Performing Underlying Notes will generally be determined by reference to the performance of the Underlying that would result in the worst performance of the notes.

*Relative Performance Notes.* “**Relative Performance Notes**” reference the relative performance of two or more Underlyings, with long exposure to one or more Underlyings (each, a “**Long Underlying**”) and short exposure to one or more other Underlying(s) (each, a “**Short Underlying**”), in the determination of one or more payments on the notes.

#### ***Terms Relating to Valuation of the Underlying(s)***

The relevant terms supplement will specify the manner in which the initial value, the final value and, if applicable, the strike value of Underlying(s) will be determined. The relevant terms sheet will also specify the manner in which values of the Underlying(s) will be used in the determination of any payment on the notes.

*Initial Value.* The relevant terms supplement will specify the manner in which the initial value of any Underlying will be determined. For example, with respect to any Underlying, the relevant terms supplement may specify that the initial value of that Underlying will be determined by reference to the value of that Underlying on the pricing date or on multiple dates near the beginning of the term of the notes or may specify that the initial value will be equal to a fixed value. Unless otherwise specified in the relevant terms supplement, the initial value of any Underlying will be determined near the beginning of the term of the notes and will be used in determining the performance of that Underlying or as a reference point against which later values of that Underlying will be compared.

*Final Value.* The relevant terms supplement will specify the manner in which the final value of any Underlying with respect to any day will be determined. For example, with respect to any Underlying, the relevant terms supplement may specify that the final value of that Underlying will be determined by reference to the value of that Underlying on that day or on multiple dates during the term of the notes. Unless otherwise specified in the relevant terms supplement, the final value of any Underlying with respect to any day will be determined after the determination of the initial value and will be used in determining the performance of that Underlying or as a reference point to be compared to the initial value of that Underlying or to other values specified in the relevant terms supplement.

**Strike Value.** The relevant terms supplement may specify a value to be used instead of, or in addition to, the initial value of an Underlying to be used in determining the performance of that Underlying or as a reference point against which later values of that Underlying will be compared. If applicable, the relevant terms supplement will specify the manner in which the strike value of any Underlying will be determined. For example, with respect to any Underlying, the relevant terms supplement may specify a fixed value for the strike value of that Underlying or may specify that the strike value of that Underlying will be equal to a specified percentage of the initial value of that Underlying.

**Determination Dates.** The relevant terms supplement will specify each date on which the value of any Underlying is to be referenced in the determination of any payment on the notes (each, a **"Determination Date"**). Unless otherwise specified in the relevant terms supplement, each Determination Date is subject to postponement as described under "General Terms of Notes — Postponement of a Determination Date" below.

See "The Underlyings" in this product supplement for a description of how the value of each Underlying will be determined. Each Underlying and the value of each Underlying are subject to adjustment under certain circumstances. See "General Terms of Notes — Postponement of a Determination Date" and "The Underlyings" below for additional information.

### **Payments on the Notes**

Any amount payable on the notes will be determined pursuant to the terms set forth in the relevant terms supplement. If the amount of any payment calculated as set forth in the relevant terms supplement is less than zero, the amount of that payment will be \$0. *Any payment on the notes is subject to the credit risk of JPMorgan Chase & Co.*

The relevant terms supplement will specify the maturity date and any other date on which amounts will or may be payable on the notes (each, a **"Payment Date"**). Unless otherwise specified in the relevant terms supplement, each Payment Date is subject to postponement as described under "General Terms of Notes — Postponement of a Payment Date" below.

The **"calculation agent"** or **"note calculation agent"** is the agent appointed by us to make certain calculations with respect to the notes, which, unless otherwise specified in the relevant terms supplement, will be J.P. Morgan Securities LLC (**"JPMS"**). See "General Terms of Notes — Calculation Agent" below. JPMS is our affiliate and may have interests adverse to yours. Please see "Risk Factors — Risks Relating to Conflicts of Interest — We or our affiliates may have economic interests that are adverse to those of the holders of the notes due to JPMS's role as calculation agent."

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

### **Interest Payments**

If the relevant terms supplement specifies that the notes will bear periodic interest, the notes will pay interest in arrears at the per annum rate, or such other rate or rates, including rates that reference the performance of the Underlying(s), as specified in the relevant terms supplement. The relevant terms supplement may also specify that the payment of interest is contingent on the performance of the Underlying(s).

Unless otherwise specified in the relevant terms supplement, the interest payment due on each interest payment date specified in the relevant terms supplement for each note, if payable under the terms specified in the relevant terms supplement, will be calculated as follows:

$$\text{Principal Amount} \times \text{Interest Rate} \times 1 / \text{number of interest payment dates per year}$$

where the number of interest payment dates per year is determined by the frequency of the interest payment dates and how many interest payment dates would occur over the course of a full year regardless of the actual term of the notes.

If the payment of interest is not contingent on the performance of the Underlying(s), interest will accrue from and including the issue date of the notes to but excluding the maturity date or the date on which the notes are redeemed or repurchased early, if applicable. Unless otherwise specified in the relevant terms supplement, interest will be payable in arrears on each interest payment date to and including the maturity date or the date on which the notes are redeemed or repurchased early, if applicable, to the holders of record at the close of business on the business day prior to that interest payment date.

***Payment upon Early Redemption, Acceleration or Early Repurchase***

The relevant terms supplement may specify that the notes will be subject to early redemption or acceleration or that investors may submit a request for us to repurchase the notes. **No further payments will be made on the notes after they have been redeemed early, accelerated or repurchased early.**

***Optional Redemption.*** If the relevant terms supplement specifies that the notes include an optional redemption feature, we will have the right, at our election, to redeem the notes in whole but not in part on any of the dates specified in the relevant terms supplement for a cash payment that will be determined as set forth in the relevant terms supplement. If we intend to redeem your notes, we will deliver notice to DTC, as holder of the notes, at least such number of business days specified in the relevant terms supplement prior to the date on which the notes are to be redeemed.

***Automatic Redemption.*** If the relevant terms supplement specifies that the notes include an automatic redemption feature, the notes will be automatically redeemed under the circumstances set forth in the relevant terms supplement for a cash payment that will be determined as set forth in the relevant terms supplement on a Payment Date specified in the relevant terms supplement.

***Acceleration.*** If the relevant terms supplement specifies that the notes include an acceleration feature, the maturity date and the determination of the payment at maturity will be accelerated under the circumstances set forth in the relevant terms supplement and in the manner set forth in the relevant terms supplement.

***Early Repurchase.*** If the relevant terms supplement specifies that the notes include an early repurchase feature, you may submit a request to have us repurchase your notes, subject to the procedures and terms set forth below. **Any repurchase request that we accept in accordance with the procedures and terms set forth below will be irrevocable. While we intend to accept all requests for early repurchase of notes that comply with the procedures and terms set forth below, we are not obligated to accept any repurchase request. We are not committed to purchasing any note at any particular time or price.**

Unless otherwise specified in the relevant terms supplement, to request that we repurchase your notes, you must instruct your broker or other person through which you hold your notes to take the following steps:

- Send a notice of repurchase, substantially in the form attached as Annex A to the relevant terms supplement (a “**Repurchase Notice**”), to us via email at [dlN\\_repurchase@jpmchase.com](mailto:dlN_repurchase@jpmchase.com) by no later than 4:00 p.m., New York City time, on the business day prior to the relevant Determination Date. The subject line of the email should include the title of the notes and the CUSIP for those notes. We or our affiliate must acknowledge receipt of the Repurchase Notice on the same business day for it to be effective, which acknowledgment will be deemed to evidence our acceptance of your repurchase request;
- Instruct your DTC custodian to book a delivery versus payment trade with respect to your notes on the relevant Determination Date at a price equal to the amount payable upon early repurchase of the notes; and
- Cause your DTC custodian to deliver the trade as booked for settlement via DTC at or prior to 10:00 a.m., New York City time, on the day on which the notes will be repurchased.

Different brokerage firms may have different deadlines for accepting instructions from their customers. Accordingly, you should consult the brokerage firm through which you own your interest in the notes in respect of those deadlines. Unless otherwise specified in the relevant terms supplement, if we do not receive your Repurchase Notice by 4:00 p.m. on the business day prior to the relevant Determination Date OR we (or our affiliates) do not acknowledge receipt of the Repurchase Notice on the same day, your Repurchase Notice will not be effective, and we will not repurchase your notes. Once given, a Repurchase Notice may not be revoked.

The calculation agent will, in its sole discretion, resolve any questions that may arise as to the validity of a Repurchase Notice and the timing of receipt of a Repurchase Notice or as to whether and when the required deliveries have been made. Questions about the repurchase requirements should be directed to [dlN\\_repurchase@jpmchase.com](mailto:dlN_repurchase@jpmchase.com).

#### ***Payment at Maturity***

The relevant terms supplement will specify the manner in which any payment at maturity will be determined. **You may lose some or all of your principal amount at maturity.**

## **ESTIMATED VALUE AND SECONDARY MARKET PRICES OF THE NOTES**

### **JPMS's Estimated Value of the Notes**

Unless otherwise specified in the relevant terms supplement, the estimated value of the notes when the terms of the notes are set, which we refer to as JPMS's estimated value of the notes, will be set forth on the cover of the relevant terms supplement and will be equal to the sum of the values of the following hypothetical components: (1) a fixed-income debt component with the same maturity as the notes, valued using our internal funding rate for structured debt described below, and (2) the derivative or derivatives underlying the economic terms of the notes. JPMS's estimated value will not represent a minimum price at which JPMS would be willing to buy your notes in any secondary market (if any exists) at any time. The internal funding rate used in the determination of JPMS's estimated value will generally represent a discount from the credit spreads for our conventional fixed-rate debt. For additional information, see "Risk Factors — Risks Relating to the Estimated Value and Secondary Market Prices of the Notes — JPMS's estimated value will not be determined by reference to credit spreads for our conventional fixed-rate debt" below in this product supplement. The value of the derivative or derivatives underlying the economic terms of the notes will be derived from JPMS's internal pricing models. These models are dependent on inputs such as the traded market prices of comparable derivative instruments and on various other inputs, some of which are market-observable, and which can include volatility, correlation, dividend rates, interest rates and other factors, as well as assumptions about future market events and/or environments. Accordingly, JPMS's estimated value of the notes will be determined when the terms of the notes are set based on market conditions and other relevant factors and assumptions existing at that time. See "Risk Factors — Risks Relating to the Estimated Value and Secondary Market Prices of the Notes — JPMS's estimated value will not represent future values of the notes and may differ from others' estimates" below in this product supplement.

Unless otherwise specified in the relevant terms supplement, JPMS's estimated value of the notes will be lower than the original issue price of the notes because costs associated with selling, structuring and hedging the notes will be included in the original issue price of the notes. These costs include the selling commissions and structuring fees, if any, paid to JPMS and other affiliated or unaffiliated dealers, the projected profits, if any, that our affiliates expect to realize for assuming risks inherent in hedging our obligations under the notes and the estimated cost of hedging our obligations under the notes. Because hedging our obligations entails risk and may be influenced by market forces beyond our control, this hedging may result in a profit that is more or less than expected, or it may result in a loss. We or one or more of our affiliates will retain any profits realized in hedging our obligations under the notes unless a portion of the hedging profits is allowed to other affiliated or unaffiliated dealers. Under those circumstances, we or one or more of our affiliates will retain any remaining hedging profits. See "Risk Factors — Risks Relating to the Estimated Value and Secondary Market Prices of the Notes — JPMS's estimated value of the notes will be lower than the original issue price (price to public) of the notes" below in this product supplement.

### **Secondary Market Prices of the Notes**

For information about factors that will impact any secondary market prices of the notes, see "Risk Factors — Risks Relating to the Estimated Value and Secondary Market Prices of the Notes — Secondary market prices of the notes will be impacted by many economic and market factors" below in this product supplement. In addition, the relevant terms supplement may specify that we will generally expect some of the costs included in the original issue price of the notes to be partially paid back to you in connection with any repurchases of your notes by JPMS in an amount that will decline to zero over an initial predetermined period that will be specified in the relevant terms supplement. The length of any such initial period will reflect the structure of the notes, whether our affiliates expect to earn a profit in connection with our hedging activities, the estimated costs of hedging the notes and when these costs are incurred, all as determined by JPMS. See "Risk Factors — Risks Relating to the Estimated Value and Secondary Market Prices of the Notes — The value of the notes as published by JPMS (and which may be reflected on customer account statements) may be higher than JPMS's then-current estimated value of the notes for a limited time period" below in this product supplement.



## **RISK FACTORS**

*Your investment in the notes will involve certain risks. Unless otherwise specified in the relevant terms supplement, the notes do not pay interest and do not guarantee any return of principal at, or prior to, maturity. Investing in the notes is not equivalent to investing (or taking a short position) directly in any Index or Underlying Currency (relative to the U.S. dollar) or any of the securities underlying any Index. In addition, your investment in the notes entails other risks not associated with an investment in conventional debt securities. **You should consider carefully the following discussion of risks, as well as the discussion of risks included in the relevant terms supplement and any accompanying underlying supplement, before you decide that an investment in the notes is suitable for you.***

### **Risks Relating to the Notes Generally**

**The notes differ from conventional debt securities and may not pay interest or return any of your principal amount.**

Any amount payable on the notes will be determined pursuant to the terms set forth in the relevant terms supplement. The notes will not pay interest unless specified in the relevant terms supplement. You may lose some or all of your principal amount at maturity.

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

The notes are subject to the credit risk of JPMorgan Chase & Co., and our credit ratings and credit spreads may adversely affect the market value of the notes. Investors are dependent on JPMorgan Chase & Co.'s ability to pay all amounts due on the notes. Any actual or potential changes in our creditworthiness or the credit spreads, as determined by the market for taking our credit risk, is likely to affect adversely the value of the notes. Any payment on the notes is subject to the creditworthiness of JPMorgan Chase & Co. If we were to default on our payment obligations, you may not receive any amounts owed to you under the notes and you could lose your entire investment.

**The appreciation potential of the notes may be limited.**

The relevant terms supplement may specify that the return or payment at maturity on the notes in excess of the principal amount will not exceed a specified value. Under these circumstances, the appreciation potential of the notes will be limited to that specified value, regardless of the performance of the Underlying(s). In addition, if the relevant terms supplement specifies that the notes will or may pay interest, the appreciation potential of the notes may be limited to any interest payments, regardless of the performance of the Underlying(s).

**We or our affiliates may have interests that are adverse to those of the holders of the notes.**

We or our affiliates may have interests that are adverse to those of the holders of the notes. See "— Risks Relating to Conflicts of Interest" below.

**If the notes are redeemed early or accelerated, you will be exposed to reinvestment risk.**

The term of the notes may be limited by any optional or automatic redemption or acceleration feature set forth in the relevant terms supplement. No further payments will be made on the notes after they have been redeemed early or accelerated. If the notes are redeemed early or accelerated, the term of your investment in the notes will be limited to a period that is shorter than the original term of the notes. There is no guarantee that you would be able to reinvest the proceeds from an investment in the notes at a comparable return for a similar level of risk in the event that the notes are redeemed early or accelerated.

**The payment upon an early redemption or acceleration may be substantially less than the market value of the notes.**

If the notes include an optional or automatic redemption or acceleration feature, the notes may be redeemed early or accelerated at a time when prevailing interest rates are relatively low or at a time when the performance of the Underlying(s) has caused the value of the notes to increase substantially since issuance. Accordingly, any payment upon early redemption or acceleration determined in the manner set forth in the relevant terms supplement may be substantially less than the market value of the notes.

**If the relevant terms supplement provides for early repurchases at the option of the holders, there will be restrictions on your ability to request that we repurchase your notes.**

Unless otherwise specified in the relevant terms supplement, if you elect to request that we repurchase your notes, your request will be valid only if we receive your Repurchase Notice by 4:00 p.m., New York City time, on the business day prior to the relevant Determination Date and we (or our affiliates) acknowledge receipt of the Repurchase Notice that same day (which will evidence our acceptance of your repurchase request). If we do not receive that notice or we (or our affiliates) do not acknowledge receipt of that notice (which means that we have declined to accept your repurchase request), your repurchase request will not be effective and we will not repurchase your notes.

Because of the timing requirements of the Repurchase Notice (and our acknowledgment of receipt), settlement of the repurchase will be prolonged when compared to a sale and settlement in the secondary market. As your request that we repurchase your notes is irrevocable, this will subject you to market risk in the event that the market fluctuates after we receive your request. Furthermore, if we accept your repurchase request, our obligation to repurchase the notes prior to maturity may be postponed upon the occurrence of a market disruption event.

**If the relevant terms supplement provides for early repurchases at the option of the holders, you will not know the amount you will receive upon an early repurchase at the time you elect to request that we repurchase your notes.**

You will not know the amount payable upon early repurchase at the time you elect to request that we repurchase your notes. As a result, you will be exposed to market risk in the event that the market fluctuates after we accept your repurchase request and prior to the date on which the payment you will receive upon repurchase is determined.

