

# JPMORGAN CHASE & CO.

## Notes Linked to an Index or a Basket, Converted into U.S. Dollars

### General

- JPMorgan Chase & Co. may from time to time offer and sell notes that are linked to a single index or a basket of indices, converted into U.S. dollars, as described below. This product supplement no. 5-I describes terms that will apply generally to the notes, and supplements the terms described in the accompanying prospectus supplement and prospectus. A separate term sheet or pricing supplement, as the case may be, will describe terms that apply to specific issuances of the notes, including any changes to the terms specified below. We refer to such 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 or in any related underlying supplement, or in the accompanying prospectus supplement or prospectus, the terms described in the relevant terms supplement will control.
- The notes are senior unsecured obligations of JPMorgan Chase & Co. **Any payment on the notes is subject to the credit risk of JPMorgan Chase & Co.**
- Payment is linked to an Index or a Basket, converted into U.S. dollars, as described below.
- For important information about tax consequences, see "Material U.S. Federal Income Tax Consequences" beginning on page PS-42.
- Minimum denominations of \$1,000 and integral multiples thereof, unless otherwise specified in the relevant terms supplement
- Investing in the notes is not equivalent to investing directly in any Index, any Underlying Currency relative to the U.S. dollar or the equity securities underlying any Index.
- The notes will not be listed on any securities exchange unless otherwise specified in the relevant terms supplement.

### Key Terms

Underlying:	In this product supplement, we refer to the Index or the Basket to which the notes are linked as the "Underlying."
Index:	Any index to which the notes are linked or that is included in a Basket will be specified in the relevant terms supplement (each, an "Index").
Basket:	If the notes are linked to a basket, the relevant terms supplement will specify the Indices that are included in the basket (the "Basket").
Underlying Currency:	Unless otherwise specified in the relevant terms supplement, with respect to an Index or any relevant successor index, the "Underlying Currency" means the currency in which that Index (or that successor index) is denominated, as specified in the relevant terms supplement, or any relevant Successor Currency. See "General Terms of Notes — Currency Succession Events."
Payment at Maturity:	Your payment at maturity per \$1,000 principal amount note will be linked to the performance of the Underlying, converted into U.S. dollars, as specified in the relevant terms supplement.
Knock-Out Event:	If the relevant terms supplement specifies that a knock-out feature applies to the notes, the relevant terms supplement will specify (a) the circumstances that will constitute a "Knock-Out Event" and (b) the method by which your payment at maturity per \$1,000 principal amount note will be determined both with respect to whether a Knock-Out Event has occurred and with respect to whether a Knock-Out Event has not occurred.
Interest Rate:	If the relevant terms supplement specifies that the notes will bear interest, the notes will bear interest at the per annum rate, or such other rate or rates, including rates that reference the performance of the Underlying, converted into U.S. dollars, as specified in the relevant terms supplement.
Automatic Call:	If the relevant terms supplement specifies that the notes include an automatic call feature, the notes will be automatically called in 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.
Underlying Return:	In this product supplement, we refer to the Index Return or the Basket Return, as applicable, as the Underlying Return.
Initial Underlying Value:	In this product supplement, we refer to the Initial Index Level (or Index Strike Level, if applicable) or the Starting Basket Level (or Basket Strike Level, if applicable), as applicable, as the Initial Underlying Value.
Ending Underlying Value:	In this product supplement, we refer to the Ending Index Level or the Ending Basket Level, as applicable, as the Ending Underlying Value.
Underlying Value:	In this product supplement, we refer to the Index closing level or the Basket Closing Level, as applicable, as the Underlying Value.
Index Return:	Unless otherwise specified in the relevant terms supplement, with respect to an Index: $\frac{\text{Ending Index Level} - \text{Initial Index Level (or Index Strike Level, if applicable)}}{\text{Initial Index Level (or Index Strike Level, if applicable)}}$

(continued on next page)

**Investing in the notes involves a number of risks. See "Risk Factors" beginning on page PS-16.**

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the notes or passed upon the accuracy or the adequacy of this product supplement no. 5-I, the accompanying prospectus supplement and prospectus, or any related underlying supplement or terms supplement. Any representation to the contrary is a criminal offense.