**The values of the Underlying(s) will be referenced only on the Determination Date(s) for purposes of determining any payment on the notes.**

The relevant terms supplement will specify each Determination Date on which the value of any Underlying is to be referenced in the determination of any payment on the notes. The value of the notes and any payment on the notes may be adversely affected by referencing the values of the Underlying(s) only on Determination Dates. For example, for notes that provide for a single payment at maturity based on the long (or bullish) performance of an Underlying, as measured from the pricing date to a single Determination Date near the end of the term of the notes, if the value of that Underlying increases or remains relatively constant during the initial term of the notes and then decreases below the initial value of that Underlying, the final value of that Underlying may be significantly less than if it were calculated on a date earlier than the Determination Date. Under these circumstances, you may receive a lower return on the notes than you would have received if you had invested directly in any Index or Underlying Currency (relative to the U.S. dollar), the securities underlying any Index or any exchange-traded or over-the-counter instruments based on any of the foregoing.

**JPMS's estimated value of the notes will be lower than the original issue price (price to public) of the notes, and secondary market prices of the notes will be impacted by many economic and market factors.**

JPMS's estimated value of the notes will be lower than the original issue price (price to public) of the notes, and secondary market prices of the notes will be impacted by many economic and market factors. See "— Risks Relating to the Estimated Value and Secondary Market Prices of the Notes" below.

**The notes are designed to be held to maturity.**

The notes are not designed to be short-term trading instruments. The price at which you will be able to sell your notes to us or our affiliates prior to maturity, if at all, may be at a substantial discount from the principal amount of the notes, even in cases where any Underlying to which the notes provide long (or bullish) exposure has appreciated since the pricing date and/or any Underlying to which the notes provide short (or bearish) exposure has depreciated since the pricing date. The potential returns described in the relevant terms supplement assume that your notes are held to maturity unless redeemed or repurchased early or accelerated, if applicable.

**Secondary trading may be limited.**

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

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

**If the value of an Underlying changes, the market value of your notes may not change proportionately.**

Owning the notes is not the same as investing (or taking a short position) directly in any Index or Underlying Currency (relative to the U.S. dollar) or any of the securities underlying any Index. Accordingly, changes in the value of an Underlying may not result in a proportionate change in the market value of the notes. For example, for notes that provide long (or bullish) exposure to an Underlying, if the value of that Underlying on any day has increased, the value of the notes may not increase comparably, if at all. It is possible for the value of that Underlying to increase moderately while the value of those notes declines.

**You will have no ownership rights in any Index or Underlying Currency or any of the securities underlying any Index.**

Investing in the notes is not equivalent to investing (or taking a short position) directly in any Index or Underlying Currency (relative to the U.S. dollar) or any of the securities underlying any Index or exchange-traded or over-the-counter instruments based on any of the foregoing. As an investor in the notes, you will not have any ownership interests or rights in any of the foregoing.

**Concentration risks may adversely affect the value of the notes.**

If any payment on the notes will be based on the performance of a single Index, converted into U.S. dollars, or on a small number of Indices, converted into U.S. dollars, that are concentrated in a single or a limited number of industry sectors or geographical regions, you will not benefit, with respect to the notes, from the advantages of a diversified investment, and you will bear the risks of a concentrated investment, including the risk of greater volatility than may be experienced in connection with a diversified investment. You should be aware that other investments may be more diversified than the notes in terms of the number and variety of industry sectors or geographical regions.

**Regulatory developments and investigations may result in changes to the rules or methodology used to determine the value of an Underlying, which may adversely affect any payment on the notes.**

The methodologies used to determine the value of certain “benchmarks,” which may include one or more Underlyings, are the subject of recent national, international and other regulatory guidance, proposals for reform and investigations. These reforms or changes made in response to these investigations may cause those benchmarks to perform differently than in the past and may have other consequences that cannot be predicted. In addition, market participants may elect not to continue to participate in the administration of certain benchmarks if these reforms and investigations increase the costs and risks associated with those activities, which could cause changes in the rules or methodologies used in certain benchmarks or lead to the disappearance of certain benchmarks. Any of these changes could adversely affect the value of the notes and any payment on the notes.

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

The calculation agent may, in its sole discretion, determine that the markets have been affected in a manner that prevents it from determining the value of any Underlying on any Determination Date and the amount of any payment on the notes. These events may include disruptions or suspensions of trading in the markets as a whole. If the calculation agent, in its sole discretion, determines that any of these events prevents us or any of our affiliates from properly hedging our obligations under the notes, it is possible that one or more Determination Dates and Payment Dates will be postponed and that your return will be adversely affected. Market disruption events are defined in the relevant sections of “The Underlyings” below. In addition, if any Determination Date is postponed to the last possible day and the value of any Underlying is not available on that day because of a market disruption event or because that date is not a trading day or a currency business day, the calculation agent will nevertheless determine the value of that Underlying on that last possible day. See “General Terms of Notes — Postponement of a Determination Date” and “General Terms of Notes — Postponement of a Payment Date” for more information.

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

There is no direct legal authority as to the proper U.S. federal income tax treatment of the notes, and we do not intend to request a ruling from the Internal Revenue Service (the “IRS”) regarding the notes. The IRS might not accept, and a court might not uphold, our treatment of the notes, in which case the timing and/or character of income on the notes could be affected materially and adversely. The relevant terms supplement will describe the tax treatment of a particular offering of notes. You should review carefully the section entitled “Material U.S. Federal Income Tax Consequences” in this product supplement no. 5a-I and consult your tax adviser regarding the U.S. federal income tax consequences of an investment in the notes, including possible alternative treatments.

**Historical performance of any Underlying should not be taken as an indication of the future performance of that Underlying during the term of the notes.**

The actual performance of any Underlying over the term of the notes, as well as any payment on the notes, may bear little relation to the historical performance of that Underlying. The future performance of any Underlying may differ significantly from its historical performance, and no assurance can be given as to the value of any Underlying during the term of the notes, including on any Determination Date. It is impossible to predict whether the value of any Underlying will rise or fall. We cannot give you assurance that the performance of the Underlying(s) will not adversely affect any payment on the notes.

**JPMorgan Chase & Co. employees holding the notes must comply with policies that limit their ability to purchase or sell the notes.**

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

### **Risks Relating to Conflicts of Interest**

**Our offering of the notes does not constitute an expression of our view about, or a recommendation of, any Index or Underlying Currency (relative to the U.S. dollar) or the securities underlying any Index.**

You should not take our offering of the notes as an expression of our views about how any Index or Underlying Currency (relative to the U.S. dollar) or the securities underlying any Index will perform in the future or as a recommendation to invest (directly or indirectly, by taking a long or short position) in any of the foregoing, including through an investment in the notes. As a global financial institution, we and our affiliates may, and often do, have positions (long, short or both) in one or more of the foregoing that conflict with an investment in the notes. See “— We or our affiliates may have economic interests that are adverse to those of the holders of the notes as a result of our hedging and other trading activities” below and “Use of Proceeds and Hedging” in this product supplement for some examples of potential conflicting positions we may have. You should undertake an independent determination of whether an investment in the notes is suitable for you in light of your specific investment objectives, risk tolerance and financial resources.

**We or our affiliates may have economic interests that are adverse to those of the holders of the notes as a result of our hedging and other trading activities.**

In anticipation of the sale of the notes, we expect to hedge our obligations under the notes through certain affiliates or unaffiliated counterparties by taking positions in one or more Underlying Currencies (relative to the U.S. dollar) or the securities underlying one or more Indices or instruments the value of which is derived from one or more Indices or Underlying Currencies (relative to the U.S. dollar) or the securities underlying one or more Indices. We may also adjust our hedge by, among other things, purchasing or selling any of the foregoing at any time and from time to time and close out or unwind our hedge by selling any of the foregoing on or before any Determination Date. In addition, JPMS and other affiliates of ours also trade the foregoing on a regular basis (taking long or short positions or both), for their accounts, for other accounts under their management and to facilitate transactions, including block transactions, on behalf of customers. While we cannot predict an outcome, any of these hedging or other trading activities could potentially affect the value of the Underlying(s) and may adversely affect the value of the notes or any payment on the notes. See “Use of Proceeds and Hedging” below for additional information about our hedging activities.

This hedging and trading activity may present a conflict of interest between your interests as a holder of the notes and our affiliates' interests in hedging and other trading activities. These hedging and trading activities could also affect the price at which JPMS is willing to purchase your notes in the secondary market. In addition, our hedging counterparties expect to make a profit. Because hedging our obligations entails risk and may be influenced by market forces beyond our control, this hedging may result in a profit that is more or less than expected, or it may result in a loss. It is possible that these hedging or trading activities could result in substantial returns for us or our affiliates while the value of the notes declines.

**We or our affiliates may have economic interests that are adverse to those of the holders of the notes as a result of our business activities.**

We or our affiliates may currently or from time to time engage in business with the companies the securities of which are included in an Index (the “**underlying companies**”), including extending loans to, making equity investments in or providing advisory services to the underlying companies, including merger and acquisition advisory services. We do not make any representation or warranty to any purchaser of notes with respect to any matters whatsoever relating to our business with the underlying companies.

In addition, in the course of our business, we or our affiliates may acquire nonpublic information about one or more Indices or Underlying Currencies (relative to the U.S. dollar) or the securities underlying one or more Indices, and we will not disclose any such information to you.

Furthermore, we or one of our affiliates may serve as issuer, agent or underwriter for issuances of other securities or financial instruments with returns linked or related to changes in the value of an Index or an Underlying Currency (relative to the U.S. dollar) or the securities underlying an Index. To the extent that we or one of our affiliates serves as issuer, agent or underwriter for these securities or financial instruments, our or their interests with respect to these securities or financial instruments may be adverse to those of the holders of the notes. By introducing competing products into the marketplace in this manner, we or one or more of our affiliates could adversely affect the value of the notes.

The value of one or more Underlyings may be determined in whole or in part by reference to the value of a benchmark that is established based on quotes, prices, values or other data provided by market participants, including, in some cases, us or our affiliates. We and our affiliates will have no obligation to consider your interests as a holder of the notes in taking any actions that might affect the value of any Underlying or the notes.

**We or our affiliates may have economic interests that are adverse to those of the holders of the notes due to JPMS's role as calculation agent.**

JPMS, one of our affiliates, will act as the calculation agent. The calculation agent makes all necessary calculations and determinations in connection with the notes, including with respect to any payments on the notes and the assumptions used to determine the pricing and estimated value of the notes. In performing these duties, JPMS may have interests adverse to the interests of the holders of the notes, which may affect your return on the notes, particularly where JPMS, as the calculation agent, is entitled to exercise discretion. See “General Terms of Notes — Postponement of a Determination Date” and “The Underlyings” in this product supplement.

**JPMS and its affiliates may have published research, expressed opinions or provided recommendations that are inconsistent with investing in or holding the notes or that may adversely affect the value of the notes, and may do so in the future.**

JPMS and its affiliates may publish research reports, express opinions or provide recommendations from time to time that relate to one or more Indices or Underlying Currencies (relative to the U.S. dollar) or the securities underlying one or more Indices. These research reports, opinions or recommendations may be inconsistent with purchasing or holding the notes and could adversely affect the value of the notes. Any research, opinions or recommendations expressed by JPMS or its affiliates may not be consistent with each other and may be modified from time to time without notice. Investors should make their own independent investigation of the merits of investing in the notes and any Underlying to which the notes are linked.

## **Risks Relating to the Estimated Value and Secondary Market Prices of the Notes**

**JPMS's estimated value of the notes will be lower than the original issue price (price to public) of the notes.**

JPMS's estimated value is only an estimate using several factors. Unless otherwise specified in the relevant terms supplement, the original issue price of the notes will exceed JPMS's estimated value because costs associated with selling, structuring and hedging the notes are included in the original issue price of the notes. These costs include the selling commissions and structuring fees, if any, the projected profits, if any, that our affiliates expect to realize for assuming risks inherent in hedging our obligations under the notes and the estimated cost of hedging our obligations under the notes. See "Description of Notes — JPMS's Estimated Value of the Notes" above in this product supplement.

**JPMS's estimated value will not represent future values of the notes and may differ from others' estimates.**

JPMS's estimated value of the notes will be determined by reference to JPMS's internal pricing models when the terms of the notes are set. This estimated value will be based on market conditions and other relevant factors existing at that time and JPMS's assumptions about market parameters, which can include volatility, correlation, dividend rates, interest rates and other factors. Different pricing models and assumptions could provide valuations for notes that are greater than or less than JPMS's estimated value. In addition, market conditions and other relevant factors may change after JPMS's estimated value has been determined, and any assumptions may prove to be incorrect. The value of the notes could change significantly after JPMS's estimated value has been determined based on, among other things, changes in market conditions, our creditworthiness, interest rate movements and other relevant factors, which may impact the price, if any, at which JPMS would be willing to buy notes from you in secondary market transactions. See "Description of Notes — JPMS's Estimated Value of the Notes" above in this product supplement.

**JPMS's estimated value will not be determined by reference to credit spreads for our conventional fixed-rate debt.**

The internal funding rate used in the determination of JPMS's estimated value will generally represent a discount from the credit spreads for our conventional fixed-rate debt. The discount is based on, among other things, our view of the funding value of the notes as well as the higher issuance, operational and ongoing liability management costs of the notes in comparison to those costs for our conventional fixed-rate debt. If JPMS were to use the interest rate implied by our conventional fixed-rate credit spreads, we would expect the economic terms of the notes to be more favorable to you. In addition, JPMS's estimated value might be lower if it were based on the interest rate implied by our conventional fixed-rate credit spreads. Consequently, our use of an internal funding rate would have an adverse effect on the terms of the notes and any secondary market prices of the notes. See "Description of Notes — JPMS's Estimated Value of the Notes" above in this product supplement.

**The value of the notes as published by JPMS (and which may be reflected on customer account statements) may be higher than JPMS's then-current estimated value of the notes for a limited time period.**

The relevant terms supplement may specify that we will generally expect that some of the costs included in the original issue price of the notes will be partially paid back to you in connection with any repurchases of your notes by JPMS in an amount that will decline to zero over an initial predetermined period. These costs can include selling commissions and structuring fees, if any, projected hedging profits, if any, and, in some circumstances, estimated hedging costs and our secondary market credit spreads for structured debt issuances. See "Description of Notes — Secondary Market Prices of the Notes" above in this product supplement. Accordingly, the estimated value of your notes during this initial period may be lower than the value of the notes as published by JPMS (and which may be shown on your customer account statements).

**Secondary market prices of the notes will likely be lower than the original issue price of the notes.**

Any secondary market prices of the notes will likely be lower than the original issue price of the notes because, among other things, secondary market prices take into account our secondary market credit spreads for structured debt issuances and, also, because secondary market prices (a) exclude selling commissions and structuring fees, if any, and (b) may exclude projected hedging profits, if any, and estimated hedging costs that are included in the original issue price of the notes. As a result, the price, if any, at which JPMS will be willing to buy notes from you in secondary market transactions, if at all, is likely to be lower than the original issue price. Any sale by you prior to the maturity date could result in a substantial loss to you. See the immediately following risk factor for information about additional factors that will impact any secondary market prices of the notes.

**Secondary market prices of the notes will be impacted by many economic and market factors.**

The secondary market price of the notes during their term will be impacted by a number of economic and market factors, which may either offset or magnify each other, aside from the selling commissions and structuring fees, if any, projected hedging profits, if any, estimated hedging costs and the value of the Underlying(s), including:

- any actual or potential change in our creditworthiness or credit spreads;
- customary bid-ask spreads for similarly sized trades;
- secondary market credit spreads for structured debt issuances;
- the actual and expected value of any Index or Underlying Currency (relative to the U.S. dollar);
- the actual and expected frequency and magnitude of changes in the value of any Index or Underlying Currency (relative to the U.S. dollar) (*i.e.*, volatility);
- prevailing market prices, volatility and liquidity of any option or futures contracts relating to any Index or Underlying Currency (relative to the U.S. dollar);
- the time to maturity of the notes;
- the dividend rates on the equity securities underlying an Index (while not paid to holders of the notes, dividend payments on any equity securities underlying an Index may influence the value of the Underlying(s) and the market value of options on the Underlying(s) and therefore affect the market value of the notes);
- interest and yield rates in the market generally, as well as in the markets of the securities underlying an Index, the markets in the originating countries or economic regions of any Underlying Currency and the markets in the United States;
- economic, financial, political, regulatory and judicial events that affect the securities underlying an Index, the original countries or economic regions of any Underlying Currency or stock markets or currency markets generally;
- changes in correlation between the value of any Index and the Underlying Currency of that Index (relative to the U.S. dollar); and
- for notes linked to two or more Underlyings, changes in correlation (the extent to which the values of the Underlyings increase or decrease to the same degree at the same time) between the Underlyings.