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

J.P.Morgan

## **Key Terms (continued)**

Initial Index Level:	Unless otherwise specified in the relevant terms supplement, with respect to an Index, the Adjusted Index Level of that Index on the pricing date or such other date as specified in the relevant terms supplement, or the arithmetic average of the Adjusted Index Levels of that Index on each of the Initial Averaging Dates, if so specified in the relevant terms supplement.
Ending Index Level:	Unless otherwise specified in the relevant terms supplement, with respect to an Index, the Adjusted Index Level of that Index on the Observation Date or such other date as specified in the relevant terms supplement, or, if the relevant terms supplement specifies Ending Averaging Dates, (a) for notes linked to a single Index, the arithmetic average of the Adjusted Index Levels of that Index on each of the Ending Averaging Dates, and (b) for notes linked to a Basket (where the Ending Basket Level is based on the weighted Index Returns calculated on each Ending Averaging Date), the Adjusted Index Level of that Index on the relevant Ending Averaging Date.
Index Strike Level:	With respect to an Index, the relevant terms supplement may specify a level other than the Initial Index Level of that Index, which we refer to as the "Index Strike Level," to be used for calculating the Index Return of that Index and the amount payable at maturity, if any. The Index Strike Level, if applicable, for an Index may be based on and/or expressed as a percentage of the Adjusted Index Level of that Index as of a specified date, or may be determined without regard to the Adjusted Index Level of that Index as of a particular date. For example, the relevant terms supplement may specify that, for a particular Index, an Index Strike Level equal to 95% of the Initial Index Level of that Index will be used to calculate the Index Return of that Index.
Adjusted Closing Level:	Unless otherwise specified in the relevant terms supplement, the "Adjusted Index Level" of an Index or any relevant successor index on any relevant day will equal the Index closing level of that Index or that successor index, as applicable, on that day multiplied by the Exchange Rate of that Index or that successor index, as applicable, on that day.
Index closing level:	Unless otherwise specified in the relevant terms supplement, the "Index 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 Index closing level of an Index or any relevant successor index will be based on the alternative calculation of that Index described under "Description of Notes — Postponement of a Determination Date" or "General Terms of Notes — Discontinuation of an Index; Alteration of Method of Calculation."
Exchange Rate:	Unless otherwise specified in the relevant terms supplement, the "Exchange Rate" of an Index or any relevant successor index on any relevant day will equal an exchange rate of U.S. dollars per one unit of the Underlying Currency of that Index or successor index, as applicable, expressed as either (i) the number of U.S. dollars per one unit of the Underlying Currency of that Index or successor index, as applicable, or (ii) 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") on the relevant page or by Bloomberg, L.P. ("Bloomberg") on the relevant page as specified in the relevant terms supplement, or any substitute Reuters or Bloomberg page; <i>provided</i> 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 approximate time of the day at which the relevant page will be consulted to determine any Exchange Rate. If a currency disruption event has occurred or is continuing or a Currency Succession Event has occurred, the method of determining the Exchange Rate of an Index or successor index, as applicable, may be modified. See "General Terms of Notes — Currency Disruption Events" and "General Terms of Notes — Currency Succession Events."
Basket Return:	Unless otherwise specified in the relevant terms supplement: <div style="text-align: center;"><math display="block">\frac{\text{Ending Basket Level} - \text{Starting Basket Level (or Basket Strike Level, if applicable)}}{\text{Starting Basket Level (or Basket Strike Level, if applicable)}}</math></div>
Starting Basket Level:	Unless otherwise specified in the relevant terms supplement, set equal to 100 on the pricing date, the final Initial Averaging Date, if applicable, or such other relevant date as specified in the relevant terms supplement.
Ending Basket Level:	Unless otherwise specified in the relevant terms supplement, the Basket Closing Level on the Observation Date or such other date as specified in the relevant terms supplement, or the arithmetic average of the Basket Closing Levels on each of the Ending Averaging Dates, if so specified in the relevant terms supplement.
Basket Strike Level:	The relevant terms supplement may specify a level other than the Starting Basket Level, which we refer to as the "Basket Strike Level," to be used for calculating the Basket Return and the amount payable at maturity, if any. The Basket Strike Level, if applicable, may be based on and/or expressed as a percentage of the Basket Closing Level of a specified date, or may be determined without regard to the Basket Closing Level as of a particular date. For example, the relevant terms supplement may specify that a Basket Strike Level equal to 95% of the Starting Basket Level will be used to calculate the Basket Return.
Basket Closing Level:	Unless otherwise specified in the relevant terms supplement, the Basket Closing Level on any relevant day will be calculated as follows: <div style="text-align: center;"><math display="block">100 \times [1 + \text{sum of (Index Return of each Index} \times \text{Index Weight of each such Index)}]</math></div>
Index Weight:	For notes linked to a Basket, with respect to an Index, a fixed percentage or fraction as specified in the relevant terms supplement, <i>provided</i> that the sum of the Index Weight for all Indices will equal 100% or 1, as applicable.  The relevant terms supplement will specify either (i) the weight of each Index in the Basket, which will be fixed for the term of the notes, or (ii) the manner in which the weight of each Index will be determined. For example, if the relevant terms supplement specifies that an Index is weighted to compose 18% of the value of the Basket, the Index Weight for that Index is 18%. Alternatively, the relevant terms supplement may specify that, for a Basket consisting of two Indices, the Index with the greater Index Return on the final Determination Date will make up 70% of the value of the Basket, and the Index with the lesser Index Return on the final Determination Date will make up 30% of the value of the Basket.