Additionally, independent pricing vendors and/or third party broker-dealers may publish a price for the notes, which may also be reflected on customer account statements. This price may be different (higher or lower) than the price of the notes, if any, at which JPMS may be willing to purchase your notes in the secondary market.

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

### **Risks Relating to Basket Notes**

#### **The Underlyings included in a Basket may not be equally weighted.**

If so specified in the relevant terms supplement, the Underlyings included in a Basket may have different weights in determining the value of the Basket. For example, the relevant terms supplement may specify that the Basket consists of five Underlyings and that the weights of the Underlyings are 25%, 30%, 15%, 20% and 10%. One consequence of an unequal weighting of the Underlyings is that the same percentage change in two of the Underlyings may have different effects on the value of the Basket. For example, if the weight for Underlying A is greater than the weight for Underlying B, a 5% decrease in the value of Underlying A will have a greater effect on the value of the Basket than a 5% decrease in value of Underlying B.

#### **The weights of the Underlyings included in a Basket may be determined on a date other than the pricing date.**

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

#### **Changes in the values of the Underlyings included in a Basket may not be correlated and may offset each other, or changes in value may be correlated in a manner that adversely affects any payment on the notes.**

Movements in the values of the Underlyings included in a Basket may not be correlated with each other. For notes that provide long (or bullish) exposure to the Basket, at a time when the value of one or more of the Underlyings increases, the value of the other Underlyings may not increase as much or may even decline. Therefore, in calculating the performance of the Basket, increases in the value of one or more of the Underlyings may be moderated, or more than offset, by lesser increases or declines in the value of the other Underlying or Underlyings, particularly if the Underlying or Underlyings that appreciate are of relatively low weight in the Basket. In addition, high correlation of movements in the values of the Underlyings during periods of negative returns among the Underlyings could have an adverse effect on any payment on the notes.

Similarly, for notes that provide short (or bearish) exposure to the Basket, at a time when the value of one or more of the Underlyings decreases, the value of the other Underlyings may not decrease as much or may even increase. Therefore, in calculating the performance of the Basket, declines in the value of one or more of the Underlyings may be moderated, or more than offset, by lesser declines or increases in the value of the other Underlying or Underlyings, particularly if the Underlying or Underlyings that depreciate are of relatively low weight in the Basket. In addition, high correlation of movements in the values of the Underlyings during periods of positive returns among the Underlyings could have an adverse effect on any payment on the notes.

## **Risks Relating to Least Performing Underlying Notes and Greatest Performing Underlying Notes**

**You are exposed to the risks associated with each Underlying.**

The return on Least Performing Underlying Notes or Greatest Performing Underlying Notes is contingent upon the individual performance of each Underlying and not the performance of a basket of the Underlyings. Unlike an instrument with a return linked to a basket of underlying assets, in which risk is diversified among all the components of the basket, you will be exposed equally to the risks related to any of the Underlyings. The performance of the Underlyings may not be correlated, and the performance of any one of the Underlyings over the term of the notes may negatively affect any payment on the notes and will not be offset by the performance of any or all of the other Underlyings. Accordingly, your investment is subject to the risks associated with each Underlying.

**Any payment on the notes may be determined by reference to the performance of the Underlying that will result in the worst performance of the notes.**

Any payment on the notes may be determined by reference to the performance of the Underlying that will result in the worst performance of the notes, and you will not benefit from the performance of any other Underlying. For example, for Least Performing Underlying Notes, which provide long (or bullish) exposure, any payment on the notes may be determined solely by reference to the Underlying with the lowest return. Similarly, for Greatest Performing Underlying Notes, which provide short (or bearish) exposure, any payment on the notes may be determined solely by reference to the Underlying with the highest return. Accordingly, the performance of a single Underlying can adversely affect the value of the notes and any payment on the notes, regardless of the performance of any other Underlying.

## **Risks Relating to Relative Performance Notes**

**The return on the notes is based on the relative performance of the Underlyings.**

You may receive a lower return on the notes than you could receive by taking directly a long position in the Long Underlying(s) or a short position in the Short Underlying(s). Unlike a long position in the Long Underlying(s) or a short position in the Short Underlying(s), you may not earn a positive return even if each Long Underlying appreciates or each Short Underlying depreciates over the term of the notes. Unless otherwise specified in the relevant terms supplement, it is possible that you will not earn a positive return when all the Underlyings appreciate or when all the Underlyings depreciate, if, in either case, the return of the Long Underlying(s) is less than the return of the Short Underlying(s). The notes will be linked to the performance of the Long Underlying(s) as compared to the performance of the Short Underlying(s) and thus are affected by the relative, not absolute, performance of the Underlyings. Unless otherwise specified in the relevant terms supplement, in order to receive a positive return on the notes, the return of the Long Underlying(s) must be greater than the return of the Short Underlying(s), in each case calculated as set forth in the relevant terms supplement.

**Changes in the value of any Long Underlying may be partially offset or entirely negated by changes in the value of any Short Underlying.**

Changes in the value of any Long Underlying may be partially offset or entirely negated by changes in the value of any Short Underlying. If the returns of the Underlyings are strongly correlated, you may not receive a positive return on the notes, unless otherwise specified in the relevant terms supplement. Conversely, if the returns of the Underlyings are not correlated, your investment will be exposed to the return of the Long Underlying(s) relative to the return of the Short Underlying(s), in each case calculated as set forth in the relevant terms supplement. Your notes may not generate a positive return even if the return of the Long Underlying is positive or the return of the Short Underlying is negative.

**You are exposed to the risks associated with each Underlying.**

The return on Relative Performance Notes is contingent upon the individual performance of each Underlying and not the performance of a basket of the Underlyings. Unlike an instrument with a return linked to a basket of underlying assets, in which risk is diversified among all the components of the basket, you will be exposed equally to the risks related to all of the Underlyings. Poor performance by the Long Underlying(s) or strong performance by the Short Underlying(s) over the term of the notes may negatively affect your return on the notes. Accordingly, your investment is subject to the risks associated with each Underlying.

**Risks Relating to an Underlying**

**The performance of an Underlying may be adversely affected by the performance of the relevant Index or its Underlying Currency (relative to the U.S. dollar) or both.**

The performance of an Underlying is based on the performance of the relevant Index and its Underlying Currency. The adjusted closing level of an Index is the closing level of that Index, converted into U.S. dollars based on the applicable Exchange Rate. Accordingly, for notes that provide long exposure to the Underlying(s), any return on the notes may be adversely affected by any decline in the value of a relevant Index or its Underlying Currency (relative to the U.S. dollar) or both. Similarly, for notes that provide short exposure to the Underlying(s), any return on the notes may be adversely affected by any increase in the value of a relevant Index or its Underlying Currency (relative to the U.S. dollar) or both.

**Changes in the values of an Index and its Underlying Currency may not be correlated and may offset each other, or changes in value may be correlated in a manner that adversely affects any payment on the notes.**

Movements in the values of an Index and its Underlying Currency may not be correlated with each other. For notes that provide long (or bullish) exposure to the Underlying(s), at a time when the value of a relevant Index increases, the value of its Underlying Currency (relative to the U.S. dollar) may not increase as much or may even decline. Therefore, in calculating the performance of an Underlying, increases in the value of the relevant Index may be moderated, or more than offset, by lesser increases or declines in the value of its Underlying Currency (relative to the U.S. dollar). In addition, high correlation of movements in the values of an Index and its Underlying Currency during periods of negative returns among that Index and Underlying Currency could have an adverse effect on any payment on the notes.

Similarly, for notes that provide short (or bearish) exposure to the Underlying(s), at a time when the value of a relevant Index decreases, the value of its Underlying Currency (relative to the U.S. dollar) may not decrease as much or may even increase. Therefore, in calculating the performance of an Underlying, declines in the value of the relevant Index may be moderated, or more than offset, by lesser declines or increases in the value of its Underlying Currency (relative to the U.S. dollar). In addition, high correlation of movements in the values of an Index and its Underlying Currency during periods of positive returns among that Index and Underlying Currency could have an adverse effect on any payment on the notes.

## **Risks Relating to an Index**

**The sponsor of an Index (an “Index Sponsor”) may adjust that Index in a way that affects its level, and the Index Sponsor has no obligation to consider your interests.**

The applicable Index Sponsor is responsible for maintaining an Index. The Index Sponsor can add, delete or substitute the securities underlying the applicable Index or make other methodological changes that could change the level of that Index. You should realize that the changing of securities included in an Index may affect that Index, as a newly added security may perform significantly better or worse than the asset or assets it replaces. Additionally, the Index Sponsor may alter, discontinue or suspend calculation or dissemination of the applicable Index. Any of these actions could adversely affect the value of the notes. The Index Sponsor of an Index has no obligation to consider your interests in calculating or revising that Index. See the relevant index description section in any accompanying underlying supplement or the relevant terms supplement for additional information.

**The reported level of an Index may include the deduction of index fees or other adjustments.**

Any accompanying underlying supplement or the relevant terms supplement may specify that the reported levels of an Index may include a deduction from the aggregate performance of the relevant securities underlying that Index of index fees or other adjustments. Under these circumstances, as a result of these deductions, the value of that Index will trail the value of a hypothetical identically constituted synthetic portfolio that is not subject to those index fees or other adjustments.

**Unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, to our knowledge, our securities are not currently included in an Index.**

As a general matter, none of the issuers the securities of which are included in an Index will be involved in the offering of the notes in any way. As a result, we will have no ability to control the actions of the issuers of those securities, including actions that could affect the value of the securities underlying an Index or your notes. None of those issuers will have any obligation to consider your interests as a holder of the notes in taking any corporate actions that might affect the value of your notes. Unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, none of the money you pay for the notes will go to any of the issuers of the securities included in any Index. See any accompanying underlying supplement or the relevant terms supplement for additional information about whether we are one of the companies included in an Index.

In the event that our securities are included in an Index, we will have no obligation to consider your interests as a holder of the notes in taking any action with respect to that issuer that might affect the value of your notes.

**For notes that provide long (or bullish) exposure to an Index that is not a total return index, your return on the notes will not reflect dividends, interest payments or other distributions on the securities underlying that Index.**

For notes that provide long (or bullish) exposure to an Index that is not a total return index, your return on the notes will not reflect the return you would realize if you actually owned the securities underlying that Index and received the dividends, interest payments or other distributions paid on those securities. This is because the calculation agent will calculate any payment on the notes, in whole or in part, by reference to the values of that Index. The values of that Index will reflect the prices of the securities underlying that Index on the relevant Determination Date(s) without taking into consideration the value of dividends, interest payments or other distributions paid on those securities.

**For notes that provide short (or bearish) exposure to an Index that is a total return index, your return on the notes will be adversely affected by dividends, interest payments or other distributions on the securities underlying that Index.**

The level of a total return index reflects the prices of the securities included in that index, as well as the value of dividends, interest payments or other distributions on the securities underlying that Index on those securities. Accordingly, if the notes are linked to a total return index, any dividends, interest payments or other distributions on the securities underlying that Index will have a positive effect on the level of that index, which will adversely affect the value of the short (or bearish) notes.

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

Unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, the securities that compose an Index have been issued by non-U.S. companies. Investments in securities linked to the value of securities of non-U.S. issuers involve risks associated with the securities markets in those countries where the relevant non-U.S. securities are traded, including risks of volatility in those markets, governmental intervention in those markets and cross shareholdings in companies in certain countries. Also, there is generally less publicly available information about companies in some of these jurisdictions than about U.S. companies that are subject to the reporting requirements of the Securities and Exchange Commission, and generally non-U.S. companies are subject to accounting, auditing and financial reporting standards and requirements and securities trading rules different from those applicable to U.S. reporting companies.

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

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

Some or all of these factors may influence the closing level of an Index. The impact of any of the factors set forth above may enhance or offset some or all of any change resulting from another factor or factors. You cannot predict the future performance of an Index based on its historical performance. The level of an Index may change in a manner that would adversely affect any payment on the notes.

## **Risks Relating to an Underlying Currency Relative to U.S. Dollars**

**The notes are subject to currency exchange risk.**

Foreign currency exchange rates vary over time, and may vary considerably during the term of the notes. The value of an Underlying Currency or the U.S. dollar is at any moment a result of the supply and demand for that Underlying Currency or the U.S. dollar, as applicable. Changes in foreign currency exchange rates over time result from the interaction of many factors directly or indirectly affecting economic and political conditions in the country or economic region the lawful currency of which is that Underlying Currency (each, an “**Underlying Currency Country**” and each Underlying Currency Country and the United States, a “**Relevant Country**”), the United States and other relevant countries or regions.

Of particular importance to potential currency exchange risk are:

- existing and expected rates of inflation;
- existing and expected interest rate levels;
- the balance of payments in any Relevant Country and between each country and its major trading partners;
- political, civil or military unrest in any Relevant Country; and
- the extent of governmental surplus or deficit in any Relevant Country.

All of these factors are, in turn, sensitive to the monetary, fiscal and trade policies pursued by any Relevant Country and those of other countries important to international trade and finance.

**The liquidity, trading value and amounts payable, if any, under the notes could be affected by the actions of the governments of any Relevant Country.**

Foreign exchange rates can be fixed by a sovereign government, allowed to float within a range of exchange rates set by that government or left to float freely. Exchange rates of most economically developed nations are permitted to fluctuate in value relative to the value of other currencies. However, governments do not always allow their currencies to float freely in response to economic forces. Governments use a variety of techniques, such as intervention by their central bank or imposition of regulatory controls or taxes, to affect the exchange rates of their respective currencies. They may also issue a new currency to replace an existing currency, fix the exchange rate or alter the exchange rate or relative exchange characteristics by devaluation or revaluation of a currency. Thus, a special risk in purchasing the notes is that their trading value and any amount payable on the notes could be affected by the actions of sovereign governments, fluctuations in response to other market forces and the movement of currencies across borders. Unless that event constitutes a market disruption event or a Currency Succession Event, there will be no adjustment or change in the terms of the notes in the event that exchange rates should become fixed, or in the event of any devaluation or revaluation or imposition of exchange or other regulatory controls or taxes or in the event of other developments affecting any Underlying Currency, the U.S. dollar or any other currency. See “The Underlyings — Currencies — Market Disruption Events for an Underlying Currency Relative to the U.S. Dollar” and “The Underlyings — Currencies — Currency Succession Events.”

**If an Underlying Currency is an emerging markets currency, the value of the notes will be subject to an increased risk of significant adverse fluctuations.**

Emerging markets currencies may be subject to higher volatility than major currencies, especially in environments of risk aversion and deleveraging. With respect to any emerging or developing nation, there is a greater possibility of nationalization, expropriation or confiscation, political changes, government regulation and social instability. Currencies of emerging economies are often subject to more frequent and larger central bank interventions than the currencies of developed countries and are also more likely to be affected by drastic changes in monetary or exchange rate policies of the relevant countries, which may negatively affect the value of the notes. Global events, even if not directly applicable to an emerging markets country or its currency, may increase volatility or adversely affect the value of your notes.

**Even though any Underlying Currency and the U.S. dollar are traded around-the-clock, if a secondary market for the notes develops, the notes may trade only during regular hours in the United States.**

The interbank market for any Underlying Currency and the U.S. dollar is a global, around-the-clock market and the value of any Underlying Currency and the U.S. dollar are quoted 24 hours a day. Therefore, the hours of trading for the notes, if any, will not conform to the hours during which any Underlying Currency or the U.S. dollar is traded. Consequently, significant price and rate movements may take place in the underlying foreign exchange markets, and thus in the relevant Exchange Rate, that will not be reflected immediately in the market price, if any, of the notes.

**The absence of last-sale and other information about any Underlying Currency or the U.S. dollar may affect the price of the notes.**

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

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

**Currency exchange risks can be expected to heighten in periods of financial turmoil.**

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

**Changes in interest rates may affect the trading value of the notes.**

We expect that changes in interest rates will affect the trading value of the notes. In general, if interest rates in the United States increase or interest rates in an Underlying Currency Country decrease, we expect the U.S. dollar to appreciate relative to the applicable Underlying Currency. Conversely, if the interest rates in the United States decrease or interest rates in an Underlying Currency Country increase, we expect the applicable Underlying Currency will appreciate relative to the U.S. dollar.

Interest rates may affect the economies of a Relevant Country, and, in turn, the exchange rates and therefore the value of an Underlying Currency relative to the U.S. dollar. The impact of changes in interest rates in any Relevant Country may either offset or magnify changes in interest rates in any other Relevant Country.

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

The currency markets are subject to temporary distortions or other disruptions due to various factors, including the participation of speculators and government regulation and intervention. These circumstances could affect the value of any Underlying Currency relative to the U.S. dollar and, therefore, the amount of any payment on the notes and/or the market value of the notes.

**Any Underlying Currency or the U.S. dollar may be replaced by another currency following a Currency Succession Event.**

If an Underlying Currency or the U.S. dollar is lawfully eliminated and replaced with, converted into, redenominated as, or exchanged for, another currency; or any Relevant Country divides into two or more countries or economic regions, each with a different lawful currency immediately after that event (each such event, a **"Currency Succession Event"**), that Underlying Currency or the U.S. dollar will be replaced with another currency (a **"Successor Currency"**). In the event of a Currency Succession Event, you will become subject to the performance of the Successor Currency instead of the Underlying Currency or the U.S. dollar, as applicable. In addition, for notes linked to multiple Underlying Currencies, if any Underlying Currency is replaced with a Successor Currency that is the same as another Underlying Currency, your exposure to that Underlying Currency may be effectively increased. You should read "The Underlyings — Currencies — Currency Succession Events" in order to understand these and other adjustments that may be made to your notes. The occurrence of a Currency Succession Event and the consequent adjustments may materially and adversely affect the value of the notes.

**A separate underlying supplement or the relevant terms supplement may provide additional risk factors relating to any Index or Underlying Currency to which the notes are linked.**



## USE OF PROCEEDS AND HEDGING

Unless otherwise specified in the relevant terms supplement, the net proceeds we receive from the sale of the notes will be used for general corporate purposes and, in part, by us or by one or more of our affiliates in connection with hedging our obligations under the notes. The notes will be offered to meet investor demand for products that reflect the risk-return profile and market exposure provided by the notes as set forth in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, the original issue price of the notes will be equal to the estimated value of the notes plus the selling commissions and structuring fees, if any, paid to each agent and other affiliated or unaffiliated dealers (as shown on the cover page of the relevant terms supplement), plus (minus) the projected profits (losses) that our affiliates expect to realize for assuming risks inherent in hedging our obligations under the notes, plus the estimated cost of hedging our obligations under the notes. See “Description of Notes — JPMS’s Estimated Value of the Notes” and the relevant terms supplement for additional information about JPMS’s estimated value. See also “Use of Proceeds” in the prospectus.

On or prior to the date of the relevant terms supplement, we, through our affiliates or others, expect to hedge some or all of our anticipated exposure in connection with the notes. In addition, from time to time after we issue the notes, we, through our affiliates or others, may enter into additional hedging transactions and close out or unwind those we have entered into, in connection with the notes and possibly in connection with our or our affiliates’ exposure to one or more Indices or Underlying Currencies (relative to the U.S. dollar) or the securities underlying one or more Indices. To accomplish this, we, through our affiliates or others, may take positions in one or more Indices or Underlying Currencies (relative to the U.S. dollar) or the securities underlying one or more Indices, or instruments the value of which is derived from one or more Indices or Underlying Currencies (relative to the U.S. dollar) or the securities underlying one or more Indices. From time to time, prior to maturity of the notes, we may pursue a dynamic hedging strategy that may involve taking long or short positions in the instruments described above.

While we cannot predict an outcome, any of these hedging activities or other trading activities of ours could potentially affect the value of the Underlying(s) in a manner that adversely affects the value of the notes or any payment on the notes. Because hedging our obligations entails risk and may be influenced by market forces beyond our control, this hedging may result in a profit that is more or less than expected, or it may result in a loss. It is possible that these hedging or trading activities could result in substantial returns for us or our affiliates while the value of the notes declines. See “Risk Factors — Risks Relating to Conflicts of Interest — We or our affiliates may have economic interests that are adverse to those of the holders of the notes as a result of our hedging and other trading activities” above.

We have no obligation to engage in any manner of hedging activity and will do so solely at our discretion and for our own account. We may hedge our exposure on the notes directly or we may aggregate this exposure with other positions taken by us and our affiliates with respect to our exposure to one or more Indices or Underlying Currencies (relative to the U.S. dollar) or the securities underlying one or more Indices. No note holder will have any rights or interest in our hedging activity or any positions that we or any unaffiliated counterparties may take in connection with our hedging activity.

## GENERAL TERMS OF NOTES

### Calculation Agent

Unless otherwise specified in the relevant terms supplement, J.P. Morgan Securities LLC, one of our affiliates, will act as the calculation agent. We may appoint a different calculation agent from time to time after the date of the relevant terms supplement without your consent and without notifying you.

The calculation agent will make all necessary calculations and determinations in connection with the notes, including calculations and determinations relating to any payments on the notes and the assumptions used to determine the pricing and estimated value of the notes. All determinations made by the calculation agent will be at the sole discretion of the calculation agent and will, in the absence of manifest error, be conclusive for all purposes and binding on you and on us.

The calculation agent will provide written notice to the trustee at its New York office, on which notice the trustee may conclusively rely, of any amount payable on the notes at or prior to 11:00 a.m., New York City time, on the date on which payment is to be made.

Unless otherwise specified in the relevant terms supplement, all values with respect to calculations in connection with the notes will be rounded to the nearest one hundred-thousandth, with five one-millionths rounded upward (e.g., 0.876545 would be rounded to 0.87655). Notwithstanding the foregoing, all calculations with respect to any Exchange Rate will be rounded to five significant figures, with fives rounded up (e.g., 0.00876545 would be rounded to 0.0087655, and 87.6545 would be rounded to 87.655), all dollar amounts related to determination of any payment on the notes per note will be rounded to the nearest ten-thousandth, with five one hundred-thousandths rounded upward (e.g., 0.76545 would be rounded up to 0.7655), and all dollar amounts payable, if any, on the aggregate principal amount of notes per holder will be rounded to the nearest cent, with one-half cent rounded upward unless otherwise specified in the relevant terms supplement.

### Postponement of a Payment Date

If any scheduled Payment Date is not a business day, then that Payment Date will be the next succeeding business day following the scheduled Payment Date. If, due to a market disruption event or otherwise, any Determination Date referenced in the determination of a payment on the notes that will or may be payable on any Payment Date is postponed so that it falls less than three business days prior to that scheduled Payment Date, that Payment Date will be the third business day following the latest such Determination Date, as postponed, unless otherwise specified in the relevant terms supplement. If any Payment Date is adjusted as the result of a non-business day, a market disruption event or otherwise, any payment of interest due on that Payment Date will be made on that Payment Date as adjusted, with the same force and effect as if that Payment Date had not been adjusted, but no interest will accrue or be payable as a result of the delayed payment.

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

### Postponement of a Determination Date

The relevant terms supplement or an accompanying underlying supplement may provide a formulation of the postponement provisions that will apply to the notes instead of the relevant provisions set forth below.

### ***Notes Linked to a Single Underlying***

For notes linked to a single Underlying, if a Determination Date is a Market Disrupted Day (as defined below) or a Currency Disrupted Day (as defined below), the applicable Determination Date will be postponed to the earliest day on which the closing level and the Exchange Rate of the Index have been established, as described below:

- (a) if the applicable Determination Date is being postponed due to a Market Disrupted Day, the calculation agent will use the closing level and the Exchange Rate on the immediately succeeding scheduled trading day that is not a Market Disrupted Day to calculate the adjusted closing level for that Determination Date, *provided* that if that scheduled trading day is a Currency Disrupted Day, the calculation agent will use the Exchange Rate on the immediately succeeding business day that is not a Currency Disrupted Day instead; and
- (b) if the applicable Determination Date is being postponed due to a Currency Disrupted Day (but not a Market Disrupted Day), the calculation agent will use the closing level on the originally scheduled Determination Date and the Exchange Rate on the immediately succeeding business day that is not a Currency Disrupted Day to calculate the adjusted closing level for that Determination Date.

For example, assume that:

- (a) Scheduled Trading Day 1, a scheduled Determination Date, is a Market Disrupted Day but not a Currency Disrupted Day;
- (b) Scheduled Trading Day 2 is not a Market Disrupted Day but is a Currency Disrupted Day; and
- (c) the business day immediately following Scheduled Trading Day 2 is not a Currency Disrupted Day.

Under these circumstances, the Determination Date originally scheduled to occur on Scheduled Trading Day 1 would be postponed to the business day immediately following Scheduled Trading Day 2 and, with respect to that Determination Date, as postponed, the adjusted closing level would be deemed to be an adjusted closing level calculated using the closing level on Scheduled Trading Day 2 and the Exchange Rate on the immediately following business day.

In no event, however, will any Determination Date be postponed to a date that is after the applicable Final Disrupted Determination Date (as defined below). If a Determination Date has been postponed to the applicable Final Disrupted Determination Date and on that day, the closing level of the Index has not been established in accordance with the immediately preceding paragraph, the calculation agent will determine the closing level of the Index for that Determination Date on that Final Disrupted Determination Date, unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, in accordance with the formula for and method of calculating the closing level last in effect prior to the commencement of the market disruption event (or prior to the non-trading day), using the closing price (or, if trading in the relevant securities has been materially suspended or materially limited, the calculation agent's good faith estimate of the closing price that would have prevailed but for that suspension or limitation or non-trading day) on that Final Disrupted Determination Date of each security most recently constituting the Index.

If a Determination Date has been postponed to the applicable Final Disrupted Determination Date and that day is a Currency Disrupted Day, the calculation agent will determine the Exchange Rate of the Index for that Determination Date on that Final Disrupted Determination Date in good faith and in a commercially reasonable manner, taking into account the latest available quotation for the exchange rate of the relevant Underlying Currency relative to the U.S. dollar and any other information that it deems relevant.

For purposes of this “— Notes Linked to a Single Underlying” section, with respect to a Determination Date, unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, the “**Final Disrupted Determination Date**” means the tenth scheduled trading day after that Determination Date, as originally scheduled.

***Notes Linked to Multiple Underlyings***

For notes linked to multiple Underlyings, if a Determination Date is a Market Disrupted Day or a Currency Disrupted Day for any Index (any Index affected by a Market Disrupted Day or a Currency Disrupted Day, a “**Disrupted Index**”), the applicable Determination Date will be postponed to the earliest day on which the closing level and the Exchange Rate of each Index have been established, as described below:

- (a) for each Index that is not a Disrupted Index (an “**Unaffected Index**”), the closing level and the Exchange Rate of that Index on the postponed Determination Date will be deemed to be the closing level and the Exchange Rate of that Index on the originally scheduled Determination Date;
- (b) for each Disrupted Index that is affected by a Market Disrupted Day, the calculation agent will use the closing level and the Exchange Rate on the immediately succeeding scheduled trading day that is not a Market Disrupted Day to calculate the adjusted closing level of that Index for that Determination Date, *provided* that if that scheduled trading day is a Currency Disrupted Day, the calculation agent will use the Exchange Rate on the immediately succeeding business day that is not a Currency Disrupted Day instead; and
- (c) for each Disrupted Index that is affected by a Currency Disrupted Day (but not a Market Disrupted Day), the calculation agent will use the closing level on the originally scheduled Determination Date and the Exchange Rate on the immediately succeeding business day that is not a Currency Disrupted Day to calculate the adjusted closing level of that Index for that Determination Date.

Accordingly, if a Determination Date is postponed as described above, the calculation agent may reference the closing levels and Exchange Rates of the Indices from different days when making any determinations with respect to that Determination Date, as postponed.

For example, assume that the notes are linked to two Indices, Index A and Index B, and that:

- (a) Scheduled Trading Day 1, a scheduled Determination Date, is not a Market Disrupted Day for Index A but is a Market Disrupted Day for Index B;
- (b) Scheduled Trading Day 2 is not a Market Disrupted Day for Index B but is a Currency Disrupted Day for Index B; and
- (c) the business day immediately following Scheduled Trading Day 2 is not a Currency Disrupted Day for Index B.

Under these circumstances, the Determination Date originally scheduled to occur on Scheduled Trading Day 1 would be postponed to the business day immediately following Scheduled Trading Day 2 and, with respect to that Determination Date, as postponed, the adjusted closing levels would be deemed to be (a) for Index A, the adjusted closing level on Scheduled Trading Day 1; and (b) for Index B, an adjusted closing level calculated using the closing level on Scheduled Trading Day 2 and the Exchange Rate on the immediately following business day.

In no event, however, will any Determination Date be postponed to a date that is after the applicable Final Disrupted Determination Date. If a Determination Date has been postponed to the applicable Final Disrupted Determination Date and on that day, the closing level or the Exchange Rate for any Disrupted Index has not been established in accordance with the first paragraph of this “— Notes Linked to Multiple Underlyings” section, the closing level and the Exchange Rate for that Determination Date will be determined by the calculation agent on that Final Disrupted Determination Date and will be deemed to be:

- (a) for each Unaffected Index, the closing level and the Exchange Rate on the originally scheduled Determination Date; and
- (b) for each Disrupted Index, the closing level and/or the Exchange Rate determined in the manner described in the first paragraph of this “— Notes Linked to Multiple Underlyings” section; *provided that*:
  - (i) if, on that Final Disrupted Determination Date, the closing level of that Index has not been established in accordance with the first paragraph of this “— Notes Linked to Multiple Underlyings” section, the calculation agent will determine the closing level of that Index for that Determination Date on that Final Disrupted Determination Date, unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, in accordance with the formula for and method of calculating the closing level last in effect prior to the commencement of the market disruption event (or prior to the non-trading day), using the closing price (or, if trading in the relevant securities has been materially suspended or materially limited, the calculation agent’s good faith estimate of the closing price that would have prevailed but for that suspension or limitation or non-trading day) on that Final Disrupted Determination Date of each security most recently constituting the Index; and/or
  - (ii) if, on that Final Disrupted Determination Date, the Exchange Rate of that Index has not been established in accordance with the first paragraph of this “— Notes Linked to Multiple Underlyings” section, the calculation agent will determine the Exchange Rate of that Index for that Determination Date on that Final Disrupted Determination Date in good faith and in a commercially reasonable manner, taking into account the latest available quotation for the exchange rate of the relevant Underlying Currency relative to the U.S. dollar and any other information that it deems relevant.

For purposes of this “— Notes Linked to Multiple Underlyings” section, with respect to a Determination Date, unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, the “**Final Disrupted Determination Date**” means the tenth scheduled trading day after that Determination Date, as originally scheduled, for each of the Indices (or, if that tenth scheduled trading day is not the same day for each of the Indices, the latest of those tenth scheduled trading days).

#### ***Additional Defined Terms***

Unless otherwise specified in the relevant terms supplement, a “**Market Disrupted Day**” means, with respect to an Index, a day that is not a trading day with respect to that Index or a day on which a market disruption event occurs or is continuing with respect to that Index.

Unless otherwise specified in the relevant terms supplement, a “**Currency Disrupted Day**” means, with respect to an Index, a day that is not a currency business day with respect to the Underlying Currency of that Index or a day on which a market disruption event occurs or is continuing with respect to the Underlying Currency of that that Index.

For additional information about market disruption events, see “The Underlyings” section below.

Unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, a “**scheduled trading day**” is, with respect to an Index or any relevant successor index, a day, as determined by the calculation agent, on which each of the following exchanges is scheduled to be open for trading for their respective regular trading sessions: (a) the relevant exchanges for securities underlying that Index or successor index, as applicable, and (b) the exchanges on which futures or options contracts related to that Index or successor index, as applicable, are traded.

Unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, a “**trading day**” is, with respect to an Index or any relevant successor index, a day, as determined by the calculation agent, on which trading is generally conducted on (a) the relevant exchanges for securities underlying that Index or successor index, as applicable, and (b) the exchanges on which futures or options contracts related to that Index or successor index, as applicable, are traded.

Unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, “**relevant exchange**” means, with respect to an Index or any relevant successor index, the primary exchange or market of trading for any security then included in that Index or successor index, as applicable.

Unless otherwise specified in the relevant terms supplement, a “**currency business day**” is, with respect to an Underlying Currency, a day, as determined by the calculation agent, on which (a) dealings in foreign currency in accordance with the practice of the foreign exchange market occur in the City of New York and the principal financial center for the applicable Underlying Currency, as specified in the relevant terms supplement, (b) banking institutions in the City of New York and those principal financial centers are not otherwise authorized or required by law, regulation or executive order to close and (c) if specified in the relevant terms supplement, the Trans-European Automated Real-time Gross Settlement Express Transfer System (“TARGET2”) is open.

## Events of Default

Under the heading “Description of Debt Securities — Events of Default and Waivers” in the prospectus is a description of events of default relating to debt securities including the notes.

## Payment upon an Event of Default

Unless otherwise specified in the relevant terms supplement, in case an event of default with respect to the notes shall have occurred and be continuing, if the notes do not include an automatic redemption feature, the amount declared due and payable per note upon any acceleration of the notes will be determined by the calculation agent and will be an amount in cash equal to the amount payable at maturity per note calculated in the manner described in the relevant terms supplement and calculated as if the date of acceleration were (a) the final Determination Date and (b) the Final Disrupted Determination Date for the final Determination Date (if the date of acceleration is a Disrupted Day).

Unless otherwise specified in the relevant terms supplement, in case an event of default with respect to the notes shall have occurred and be continuing, if the notes include an automatic redemption feature, the amount declared due and payable per note upon any acceleration of the notes will be determined by the calculation agent and will be (1) if (a) the date of acceleration is a Determination Date for the automatic redemption feature and the conditions for an automatic redemption would have been satisfied on the date of acceleration or (b) the date of acceleration is not a Determination Date for the automatic redemption feature, but the conditions for an automatic redemption would have been satisfied on the date of acceleration if the date of

acceleration were the next succeeding Determination Date for the automatic redemption feature, an amount in cash equal to the amount payable upon an automatic redemption per note calculated in the manner described in the relevant terms supplement and calculated as if the date of acceleration were (i) that Determination Date and (ii) the Final Disrupted Determination Date for that Determination Date, or (2) in all other circumstances, an amount in cash equal to the amount payable at maturity per note calculated in the manner described in the relevant terms supplement and calculated as if the date of acceleration were (a) the final Determination Date and (b) the Final Disrupted Determination Date for the final Determination Date (if the date of acceleration is a Disrupted Day).

Unless otherwise specified in the relevant terms supplement, any amount payable as described in the two immediately preceding paragraphs will include any accrued and unpaid interest on the notes; *provided* that any interest payable will be prorated based on the ratio of the actual number of days from and including the previous interest payment date to but excluding the date of acceleration over the number of days from and including the previous interest payment date to but excluding the next scheduled interest payment date.

If the final value of an Underlying is determined on more than one Determination Date, then, for each Determination Date scheduled to occur after the date of acceleration, the trading days immediately preceding the date of acceleration (in such number equal to the number of the Determination Dates in excess of one) will be the corresponding Determination Dates, unless otherwise specified in the relevant terms supplement.

The amount determined as described above will constitute the final payment on the notes, and no additional amounts will accrue with respect to the notes following the date of acceleration, regardless of any performance of the Underlying(s) following the date of acceleration.

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

### **Modification**

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

### **Defeasance**

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

### **Listing**

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

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

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

## **Registrar, Transfer Agent and Paying Agent**

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

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

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

## **Governing Law**

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

## **Reopening Issuances**

We may, in our sole discretion, "reopen" the notes based upon market conditions and the value of the Underlying(s) at that time. We intend to issue the notes initially in an amount having the aggregate offering price specified on the cover of the relevant terms supplement. However, we may issue additional notes in amounts that exceed the amount on the cover at any time, without your consent and without notifying you. The notes do not limit our ability to incur other indebtedness or to issue other securities. Also, we are not subject to financial or similar restrictions by the terms of the notes. These further issuances, if any, will be consolidated to form a single sub-series with the originally issued notes, will have the same CUSIP number and will trade interchangeably with the notes immediately upon settlement. Any notes bearing the same CUSIP number that are issued pursuant to any future additional issuances of notes bearing the same CUSIP number will increase the aggregate principal amount of the outstanding notes of this series. The price of any additional offering will be determined at the time of pricing of that offering.

***We have no obligation to take your interests into account when deciding whether to issue additional notes. In addition, we are under no obligation to reopen any series of notes or to issue any additional notes.***



## THE UNDERLYINGS

A separate underlying supplement or the relevant terms supplement will provide additional information relating to any Index. Unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, we will derive all information regarding any Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, without independent verification.

### Adjusted Closing Level of an Index

Unless otherwise specified in the relevant terms supplement, the “**adjusted closing level**” of an Index or any relevant successor index (as defined under “— Discontinuation of an Index; Alteration of Method of Calculation” below) on any relevant day will equal the closing level of that Index or successor index, as applicable, on that day *multiplied* by the Exchange Rate of that Index or successor index, as applicable, on that day.

Unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, the “**closing level**” of an Index or any relevant successor index on any relevant day will equal the official closing level of that Index or successor index, as applicable, published with respect to that day. In certain circumstances, the closing level of an Index or any relevant successor index will be based on the alternative calculation of that Index described under “General Terms of Notes — Postponement of a Determination Date” above or “— Discontinuation of an Index; Alteration of Method of Calculation” below.

Unless otherwise specified in the relevant terms supplement, the “**Exchange Rate**” of an Index or any relevant successor index on any relevant day will be an exchange rate expressed as the amount of U.S. dollars per one unit of the Underlying Currency of that Index or successor index, as applicable, and will be equal to either:

- the number of U.S. dollars per one unit of the Underlying Currency of that Index or successor index, as applicable; or
- one *divided* by the amount of Underlying Currency of that Index or successor index, as applicable, per U.S. dollar,

in each case as reported by Reuters Group PLC (“**Reuters**”) or Bloomberg, L.P. (“**Bloomberg**”) on the relevant page, as specified in the relevant terms supplement, or any substitute Reuters or Bloomberg page; *provided* that if the Underlying Currency of that Index or successor index, as applicable, is U.S. dollars, the Exchange Rate will be equal to 1.0.

The relevant terms supplement will specify the specific Reuters or Bloomberg page to be used and the approximate time of day at which the relevant page will be consulted to determine the Exchange Rate. If a market disruption event or non-currency business day with respect to an Underlying Currency has occurred or is continuing, or a Currency Succession Event with respect to an Underlying Currency or the U.S. dollar has occurred, the method of determining the relevant Exchange Rates may be modified as described under “General Terms of Notes — Postponement of a Determination Date” above and “— Currency Succession Events” below.

### Market Disruption Events for an Index

With respect to an Index (or any relevant successor index), a “**market disruption event**,” unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, means:

- the occurrence or existence of a suspension, absence or material limitation of trading of equity securities then constituting 20% or more of the level of that Index (or that successor index) on the relevant exchanges for those securities for more than two hours of trading during, or during the one-hour period preceding the close of, the principal trading session on that relevant exchange;

- a breakdown or failure in the price and trade reporting systems of any relevant exchange as a result of which the reported trading prices for equity securities then constituting 20% or more of the level of that Index (or that successor index) during the one-hour period preceding the close of the principal trading session on that relevant exchange are materially inaccurate;
- the occurrence or existence of a suspension, absence or material limitation of trading on the primary exchange or market for trading in futures or options contracts related to that Index (or that successor index), if available, for more than two hours of trading during, or during the one-hour period preceding the close of, the principal trading session on that exchange or market; or
- a decision to permanently discontinue trading in those related futures or options contracts,

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

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

For purposes of determining whether a market disruption event with respect to an Index (or any relevant successor index) exists at any time, if trading in a security included in that Index (or that successor index) is materially suspended or materially limited at that time, then the relevant percentage contribution of that security to the level of that Index (or that successor index) will be based on a comparison of:

- the portion of the level of that Index (or that successor index) attributable to that security relative to
- the overall level of that Index (or that successor index),

in each case immediately before that suspension or limitation.

For purposes of determining whether a market disruption event with respect to an Index (or any relevant successor index) has occurred, unless otherwise specified in the relevant terms supplement:

- a limitation on the hours or number of days of trading will not constitute a market disruption event if it results from an announced change in the regular business hours of the relevant exchange or the primary exchange or market for trading in futures or options contracts related to that Index (or that successor index);
- limitations pursuant to the rules of any relevant exchange similar to New York Stock Exchange ("NYSE") Rule 80B (or any applicable rule or regulation enacted or promulgated by any other self-regulatory organization or any government agency of scope similar to NYSE Rule 80B as determined by the calculation agent) on trading during significant market fluctuations will constitute a suspension, absence or material limitation of trading;
- a suspension of trading in futures or options contracts on that Index (or that successor index) by the primary exchange or market for trading in those contracts, if available, by reason of:
  - a price change exceeding limits set by that exchange or market,
  - an imbalance of orders relating to those contracts or
  - a disparity in bid and ask quotes relating to those contracts

will, in each case, constitute a suspension, absence or material limitation of trading in futures or options contracts related to that Index (or that successor index); and

- a “suspension, absence or material limitation of trading” on any relevant exchange or on the primary exchange or market on which futures or options contracts related to that Index (or that successor index) are traded will not include any time when that exchange or market is itself closed for trading under ordinary circumstances.

### **Discontinuation of an Index; Alteration of Method of Calculation**

Unless otherwise specified in the relevant terms supplement or any accompanying underlying supplement, if the sponsor of an Index (an “**Index Sponsor**”) discontinues publication of that Index and that Index Sponsor or another entity publishes a successor or substitute index that the calculation agent determines, in its sole discretion, to be comparable to the discontinued Index (such index being referred to in this product supplement as a “**successor index**”), then the closing level of that Index on any Determination Date, or any other relevant date on which the closing level of that Index is to be determined, will be determined by reference to the level of that successor index published with respect to that day.

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

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

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

## Market Disruption Events for an Underlying Currency Relative to the U.S. Dollar

Unless otherwise specified in the relevant terms supplement, a “**market disruption event**,” with respect to an Underlying Currency relative to the U.S. dollar, means the occurrence of any of the following with respect to that Underlying Currency relative to the U.S. dollar:

- (a) a Convertibility Event;
- (b) a Deliverability Event (*provided* that a Deliverability Event will not constitute a market disruption event if that Underlying Currency is a Non-Deliverable Currency);
- (c) a Liquidity Event;
- (d) a Taxation Event;
- (e) a Discontinuity Event; or
- (f) a Price Source Disruption Event,

in each case as determined by the calculation agent in its sole discretion and in the case of an event described in clause (a), (b), (c), (d) or (e) above, a determination by the calculation agent in its sole discretion that such event materially interferes with our ability or the ability of any of our affiliates to adjust or unwind all or a material portion of any hedge with respect to the notes.

Unless otherwise specified in the relevant terms supplement, each of the following is a “**Non-Deliverable Currency**”: the Argentine peso, the Brazilian real, the Chilean peso, the Colombian peso, the Indian rupee, the Indonesian rupiah, the Korean won, the Malaysian ringgit, the New Taiwan dollar, the Peruvian nuevo sol and the Philippine peso.

Unless otherwise specified in the relevant terms supplement, a “**Convertibility Event**” with respect to an Underlying Currency relative to the U.S. dollar means an event that, in effect, prevents, restricts or delays (or, in the case of a Non-Deliverable Currency, an event that results in a material change since the pricing date in) a market participant’s ability to:

- convert that Underlying Currency into U.S. dollars or convert U.S. dollars into that Underlying Currency through customary legal channels; or
- convert that Underlying Currency into U.S. dollars at a rate at least as favorable as the rate for domestic institutions located in the Underlying Currency Country or convert U.S. dollars into that Underlying Currency at a rate at least as favorable as the rate for domestic institutions located in the United States.

Unless otherwise specified in the relevant terms supplement, a “**Deliverability Event**” with respect to an Underlying Currency relative to the U.S. dollar means an event that has the effect of preventing, restricting or delaying a market participant from:

- delivering that Underlying Currency from accounts inside the Underlying Currency Country to accounts outside the Underlying Currency Country or delivering U.S. dollars from accounts inside the United States to accounts outside the United States; or
- delivering that Underlying Currency between accounts inside the Underlying Currency Country or to a party that is a non-resident of the Underlying Currency Country or delivering U.S. dollars between accounts inside the United States or to a party that is a non-resident of the United States.

Unless otherwise specified in the relevant terms supplement, a **"Liquidity Event"** with respect to an Underlying Currency relative to the U.S. dollar means the imposition by any Relevant Country (or any political subdivision or regulatory authority thereof) of any capital or currency controls (such as a restriction placed on the holding of assets in or transactions through any account in the Relevant Country by a non-resident of that Relevant Country) (or, in the case of a Non-Deliverable Currency, an event that results in a material change since the pricing date in any capital or currency controls imposed by a Relevant Country), or the publication of any notice of an intention to do so, that the calculation agent determines in good faith and in a commercially reasonable manner is likely to materially affect an investment in that Underlying Currency or U.S. dollars.

Unless otherwise specified in the relevant terms supplement, a **"Taxation Event"** with respect to an Underlying Currency relative to the U.S. dollar means the implementation by a Relevant Country (or any political subdivision or regulatory authority thereof), or the publication of any notice of an intention to implement, any changes to the laws or regulations relating to foreign investment in that Relevant Country, as applicable (including, but not limited to, changes in tax laws and/or laws relating to capital markets and corporate ownership), that the calculation agent determines in good faith in a commercially reasonable manner are likely to materially affect an investment in that Underlying Currency or U.S. dollars.

Unless otherwise specified in the relevant terms supplement, a **"Discontinuity Event"** with respect to an Underlying Currency relative to the U.S. dollar means the pegging or de-pegging of that Underlying Currency relative to the U.S. dollar (or of U.S. dollars relative to that Underlying Currency) or the controlled appreciation or devaluation by the Relevant Country (or any political subdivision or regulatory authority thereof) of that Underlying Currency relative to the U.S. dollar (or U.S. dollars relative to that Underlying Currency), as determined by the calculation agent in good faith and in a commercially reasonable manner.

Unless otherwise specified in the relevant terms supplement, a **"Price Source Disruption Event"** with respect to an Underlying Currency relative to the U.S. dollar means the non-publication or unavailability of the applicable spot rate for that Underlying Currency relative to the U.S. dollar on the applicable Reuters or Bloomberg page (or any substitute page) specified in the relevant terms supplement and at the applicable time specified in the relevant terms supplement for the determination of the Exchange Rate for that Underlying Currency on any date of determination.

### **Currency Succession Events**

A **"Currency Succession Event"** with respect to an Underlying Currency or the U.S. dollar means the occurrence of either of the following events:

- (a) that Underlying Currency or the U.S. dollar is lawfully eliminated and replaced with, converted into, redenominated as, or exchanged for, another currency; or
- (b) the Relevant Country for that Underlying Currency or the U.S. dollar divides into two or more countries or economic regions, as applicable, each with a different lawful currency immediately after that event.

We refer to that Underlying Currency or the U.S. dollar with respect to which a Currency Succession Event has occurred as the **"Former Currency."**

On and after the effective date of a Currency Succession Event, the Former Currency will be deemed to be replaced with:

- in the case of clause (a) above, the currency that lawfully replaces the Former Currency, into which the Former Currency is converted or redenominated, or for which the Former Currency is exchanged, as applicable, or

- in the case of clause (b) above, a currency selected by the calculation agent from among the lawful currencies resulting from the division that the calculation agent determines in good faith and in a commercially reasonable manner is most comparable to the Former Currency, taking into account the latest available quotation for the spot rate of the Former Currency relative to the U.S. dollar or the relevant Underlying Currency relative to the Former Currency, as applicable, and any other information that it deems relevant.

We refer to the replacement currency determined as described in the bullets above as the **"Successor Currency."**

Upon the occurrence of a Currency Succession Event, the Exchange Rate for any Underlying Currency affected by the Currency Succession Event (either because the Currency Succession Event has occurred with respect to that Underlying Currency or because the Currency Succession Event has occurred with respect to the U.S. dollar) on any day prior to the relevant Currency Succession Event will be adjusted so that the new Exchange Rate for that prior day will equal the product of:

- the original Exchange Rate for that prior day; and
- a ratio of the Successor Currency to the Former Currency, which ratio will be calculated on the basis of the exchange rate set forth by the relevant country or economic region of the Former Currency for converting the Former Currency into the Successor Currency on the effective date of the Currency Succession Event, as determined by the calculation agent.

In the event that the exchange rate is not publicly announced by the relevant country or economic region, the Exchange Rate for that prior day will be adjusted by the calculation agent in good faith and in a commercially reasonable manner.

For example, assuming an Underlying Currency is the European Union euro, but a Currency Succession Event occurs and the European Union euro is replaced with the Deutsche mark, if the Exchange Rate for the European Union euro on a relevant day prior to a Currency Succession Event was equal to 1.30 U.S. dollars per European Union euro, the original Exchange Rate for that prior day will be adjusted so that it is expressed in terms of Deutsche marks and U.S. dollars. If the exchange rate set forth by the European Union for converting European Union euros into Deutsche marks on the effective date of the Currency Succession Event is 2.00 Deutsche marks for each European Union euro, the new Exchange Rate for that prior day will be equal to 0.65 U.S. dollars per Deutsche mark (or 1.30 multiplied by the ratio of 1 over 2.00). On and after the effective date of a Currency Succession Event, the Exchange Rate for that Underlying Currency will refer to the Deutsche mark relative to the U.S. dollar.

Notwithstanding the foregoing, if, as a result of a Currency Succession Event, (a) in the case of a Former Currency that is an Underlying Currency, the Successor Currency is the U.S. dollar or (b) in the case of a Former Currency that is the U.S. dollar, a Successor Currency is the same as the relevant Underlying Currency, in lieu of the adjustments to the relevant Exchange Rates described above, the Exchange Rate for the affected Underlying Currency on each relevant day occurring on and after the effective date of that Currency Succession Event will be based on the exchange rate on the date of the Currency Succession Event as announced by the relevant country or economic region (or if that country or economic region has not announced an exchange rate, an exchange rate as determined by the calculation agent in good faith and in a commercially reasonable manner).

Upon the occurrence of a Currency Succession Event, the calculation agent will select in good faith and in a commercially reasonable manner a substitute Reuters or Bloomberg page for purposes of determining the Exchange Rate of any affected Underlying Currencies. To the extent the market convention for quoting the exchange rate for the Successor Currency relative to the U.S. dollar or the Underlying Currency relative to the Successor Currency, as applicable, is different from the market convention for the Underlying Currency relative to the U.S. dollar, the calculation agent will apply all calculations in a manner consistent with the original market convention in accounting for any adjustments resulting from a Currency Succession Event.

## MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES

The following is a discussion of the material U.S. federal income and certain estate tax consequences of owning and disposing of notes. It applies to you only if you are an initial investor who purchases a note at its issue price for cash and holds it as a capital asset within the meaning of Section 1221 of the Internal Revenue Code of 1986, as amended (the "Code").

This discussion does not address all aspects of U.S. federal income and estate taxation that may be relevant to you in light of your particular circumstances, including alternative minimum tax consequences, the potential application of the provision of the Code known as the Medicare contribution tax and the different consequences that may apply if you are an investor subject to special treatment under the U.S. federal income tax laws, such as:

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

If you are a partnership for U.S. federal income tax purposes, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and your activities.

This discussion is based on the Code, administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations as of the date of this product supplement, changes to any of which, subsequent to the date hereof, may affect the tax consequences described herein. The effects of any applicable state, local or non-U.S. tax laws are not discussed. **You should consult your tax adviser concerning the application of U.S. federal income and estate tax laws to your particular situation (including the possibility of alternative treatments of the notes), as well as any tax consequences arising under the laws of any state, local or non-U.S. jurisdiction.**

### Tax Treatment of the Notes

The tax consequences of an investment in the notes are unclear. There is no direct legal authority as to the proper U.S. federal income tax treatment of the notes, and we do not intend to request a ruling from the IRS regarding the notes. The tax treatment of the notes for U.S. federal income tax purposes will depend upon the facts at the time of the relevant offering. At the time of the relevant offering, we may seek an opinion of counsel regarding the tax consequences of owning and disposing of the notes. In this event, whether or not counsel is able to opine regarding the correctness of the treatment we intend to apply to a particular offering of notes, we generally expect that counsel will be able to opine that the tax consequences described in the applicable sections below are the material tax consequences of owning and disposing of the notes if that treatment is respected, as well as material tax consequences that may apply if it is not respected.

The following discussion assumes the treatment described in an applicable section below is respected, except where otherwise indicated. The relevant terms supplement may indicate consequences different from those described herein and also may identify other issues applicable to a particular offering of notes.

## Tax Consequences to U.S. Holders

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

- a citizen or individual resident of the United States;
- a corporation, created or organized in or under the laws of the United States, any state therein or the District of Columbia; or
- an estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

### *Notes Treated as Open Transactions That Are Not Debt Instruments*

The following describes the material U.S. federal income tax consequences of owning and disposing of notes that we treat as "open transactions" that are not debt instruments for U.S. federal income tax purposes. The relevant terms supplement will indicate whether we intend to treat the notes as open transactions that are not debt instruments for U.S. federal income tax purposes.

*Tax Treatment as Open Transactions That Are Not Debt Instruments.* Under this treatment, you should not recognize taxable income or loss other than pursuant to a sale or exchange (including acceleration, early redemption or repurchase, "deemed" taxable exchange, as described below, or maturity). Upon a sale or exchange of a note, you should recognize gain or loss equal to the difference between the amount realized on the sale or exchange and your tax basis in the note, which should equal the amount you paid to acquire it. Subject to the discussion below concerning the potential application of the "constructive ownership" rules under Section 1260 of the Code, this gain or loss should be long-term capital gain or loss if you have held the note for more than one year at that time. The deductibility of capital losses is subject to limitations. Depending on the nature of the Underlying, the IRS might assert that a "deemed" taxable exchange has occurred under certain circumstances. The relevant terms supplement may contain additional disclosure regarding this risk.

*Potential Application of the Constructive Ownership Rules.* If a "pass-thru entity" (as defined in the Code) is a component of an Underlying, the notes could be treated as "constructive ownership transactions" within the meaning of Section 1260 of the Code, in which case the tax consequences of a sale or exchange of the notes could be affected materially and adversely. If a note were treated in whole or in part as a constructive ownership transaction, all or a portion of any long-term capital gain you would otherwise recognize on a sale or exchange of the note would be recharacterized as ordinary income to the extent such gain exceeded the "net underlying long-term capital gain." Under Section 1260, the net underlying long-term capital gain is generally the net long-term capital gain a taxpayer would have recognized by investing in the pass-thru entity at the inception of the constructive ownership transaction and selling that investment on the date the constructive ownership transaction is closed (i.e., at maturity or earlier disposition). If Section 1260 were to apply to a note, it is uncertain how the net underlying long-term capital gain would be computed. It is possible, for instance, where an Underlying is an Index that consists solely of interests in pass-thru entities, that the net underlying long-term capital gain could equal the amount of long-term capital gain you would have recognized if on the issue date you had invested the amount you paid to acquire the note in interests in the relevant pass-thru entities and sold those interests for their fair market value on the date your note is sold or exchanged. Unless otherwise established by clear and convincing evidence, the amount of net underlying long-term capital gain is treated as zero. Any long-term capital gain recharacterized as ordinary income under Section 1260 would be treated as accruing at a constant rate over the period you held the note, and you would be subject to a notional interest charge in respect of the deemed tax liability on the income treated as accruing in prior tax years. Unless otherwise indicated in the relevant terms supplement, if pass-thru entities constitute a significant portion of the Underlying(s), due to the lack of governing authority and the fact-sensitive nature of the analysis under Section 1260, we do not expect that counsel will be able to opine as to whether or how these rules would apply to your notes. You should consult your tax adviser regarding the potential application of the constructive ownership rules.



*Uncertainties Regarding Tax Treatment as Open Transactions That Are Not Debt Instruments.* If the notes are treated as open transactions that are not debt instruments, due to the lack of controlling authority there remain significant additional uncertainties regarding the tax consequences of owning and disposing of them. For instance, you might be required to include amounts in income during the term of your notes and/or to treat all or a portion of the gain or loss on the sale or exchange of your notes as ordinary income or loss or as short-term capital gain or loss, without regard to how long you have held them. In addition, in 2007 Treasury and the IRS released a notice requesting comments on the U.S. federal income tax treatment of “prepaid forward contracts” and similar instruments. The notice focuses in particular on whether to require investors in these instruments to accrue income over the term of their investment. It also asks for comments on a number of related topics, including the character of income or loss with respect to these instruments; the relevance of factors such as the nature of the underlying property to which the instruments are linked; and whether these instruments are or should be subject to the “constructive ownership” regime described above. While the notice requests comments on appropriate transition rules and effective dates, any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the notes, possibly with retroactive effect.

*Tax Consequences if Treated as Debt Instruments.* If the notes are treated as debt instruments, your tax consequences will be governed by Treasury regulations relating to the taxation of “contingent payment debt instruments” if the term of the notes from issue to maturity (excluding the issue date, but including the last possible date that the notes could be outstanding) is more than one year. In this event, regardless of whether you are an accrual-method or cash-method taxpayer, (i) in each year that you hold your notes, you will be required to accrue into income original issue discount (“OID”) on your notes at our “comparable yield” for similar noncontingent debt, determined at the time of the issuance of the notes (even though you will not receive any cash with respect to the notes prior to maturity) and (ii) any income recognized upon a sale or exchange of your notes generally will be treated as interest income. Additionally, if you recognize a loss above certain thresholds, you might be required to file a disclosure statement with the IRS.

***Notes Treated as Units Each Comprising a Put Option and a Deposit***

The following describes the material U.S. federal income tax consequences of the ownership and disposition of notes that are treated as units comprising a put option and a deposit for U.S. federal income tax purposes. The relevant terms supplement will indicate whether we intend to treat the notes as Units each comprising a put option and a deposit for U.S. federal income tax purposes. Unless otherwise indicated in the relevant terms supplement, insofar as we have tax reporting responsibilities with respect to these notes, we expect (in the absence of an administrative determination or judicial ruling to the contrary) to treat them for U.S. federal income tax purposes as units each comprising (i) a put option written by you (a “Put Option”) that is terminated if an early redemption occurs and that, if not terminated, in circumstances where the payment due at maturity is less than \$1,000 (excluding amounts attributable to accrued but unpaid interest), requires you to receive the cash value of the Underlying in exchange for \$1,000 and (ii) a deposit of \$1,000 per \$1,000 principal amount note to secure your potential obligation under the Put Option (the “Deposit”). Under this approach, a portion of each interest payment (including at maturity) made with respect to the notes will be treated as interest on the Deposit, and the remainder as premium paid to you in consideration of your entry into the Put Option (a “Put Premium”). We will specify in the relevant terms supplement the portion of each interest payment that we will allocate to interest on the Deposit and to Put Premium, respectively.

### *Notes with a Term of Not More than One Year*

If the term of the notes (including either the issue date or the last possible date that the notes could be outstanding, but not both) is not more than one year, the following discussion applies.

***Tax Treatment of Interest Payments.*** Because the term of the notes is not more than one year, the Deposit will be treated as a short-term obligation for U.S. federal income tax purposes. Under the applicable Treasury regulations, the Deposit will be treated as being issued at a discount equal to the sum of all interest payments to be made with respect to the Deposit. Accordingly, accrual-method holders, and cash-method holders who so elect, will be required to include the discount in income as it accrues on a straight-line basis, unless they elect to accrue the discount on a constant-yield method based on daily compounding. Cash-method holders who do not elect to accrue the discount in income currently will be required to include interest paid on the Deposit upon its receipt. Additionally, cash-method holders who do not elect to accrue the discount in income currently will be required to defer deductions for interest paid on any indebtedness incurred to purchase or carry their notes in amounts not exceeding accrued discount that has not been included in income.

Put Premium will be taken into account as described below.

***Sale or Exchange of a Note.*** Upon sale or exchange of a note prior to maturity (including upon acceleration, early redemption or repurchase), subject to the next sentence, you generally will be required to recognize an amount of short-term capital gain or loss equal to the difference between (i) the proceeds received and (ii) the purchase price you paid for the note plus accrued but unpaid discount included in income minus the total Put Premium you have received from us. This amount represents the net of the gain or loss attributable to the termination of the Put Option and the gain or loss attributable to the sale of the Deposit. Notwithstanding the above, if you are a cash-method taxpayer who has not elected to accrue the discount in income currently, you will recognize an amount of ordinary income equal to the lesser of the accrued but unpaid discount on the Deposit and your gain on the Deposit (generally, the proceeds attributable to the Deposit minus the amount you paid to acquire it), and this amount will reduce your short-term capital gain or increase your short-term capital loss, as described above. You should consult your tax adviser regarding the separate determination of gain or loss with respect to the Put Option and the Deposit.

***Tax Treatment at Maturity or Early Redemption.*** If a note is redeemed early or held to maturity and the Put Option expires unexercised (*i.e.*, you receive a cash payment at maturity equal to the amount of the Deposit plus the final interest payment, which will be treated as described above), you will recognize short-term capital gain equal to the sum of all Put Premium payments received.

If a note is held to maturity and the Put Option is exercised (*i.e.*, you receive a cash payment at maturity that is less than the amount of the Deposit (the "Settlement Payment") excluding the final interest payment, which should be treated as described above), you will be deemed to have applied a portion of the Deposit toward the cash settlement of the Put Option. In that case, you will recognize short-term capital gain or loss in an amount equal to the difference between (i) the Settlement Payment plus the total Put Premium received and (ii) the Deposit.

***Other Possible Tax Treatments.*** The IRS might treat the notes as indivisible debt instruments, despite the uncertainty as to what you will receive at maturity. In this event, while they would be subject to the general rules applicable to the Deposit that are described above, a number of aspects of this treatment would be uncertain because the amount due at maturity is not fixed. In addition, you could be subject to special reporting requirements if any loss exceeded certain thresholds.

Alternatively, the notice described above in "— Notes Treated as Open Transactions That Are Not Debt Instruments — Uncertainties Regarding Tax Treatment as Open Transactions That Are Not Debt Instruments" may apply to your notes. While it is not entirely clear whether the notes would be viewed as similar to the typical prepaid forward contract described in the notice, or whether the

scope of the notice extends to short-term instruments such as the notes, it is possible that any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the notes, possibly with retroactive effect. The notice focuses on a number of issues, the most relevant of which for U.S. Holders of short-term notes are the timing and character of income or loss (including whether the Put Premium might be currently included as ordinary income). You should consult your tax adviser regarding the U.S. federal income tax consequences of an investment in the notes, including possible alternative treatments and the issues presented by this notice.

#### *Notes with a Term of More than One Year*

If the term of the notes (including either the issue date or the last possible date that the notes could be outstanding, but not both) is more than one year, the following discussion applies.

*Tax Treatment of Interest Payments.* Interest paid with respect to the Deposit will be taxable to you as ordinary income at the time it accrues or is received, in accordance with your method of accounting for U.S. federal income tax purposes.

Put Premium will be taken into account as described below.

*Sale or Exchange of a Note.* Upon sale or exchange of a note prior to maturity, you will be treated as receiving a payment of interest equal to any accrued but unpaid interest on the Deposit, which will be treated as described above. The Deposit will be treated as sold for its fair market value, excluding any accrued but unpaid interest. The amount of capital gain or loss on the Deposit will equal the amount realized that is attributable to the Deposit, minus your tax basis in the Deposit. That gain or loss will be long-term capital gain or loss if the note was held for more than one year.

If the value of the Deposit on the date of sale or exchange of a note is less than the amount realized on the sale or exchange of the note, any amount realized that is attributable to the Put Option, together with the total Put Premium received over the term of the notes, will be treated as short-term capital gain or loss.

If the value of the Deposit on the date of sale or exchange exceeds the amount realized on the sale or exchange of the note, you will be treated as having (i) sold or exchanged the Deposit for an amount equal to its value on that date and (ii) made a payment to the purchaser of the note equal to the amount of this excess, in exchange for the purchaser's assumption of the Put Option. In this case, you will be required to recognize short-term capital gain or loss in respect of the Put Option equal to the total Put Premium received over the term of the note minus the amount deemed to be paid by you in exchange for the purchaser's assumption of the Put Option.

*Tax Treatment at Maturity or Early Redemption.* If a note is redeemed early or held to maturity and the Put Option expires unexercised (*i.e.*, you receive a cash payment at maturity equal to the amount of the Deposit plus the final interest payment, which will be treated as described above), you will recognize short-term capital gain equal to the sum of all Put Premium payments received.

If you receive the Settlement Payment (plus the final interest payment, which will be treated as interest as described above), you will be deemed to have applied a portion of the Deposit toward the cash settlement of the Put Option. In that case, you will recognize short-term capital gain or loss in an amount equal to the difference between (i) the Settlement Payment plus the total Put Premium received and (ii) the Deposit.

*Other Possible Tax Treatments.* The IRS might treat the notes as "contingent payment debt instruments." In that event, regardless of whether you are an accrual-method or cash-method taxpayer, (i) in each year that you hold your notes, you will be required to accrue into income original issue discount on your notes at our "comparable yield" for similar noncontingent debt,

determined at the time of the issuance of the notes and (ii) any income recognized at maturity or upon sale or exchange of your notes generally will be treated as interest income. In addition, you could be subject to special reporting requirements if any loss exceeded certain thresholds. You should consult your tax adviser regarding these issues.

Alternatively, the notice described above in “— Notes with a Term of Not More than One Year — Other Possible Tax Treatments” may apply to your notes. While it is not entirely clear whether the notes would be viewed as similar to the typical prepaid forward contract described in the notice, it is possible that any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the notes, possibly with retroactive effect. The notice focuses on a number of issues, the most relevant of which for U.S. Holders of the notes are the timing and character of income or loss (including whether the Put Premium might be currently included as ordinary income).

### ***Notes Treated as Prepaid Forward Contracts with Associated Contingent Coupons***

The following describes the material U.S. federal income tax consequences of owning and disposing of notes that we treat as prepaid forward contracts with associated contingent coupons for U.S. federal income tax purposes (“Contingent Interest Notes”). The relevant terms supplement will indicate whether we intend to treat an offering of notes as Contingent Interest Notes. Unless otherwise indicated in the relevant terms supplement, insofar as we have tax reporting responsibilities with respect to these notes, we intend to treat them as prepaid forward contracts with associated contingent coupons for U.S. federal income tax purposes.

***Tax Treatment of Contingent Interest Payments.*** Although the U.S. federal income tax treatment of contingent interest payments (including any contingent interest payment made in connection with an acceleration, early redemption or repurchase or at maturity) is uncertain, we expect (in the absence of an administrative determination or judicial ruling to the contrary) to treat any contingent interest payments with respect to the notes as ordinary income, unless otherwise indicated in the relevant terms supplement.

***Sale or Exchange of a Note.*** Upon a sale or exchange of a note (including an acceleration, early redemption or repurchase or at maturity), you should recognize capital gain or loss equal to the difference between the amount realized on the sale or exchange and your tax basis in the note, which should equal the amount you paid to acquire the note (assuming contingent interest payments are properly treated as ordinary income, consistent with the position described above). This gain or loss should be long-term capital gain or loss if you have held the note for more than one year at that time. The deductibility of capital losses is subject to limitations. If you sell your note between the time your right to a contingent interest payment is fixed and the time it is paid, it is likely that you will be treated as receiving ordinary income equal to the contingent interest payment. Although uncertain, it is possible that proceeds received from the sale or exchange of your note prior to a Determination Date but that can be attributed to an expected contingent interest payment could be treated as ordinary income. You should consult your tax adviser regarding this issue.

***Uncertainties Regarding Tax Treatment as Prepaid Forward Contracts with Associated Contingent Coupons.*** If the notes are treated as prepaid forward contracts with associated contingent coupons, due to the lack of controlling authority there remain significant uncertainties regarding the tax consequences of owning and disposing of them. For instance, you might be required to include amounts in income during the term of your notes in addition to the contingent interest payments you receive, and/or to treat all or a portion of the gain or loss on the sale or exchange of your notes (in addition to any amounts attributable to an unpaid contingent interest payment, as discussed above) as ordinary income or loss or as short-term capital gain or loss, without regard to how long you have held them.

Alternatively, the notice described above in “— Notes with a Term of Not More than One Year — Other Possible Tax Treatments” may apply to your notes. While it is not entirely clear whether the notes would be viewed as similar to the typical prepaid forward contract described in the notice, it is possible that any Treasury regulations or other guidance promulgated after consideration of these issues could materially affect the tax consequences of an investment in the notes, possibly with retroactive effect.

***Tax Consequences if Treated as Debt Instruments.*** If the notes are treated as debt instruments, your tax consequences will be governed by Treasury regulations relating to the taxation of “contingent payment debt instruments” if the term of the notes from issuance to maturity (excluding the issue date, but including the last possible date that the notes could be outstanding) is more than one year. In this event, regardless of whether you are an accrual-method or cash-method taxpayer, in each year that you hold your notes, you will be required to accrue into income original issue discount on your notes at our “comparable yield” for similar noncontingent debt, determined at the time of the issuance of the notes, subject to certain adjustments, with the result that your taxable income in any year could differ significantly from the contingent interest payments (if any) you receive in that year. In addition, any gain recognized upon a sale or exchange of your notes generally will be treated as interest income, and if you recognize a loss above certain thresholds, you might be required to file a disclosure statement with the IRS.

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

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

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

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

Subject to the discussions below, any income or gain from a note that we treat as (i) an open transaction that is not a debt instrument or (ii) a unit comprising a Put Option and a Deposit should not be subject to U.S. federal income tax (including withholding tax) if you provide a properly completed applicable IRS Form W-8 and these amounts are not effectively connected with your conduct of a U.S. trade or business.

However, among the issues addressed in the notice described above in “— Tax Consequences to U.S. Holders — Notes Treated as Open Transactions That Are Not Debt Instruments —Uncertainties Regarding Tax Treatment as Open Transactions That Are Not Debt Instruments” is the degree, if any, to which income with respect to instruments described therein should be subject to U.S. withholding tax. It is possible that any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the withholding tax consequences of an investment in a note that is treated as an open transaction that is not a debt instrument or as a Put Option and Deposit, possibly with retroactive effect.

If you own a Contingent Interest Note, although we believe it is reasonable to take a position that contingent interest payments made on those notes are not subject to withholding tax (at least if an applicable IRS Form W-8 is provided, and subject to the discussions below of Section 871(m) and FATCA), a withholding agent may nonetheless withhold on these payments (generally at a rate of 30%, subject to the possible reduction of that rate under an applicable income tax treaty), unless income from your notes is effectively connected with your conduct of a U.S. trade or business (and, if an applicable income tax treaty so requires, is attributable to a permanent establishment in the United States).

If you are engaged in a U.S. trade or business, and if income or gain from a note is effectively connected with your conduct of that trade or business (and, if an applicable income tax treaty so requires, is attributable to a permanent establishment in the United States), although exempt from the withholding tax discussed above, you generally will be taxed in the same manner as a U.S. Holder with respect to that income. You will not be subject to withholding in this case if you provide a properly completed IRS Form W-8ECI. If this paragraph applies to you, you should consult your tax adviser with respect to other U.S. tax consequences of owning and disposing of notes, including the possible imposition of a 30% branch profits tax if you are a corporation.

Section 871(m) imposes a 30% withholding tax on certain “dividend equivalents” paid or deemed paid with respect to U.S. equities or equity indices under certain circumstances. Several recent Treasury proposals could apply Section 871(m) in the future to notes linked to U.S. equities or equity indices offered under this product supplement, under certain circumstances, even in cases where no current payment is made under the notes. Pursuant to published guidance, these regulations are not expected to apply to notes issued prior to 90 days after the date that final regulations are published. If a note is issued after that date and is linked to one or more U.S. equities or equity indices, no assurances can be given as to whether or how Section 871(m) will be applied to the notes. You should consult your tax adviser regarding the potential application of Section 871(m). Where warranted, we will disclose further information regarding the possible application of Section 871(m) in the relevant terms supplement.

We will not pay additional amounts with respect to any withholding taxes.

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

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

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

You may be subject to information reporting. You may also be subject to backup withholding on payments in respect of your notes unless you provide proof of an applicable exemption or a correct taxpayer identification number and otherwise comply with applicable requirements of the backup withholding rules. If you are a Non-U.S. Holder, you will not be subject to backup withholding if you provide a properly completed IRS Form W-8 appropriate to your circumstances. Amounts withheld under the backup withholding rules are not additional taxes, and may be refunded or credited against your U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

### **FATCA**

Legislation commonly referred to as “FATCA,” and regulations promulgated thereunder, generally impose a 30% withholding tax on payments to certain foreign entities (including financial intermediaries) unless various U.S. information reporting and due diligence requirements have been satisfied. An intergovernmental agreement between the United States and the foreign entity’s jurisdiction may modify these requirements. This regime may apply to amounts treated as interest or other “fixed or determinable annual or periodical” income for U.S. federal income tax purposes paid with respect to a note, as well as (if the note is treated in whole or in part as indebtedness) to payments of gross proceeds of a sale of the note (including early redemption or settlement at maturity) occurring after December 31, 2016. You should consult your tax adviser regarding the potential application of FATCA to the notes.

We will not pay any additional amounts with respect to any withholding tax.

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

## PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

Under the terms and subject to the conditions contained in the Master Agency Agreement entered into between JPMorgan Chase & Co. and J.P. Morgan Securities LLC, as agent (an “**Agent**” or “**JPMS**”), and certain other agents that are or may become party to the Master Agency Agreement, as amended or supplemented, from time to time (each an “**Agent**” and collectively with JPMS, the “**Agents**”), JPMS has agreed and any additional Agents will agree to use reasonable efforts to solicit offers to purchase the principal amount of notes set forth in the cover page of the relevant terms supplement. We will have the sole right to accept offers to purchase the notes and may reject any offer in whole or in part. Each Agent may reject, in whole or in part, any offer it solicited to purchase notes. We will pay an Agent, in connection with sales of these notes resulting from a solicitation that Agent made or an offer to purchase that Agent received, a commission as set forth in the relevant terms supplement. An Agent will allow a concession to other dealers, or we may pay other fees, in the amount set forth on the cover page of the relevant terms supplement.

We may also sell notes to an Agent as principal for its own account at discounts to be agreed upon at the time of sale as disclosed in the relevant terms supplement. That Agent may resell notes to investors and other purchasers at a fixed offering price or at prevailing market prices, or prices related thereto at the time of resale or otherwise, as that Agent determines and as we will specify in the relevant terms supplement. An Agent may offer the notes it has purchased as principal to other dealers. That Agent may sell the notes to any dealer at a discount and, unless otherwise specified in the relevant terms supplement, the discount allowed to any dealer will not be in excess of the discount that Agent will receive from us. After the initial public offering of notes that the Agent is to resell on a fixed public offering price basis, the Agent may change the public offering price, concession and discount.

Our affiliates, including JPMS, may use this product supplement no. 5a-I, any accompanying underlying supplement and the prospectus supplement, prospectus or terms supplement in connection with offers and sales of the notes in the secondary market. JPMS or another Agent may act as principal or agent in connection with offers and sales of the notes in the secondary market. Secondary market offers and sales will be made at prices related to market prices at the time of that offer or sale; accordingly, the Agents or a dealer may change the public offering price, concession and discount after the offering has been completed.

Unless otherwise specified in the relevant terms supplement, there is currently no public trading market for the notes. In addition, unless otherwise specified in the relevant terms supplement, we have not applied and do not intend to apply to list the notes on any securities exchange or to have the notes quoted on a quotation system. JPMS may act as a market-maker for the notes. However, JPMS is not obligated to do so and may discontinue any market-making in the notes at any time in its sole discretion. Therefore, we cannot assure you that a liquid trading market for the notes will develop, that you will be able to sell your notes at a particular time or that the price you receive if you sell your notes will be favorable.

In connection with an offering of the notes, JPMS may engage in overallotment, stabilizing transactions and syndicate covering transactions in accordance with Regulation M under the Securities Exchange Act of 1934. Overallotment involves sales in excess of the offering size, which create a short position for JPMS. Stabilizing transactions involve bids to purchase the notes in the open market for the purpose of pegging, fixing or maintaining the price of the notes. Syndicate covering transactions involve purchases of the notes in the open market after the distribution has been completed in order to cover short positions. Stabilizing transactions and syndicate covering transactions may cause the price of the notes to be higher than it would otherwise be in the absence of those transactions. If JPMS engages in stabilizing or syndicate covering transactions, it may discontinue them at any time.



Certain of the Agents engage in transactions with and perform services for us and our subsidiaries in the ordinary course of business.

No action has been or will be taken by us, JPMS or any dealer that would permit a public offering of the notes or possession or distribution of this product supplement no. 5a-I, any accompanying underlying supplement or the prospectus supplement, prospectus or terms supplement, other than in the United States, where action for that purpose is required. No offers, sales or deliveries of the notes, or distribution of the relevant terms supplement, this product supplement no. 5a-I, any underlying supplement, the prospectus supplement or the prospectus or any other offering material relating to the notes, may be made in or from any jurisdiction except in circumstances which will result in compliance with any applicable laws and regulations and will not impose any obligations on us, the Agents or any dealer.

Each Agent has represented and agreed that it will not offer or sell the notes in any non-U.S. jurisdiction (i) if that offer or sale would not be in compliance with any applicable law or regulation or (ii) if any consent, approval or permission is needed for that offer or sale by that Agent or for or on our behalf, unless the consent, approval or permission has been previously obtained. We will have no responsibility for, and the applicable Agent will obtain, any consent, approval or permission required by that Agent for the subscription, offer, sale or delivery by that Agent of the notes, or the distribution of any offering materials, under the laws and regulations in force in any non-U.S. jurisdiction to which that Agent is subject or in or from which that Agent makes any subscription, offer, sale or delivery. For additional information regarding selling restrictions, please see "Notice to Investors" in this product supplement.

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

### **Conflicts of Interest**

JPMS has a "conflict of interest" within the meaning of FINRA Rule 5121 in any offering of the notes in which it participates because we own, directly or indirectly, all of the outstanding equity securities of JPMS and because the net proceeds received from the sale of the notes will be used, in part, by JPMS or its affiliates in connection with hedging our obligations under the notes. The underwriting arrangements for an offering of the notes will comply with the requirements of FINRA Rule 5121 regarding a FINRA member firm's underwriting of securities of an affiliate. In accordance with FINRA Rule 5121, neither JPMS nor any other affiliated Agent of ours may make sales in an offering of the notes to any of its discretionary accounts without the specific written approval of the customer.

## NOTICE TO INVESTORS

We will offer to sell, and will solicit offers to buy, the notes only in jurisdictions where offers and sales are permitted. None of the relevant terms supplement, this product supplement no. 5a-l, any underlying supplement, the prospectus supplement and the prospectus (each, a “**Disclosure Document**” and, collectively, the “**Disclosure Documents**”) will constitute an offer to sell, or a solicitation of an offer to buy, the notes by any person in any jurisdiction in which it is unlawful for that person to make an offer or solicitation. Neither the delivery of any Disclosure Document nor any sale made thereunder implies that our affairs have not changed or that the information in any Disclosure Document is correct as of any date after the date thereof.

You must (i) comply with all applicable laws and regulations in force in any jurisdiction in connection with the possession or distribution of the Disclosure Documents and the purchase, offer or sale of the notes and (ii) obtain any consent, approval or permission required to be obtained by you for the purchase, offer or sale by you of the notes under the laws and regulations applicable to you in force in any jurisdiction to which you are subject or in which you make those purchases, offers or sales.

### Argentina

The notes have not been and will not be authorized by the *Comisión Nacional de Valores* (the “CNV”) for public offer in Argentina and therefore may not be offered or sold to the public at large or to sectors or specific groups thereof by any means, including, but not limited to, personal offerings, written materials, advertisements, the internet or the media, in circumstances that constitute a public offering of securities under Argentine Law No. 26,831 (the “**Capital Markets Law**”).

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

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

## **The Bahamas**

The notes may not be offered or sold in or from within The Bahamas unless the offer or sale is made by a person appropriately licensed or registered to conduct securities business in or from within The Bahamas.

The notes may not be offered or sold to persons or entities deemed resident in The Bahamas pursuant to the Exchange Control Regulations, 1956 of The Bahamas unless the prior approval of the Central Bank of The Bahamas is obtained.

No distribution of the notes may be made in The Bahamas unless a preliminary prospectus and a prospectus have been filed with the Securities Commission of The Bahamas and the Securities Commission of The Bahamas has issued a receipt for each document, unless such offering is exempted pursuant to the Securities Industry Regulations, 2012.

## **Bermuda**

The notes may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act 2003 of Bermuda, which regulates the sale of securities in Bermuda. Additionally, non-Bermudian persons (including companies) may not carry on or engage in any trade or business in Bermuda unless such persons are authorized to do so under applicable Bermuda legislation. Engaging in the activity of offering or marketing the notes in Bermuda to persons in Bermuda may be deemed to be carrying on business in Bermuda.

## **Brazil**

The notes have not been and will not be registered with the "*Comissão de Valores Mobiliários*" - the Brazilian Securities and Exchange Commission ("**CVM**") and accordingly, each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that it has not and will not sell, promise to sell, offer, solicit, advertise and/or market the notes within the Federative Republic of Brazil in an offering that can be construed as a public offering or unauthorized distribution of securities under Brazilian law and regulations. Additionally, each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that it has not and will not violate any of the registration requirements and securities distribution, sales and marketing restrictions under CVM Instruction nº 400, dated 29 December 2003, as amended from time to time, and Federal Law 6.385, dated 7 December 1976, as amended from time to time.

## **British Virgin Islands**

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

## **Cayman Islands**

Each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that it shall not offer and sell the notes from a place of business within the Cayman Islands (including an offering from an internet or other electronic service provider located in the Cayman Islands) or in a manner constituting the commencement of business in the Cayman Islands unless it is appropriately registered and licensed or otherwise permitted to undertake such an offer or sale under applicable laws (including, without limitation, the Securities Investment Business Law of the Cayman Islands).

An Agent may therefore offer and sell the notes to investors resident and incorporated in the Cayman Islands without restriction on such Agent or us if such Agent is, according to applicable Cayman Islands law, not located in the Cayman Islands (as a branch, an incorporated entity, a resident or otherwise) and does not have a place of business in and/or has not commenced the carrying on of business in the Cayman Islands.

## **Chile**

The Agents, we and the notes have not been and will not be registered in the *Registro de Valores Extranjeros* (Foreign Securities Registry) maintained by the *Superintendencia de Valores y Seguros* (Chilean Securities and Insurance Commission or “SVS”) and will not be subject to the supervision of the SVS. If the notes are offered in Chile, they will be offered and sold only pursuant to General Rule 336 of the SVS, an exemption to the registration requirements, or in circumstances that do not constitute a public offer of securities in Chile within the meaning of Article 4 of the Chilean Securities Market Law 18,045. None of the Agents or we have an obligation to deliver public information in Chile. The notes shall not be subject to public offering in Chile unless registered in the Foreign Securities Registry.

## **Colombia**

Each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that the notes have not been and will not be marketed, offered, sold or distributed in Colombia or to Colombian residents except in circumstances that do not constitute a public offer of securities in Colombia within the meaning of article 6.1.1.1.1 of Decree 2555 of 2010 as amended from time to time. The Disclosure Documents are for the sole and exclusive use of the addressee as a determined individual/entity and cannot be understood as addressed for the use of any third party. Accordingly, the notes will not be publicly offered, marketed or negotiated in Colombia through promotional or advertisement activities (as defined under Colombian law) except in compliance with the requirements of the Colombian Financial and Securities Market Regulation (Decree 2555 of 2010, Law 964 of 2005 and Organic Statute of the Financial System) as amended and restated, and decrees and regulations made thereunder. The notes have not been and will not be registered in the National Securities and Issuers Registry (*Registro Nacional de Valores y Emisores*) of the Colombian Financial Superintendence (*Superintendencia Financiera de Colombia*).

Investors acknowledge the Colombian laws and regulations (specifically foreign exchange and tax regulations) applicable to any transaction or investment consummated pursuant thereto and represent that they are the sole liable party for full compliance with any such laws and regulations.

The investors represent that any investment in the notes is a permitted investment for them under their corporate bylaws and/or particular investment regime that may be applicable.

## **Costa Rica**

The notes may not be offered or sold, directly or indirectly, to any person within the Republic of Costa Rica, in circumstances that require the issuer or offeror and the notes to be authorized by the *Superintendencia General de Valores* (public offering) or the *Superintendencia General de Entidades Financieras* (general financial intermediation). Any offering, express or implicit, that seeks to issue, negotiate or sell securities among public investors, is deemed under Costa Rican law (*Ley Reguladora del Mercado de Valores, N° 7732, and its Regulations*) as a public offering, which requires the issuer or offeror and the notes to be authorized by the *Superintendencia General de Valores*. A public offering is any invitation or transmission by any means to the public or determined groups of persons exceeding 50 potential investors. A public offering is presumed when made through public or collective means of communication (mass media), such as press, radio, television and internet, or when the offering includes standardized securities.

Accordingly, each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that (i) such Agent is appropriately registered with the *Superintendencia General de Valores*, (ii) it has not offered or sold and will not offer or sell, directly or indirectly, the notes to the public in Costa Rica and (iii) that sales of the notes in Costa Rica shall be placed or negotiated only on an individual basis with private investors, limited to a maximum 50 investors. Each Agent will evidence in writing, for each offering, compliance with the above requirements by means of an affidavit, a party declaration or any form of express acknowledgement. Each Agent has acknowledged that it is registered as a financial intermediary with the *Superintendencia General de Valores* or the *Superintendencia General de Entidades Financieras* (as the case may be), and that the Disclosure Documents have not been filed with the *Superintendencia General de Valores* and, therefore, are not intended for any public offering of the notes in Costa Rica within the meaning of Costa Rican law.

## **El Salvador**

The notes may not be offered to the general public in El Salvador, and according to Article 2 of the *Ley de Mercado de Valores* (Securities Market Law) of the Republic of El Salvador, Legislative Decree number 809 dated 16 February 1994, published on the *Diario Oficial* (Official Gazette) number 73-BIS, Number 323, dated 21 April 1994, and in compliance with the aforementioned regulation, each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that it will not make an invitation for subscription or purchase of the notes to indeterminate individuals, nor will it make known any Disclosure Documents in the territory of El Salvador through any mass media communication such as television, radio, press or any similar medium, other than publications of an international nature that are received in El Salvador, such as internet access or foreign cable advertisements, that are not directed to the Salvadoran public. The offering of the notes will not be registered with an authorized stock exchange in the Republic of El Salvador. Any negotiation for the purchase or sale of the notes in the Republic of El Salvador will be negotiated only on an individual basis with determinate individuals or entities in strict compliance with the aforementioned Article 2 of the Salvadoran Securities Market Law, and will in any event, be effected in accordance with all securities, tax and exchange control regulations of the Dominican Republic, Central America, and United States Free Trade Agreements, and other applicable laws or regulations of the Republic of El Salvador.

## **European Economic Area**

In relation to each Member State of the European Economic Area that has implemented the Prospectus Directive (each, a “**Relevant Member State**”), each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the “**Relevant Implementation Date**”) it has not made and will not make an offer of the notes to the public in that Relevant Member State except that it may, with effect from and including the Relevant Implementation Date, make an offer of the notes to the public in that Relevant Member State:

- (a) at any time to any legal entity that is a qualified investor as defined in the Prospectus Directive;
- (b) at any time to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the Agent; or
- (c) at any time in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no offer of notes will require us or any Agent to publish a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression “**an offer of the notes to the public**” in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the notes to be offered so as to enable an investor to decide to purchase or subscribe the notes, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression “**Prospectus Directive**” means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State and the expression “**2010 PD Amending Directive**” means Directive 2010/73/EU.

Each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that any commission or fee received from us complies with the applicable rules set out in the Markets in Financial Instrument Directive 2004/39/EC.

### **Hong Kong**

Each Agent has acknowledged and agreed that the notes have not been authorized by the Hong Kong Securities and Futures Commission. Each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that:

- (a) it has not offered or sold and will not offer or sell in Hong Kong, by means of any document, the notes (except for notes which are a “structured product” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (“**Securities and Futures Ordinance**”)) other than (a) to “professional investors” as defined in the Securities and Futures Ordinance and any rules made under that Ordinance; or (b) in other circumstances that do not result in the document being a “prospectus” as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong or that do not constitute an offer to the public within the meaning of that Ordinance; and
- (b) it has not issued or had in its possession for the purposes of issue, and will not issue or have in its possession for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation or document relating to the notes that is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to notes that are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

### **Mexico**

Under the Mexican Securities Market Law, the notes have not been, and will not be, registered with the Mexican National Securities Registry (*Registro Nacional de Valores*) maintained by the Mexican National Banking and Securities Commission (*Comisión Nacional Bancaria y de Valores*; the “**CNBV**”) and may not be offered or sold publicly in the United Mexican States or be the subject of brokerage activities in the United Mexican States.

Pursuant to Article 8 of the Mexican Securities Market Law, the notes may be offered or sold by non-Mexican broker-dealers, on a private placement basis, as an offering not requiring any approval from the CNBV, to Mexican investors that are deemed as qualified or institutional investors (*inversionistas institucionales or inversionistas calificados*).

## The Netherlands

For selling restrictions in respect of The Netherlands, see “European Economic Area” above and in addition:

- (a) *Specific Dutch selling restriction for exempt offers:* Each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that it will not make an offer of the notes to the public in The Netherlands in reliance on Article 3(2) of the Prospectus Directive unless:
  - (i) such offer is made exclusively to persons or legal entities which are qualified investors (as defined in the Dutch Financial Supervision Act (*Wet op het financieel toezicht*, the “FSA”) and which includes authorized discretionary asset managers acting for the account of retail investors under a discretionary investment management contract) in The Netherlands; or
  - (ii) standard exemption logo and wording are disclosed as required by article 5:20(5) of the FSA; or
  - (iii) such offer is otherwise made in circumstances in which article 5:20(5) of the FSA is not applicable,

*provided* that no offer of the notes will require us or any Agent to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

For the purposes of this provision, the expressions (i) an “**offer of the notes to the public**” in The Netherlands; and (ii) “**Prospectus Directive**”, have the meaning given to them above under the section entitled “European Economic Area”.

- (b) *Regulatory capacity to offer the notes in The Netherlands:* Each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that did and does not have the requisite Dutch regulatory capacity to make offers or sales of financial instruments in The Netherlands has represented and agreed or, in the case of additional Agents, will be required to represent and agree with us that it has not offered or sold and will not offer or sell the notes in The Netherlands, other than through one or more investment firms acting as principals and having the Dutch regulatory capacity to make such offers or sales.

## Panama

The Disclosure Documents and the notes have not been approved by, the Superintendence of Capital Markets (“**SCM**”) of the Republic of Panama for its offering in Panama. Consequently, the notes may not be offered, sold or advertised and the Disclosure Documents, and any other information related thereto, may not be distributed, directly or indirectly, to any person in the Republic of Panama other than institutional investors or private placement investors as are defined by the Securities Laws of the Republic of Panama, or through a corresponding brokerage firm licensed by the SCM to offer and sell securities in Panama.

## Peru

Each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that the notes have not been and will not be placed, offered, sold, disposed of or distributed in Peru, except in circumstances which do not constitute a public offer of securities in Peru within the meaning of Peruvian securities laws and regulations. Accordingly, the notes will not be the subject of a duly diffused invitation for subscription, acquisition or purchase of the notes in Peru, pursuant to the Peruvian Securities Market Law, Supreme Decree No. 093-2002-EF, as amended and restated.

The notes may be offered in Peru only under private offerings complying with the Securities Market Law and the regulations that govern the investment policy of institutional investors such as, but not restricted to, banking and other financial entities, insurance entities, private pension fund managers, open ended and close ended collective investment schemes.

Each Agent has acknowledged, and any additional Agents will be required to acknowledge, that the Disclosure Documents have not been subject to review by the Securities Market Superintendence (*Superintendencia del Mercado de Valores*, “**SMV**”) and have not been registered with the Peruvian Securities Market Public Registry, and therefore are not intended for any public offer of the notes in Peru. If the notes were to be offered under private offerings in Peru, regulations do not impose reporting obligations with SMV, to us or the Agents, notwithstanding, when offering the notes to investors subject to the supervision of the Peruvian Financial Services Authority (*Superintendencia de Banca y Seguros y Administradoras Privadas de Fondos de Pensiones*), certain disclosure requirements should be met in order to be in good standing with the regulations issued by such authority.

### Singapore

None of the Disclosure Documents has been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, the Disclosure Documents and/or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the notes may not be circulated or distributed, nor may the notes be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the “**SFA**”), (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the notes are subscribed or purchased under Section 275 of the SFA by a relevant person, which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust will not be transferred within six months after that corporation or that trust has acquired the notes pursuant to an offer made under Section 275 of the SFA except:

- (i) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- (ii) where no consideration is or will be given for the transfer;
- (iii) where the transfer is by operation of law;
- (iv) as specified in Section 276(7) of the SFA; or
- (v) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.



## Switzerland

Unless otherwise specified in the relevant Disclosure Documents:

- (a) the notes may not be offered, sold or otherwise distributed in or from Switzerland, as such term is defined or interpreted under the Swiss Federal Code of Obligations or the Swiss Federal Act on Collective Investment Schemes, and neither the Disclosure Documents nor any other offering or marketing material relating to the notes shall constitute a prospectus in the sense of article 652a or 1156 of the Swiss Federal Code of Obligations, or constitute a simplified prospectus in the sense of article 5 of the Swiss Federal Act on Collective Investment Schemes. The notes do not constitute a participation in a collective investment scheme in the meaning of the Swiss Federal Act on Collective Investment Schemes and they are neither subject to approval nor supervision by the Swiss Financial Market Supervisory Authority FINMA; and
- (b) the notes may be distributed only in or from Switzerland to individually selected qualified investors within the meaning of, and in accordance with, the Swiss Federal Act on Collective Investment Schemes and the Swiss Collective Investment Schemes Ordinance. Qualified investors within the meaning of the Swiss Federal Act on Collective Investment Schemes and the Swiss Collective Investment Schemes Ordinance are:
  - (i) regulated financial intermediaries such as banks, brokers dealers, fund administrations and asset managers of collective investment schemes as well as central banks;
  - (ii) regulated insurance companies;
  - (iii) public entities and pension funds with a professional treasury (professional treasury is assumed if there is at least one qualified employee with experience in the financial sector who is responsible for the management of the investments);
  - (iv) corporations organised under private law having a professional treasury;
  - (v) high net worth individuals (i.e. according to article 6 of the Swiss Collective Investment Schemes Ordinance (a) individuals having the knowledge necessary to understand the risks in connection with the investment based on personal education and professional experience or similar experience in the financial sector and possessing bankable assets of at least CHF 500,000.00 or (b) individuals possessing bankable assets of at least CHF 5,000,000.00), provided they declare in writing that they want to be treated as qualified investors; and
  - (vi) investors who have concluded a written discretionary asset management contract with a regulated financial intermediary or with an independent asset manager, provided that the independent asset manager is (a) a financial intermediary within the meaning of the Swiss Anti-Money Laundering Act and (b) subject to conduct of business rules of an organization in the financial sector that have been recognized by the Swiss Financial Market Supervisory Authority FINMA as minimum standard and that the discretionary asset management contract is in accordance with the recognized guidelines of such organization, except for investors having declared in writing that they do not want to be treated as qualified investors.

## United Kingdom

Each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that:

- (a) *Notes with maturities of less than one year*: in relation to any notes where the issue of the notes would otherwise constitute a contravention of section 19 of the Financial Services and Markets Act 2000 (“FSMA”) by us:
  - (i) it is a person whose ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of its business; and
  - (ii) it has not offered or sold and will not offer or sell the notes other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or as agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage or dispose of investments (as principal or agent) for the purposes of their businesses;
- (b) *Financial promotion*: it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of section 21 of the FSMA) received by it in connection with the issue or sale of the notes in circumstances in which section 21(1) of the FSMA does not apply to us;
- (c) *General compliance*: it has complied and will comply with all applicable provisions of the FSMA and the Financial Conduct Authority Handbook with respect to anything done by it in relation to the notes in, from or otherwise involving the United Kingdom; and
- (d) *Commissions and fees*:
  - (i) if it is distributing notes that are “retail investment products” (as such term is defined in the Financial Conduct Authority Handbook) into the United Kingdom and it is entitled to receive any commission or fee from us, it will not transfer any part of that commission or fee to any third party who may advise retail investors to purchase a note that is a retail investment product; and
  - (ii) if it is authorized and regulated by the Financial Conduct Authority to provide investment advice to retail investors in the United Kingdom and it is providing advice to retail investors in respect of a note that is a retail investment product, it undertakes not to request any commission or fee from us and to otherwise reject any such payment offered to it other than in circumstances where we have agreed to facilitate the payment of an advisory fee and have the express consent of the retail investor to do so.

## Uruguay

The notes have not been registered with the “Superintendence of Financial Services” of the Central Bank of Uruguay (the “CBU”) and have not and will not be traded on any Uruguayan stock exchange.

The notes are not offered to the public in or from Uruguay. The notes have not been and will not be announced to the public and the Disclosure Documents and any other offering material relating to the notes will not be made available to the public except in circumstances which do not constitute a public offer of securities in Uruguay in compliance with the requirements of the Uruguayan Securities Market Law (Law No 18.627 of 24 November 2009). Public advertising of the notes will be avoided.

The notes will be offered to people in or from Uruguay only through occasional private offerings and never on a professional or regular basis.

If private offers are made in or from Uruguay on a professional and regular basis, the intermediary entity has to be registered with the Uruguayan Brokers Registry kept by the Superintendence of Financial Services of the CBU, and must comply with the obligations indicated in the Compilation of Securities Market Regulations (Please note that the Security Brokers' obligations are established in the following articles: 60 to 69, 142 and 143, 147 to 151, 185 to 206, 209 and 210, 212 to 214, 225, 234, 245 to 249, 252, 255 and 256, 283 to 300).

## **Venezuela**

No public offering of the notes has been authorized by the National Securities Superintendence (*Superintendencia Nacional de Valores – “SNV”*). Each Agent has represented and agreed, and any additional Agents will be required to represent and agree, that (i) it shall not offer and/or sell the notes in Venezuela by means of a public offering, without obtaining the prior authorization of SNV in accordance with the relevant provisions of the Securities Markets Law of 5 November 2010 (*Ley de Mercado de Valores*) and (ii) any documents relating to the offering of the notes has not been and will not be announced to the public and offering material will not be made available to the public, without the prior authorization of SNV.

## BENEFIT PLAN INVESTOR CONSIDERATIONS

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

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

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

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

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

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

The notes are contractual financial instruments. The financial exposure provided by the notes is not a substitute or proxy for, and is not intended as a substitute or proxy for, individualized investment management or advice for the benefit of any purchaser or holder of the notes. The notes have not been designed and will not be administered in a manner intended to reflect the individualized needs and objectives of any purchaser or holder of the notes.

Each purchaser or holder of any notes acknowledges and agrees that:

- (i) the purchaser or holder or its fiduciary has made and shall make all investment decisions for the purchaser or holder and the purchaser or holder has not relied and shall not rely in any way upon us or our affiliates to act as a fiduciary or adviser of the purchaser or holder with respect to (A) the design and terms of the notes, (B) the purchaser or holder’s investment in the notes, or (C) the exercise of or failure to exercise any rights we have under or with respect to the notes;
- (ii) we and our affiliates have acted and will act solely for our own account in connection with (A) all transactions relating to the notes and (B) all hedging transactions in connection with our obligations under the notes;
- (iii) any and all assets and positions relating to hedging transactions by us or our affiliates are assets and positions of those entities and are not assets and positions held for the benefit of the purchaser or holder;
- (iv) our interests are adverse to the interests of the purchaser or holder; and
- (v) neither we nor any of our affiliates is a fiduciary or adviser of the purchaser or holder in connection with any such assets, positions or transactions, and any information that we or any of our affiliates may provide is not intended to be impartial investment advice.

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