*(continued on next page)*

**Key Terms (continued)**

Determination Date(s):	The relevant terms supplement will specify Initial Averaging Dates, Call Dates, Review Dates, Valuation Dates, Observation Dates, Ending Averaging Dates or other relevant dates (each, a "Determination Date"), as applicable. Unless otherwise specified in the relevant terms supplement, Determination Dates are subject to postponement in the event of certain market disruption events and currency disruption events and as described under "Description of Notes — Postponement of a Determination Date."
Maturity Date:	As specified in the relevant terms supplement. The maturity date of the notes is subject to postponement in the event of certain market disruption events and currency disruption events and as described under "Description of Notes — Payment at Maturity."
Other Terms:	Any other terms applicable to the notes will be set forth in the relevant terms supplement.

## TABLE OF CONTENTS

	<b><u>Page</u></b>
Description of Notes .....	PS-1
Risk Factors .....	PS-16
Use of Proceeds and Hedging .....	PS-31
The Indices and the Underlying Currencies .....	PS-32
General Terms of Notes .....	PS-33
Material U.S. Federal Income Tax Consequences .....	PS-42
Plan of Distribution (Conflicts of Interest) .....	PS-46
Notice to Investors .....	PS-48
Benefit Plan Investor Considerations .....	PS-55

We have not authorized anyone to provide any information other than that contained or incorporated by reference in the relevant terms supplement, any related underlying supplement, this product supplement no. 5-I and the accompanying prospectus supplement and 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. This product supplement no. 5-I, together with the relevant terms supplement, any related underlying supplement and the accompanying prospectus and prospectus supplement, contains the terms of the notes and supersedes all other prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, fact sheets, brochures or other educational materials of ours. The information in the relevant terms supplement, any related underlying supplement, this product supplement no. 5-I and the accompanying prospectus supplement and prospectus may only be accurate as of the dates of each of these documents, respectively.

The notes described in the relevant terms supplement and this product supplement no. 5-I are not appropriate for all investors, and involve important legal and tax consequences and investment risks, which should be discussed with your professional advisers. You should be aware that the regulations of the Financial Industry Regulatory Authority, or FINRA, and the laws of certain jurisdictions (including regulations and laws that require brokers to ensure that investments are suitable for their customers) may limit the availability of the notes. The relevant terms supplement, any related underlying supplement, this product supplement no. 5-I and the accompanying prospectus supplement and prospectus do not constitute an offer to sell or a solicitation of an offer to buy the notes in any circumstances in which such offer or solicitation is unlawful.

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

## DESCRIPTION OF NOTES

*The following description of the terms of the notes supplements the description of the general terms of the debt securities set forth under the headings "Description of Notes" in the accompanying prospectus supplement and "Description of Debt Securities" in the accompanying prospectus. A separate terms supplement will describe the terms that apply to specific issuances of the notes, including any changes to the terms specified below. A separate underlying supplement or the relevant terms supplement will describe any index to which the notes are linked. Capitalized terms used but not defined in this product supplement no. 5-I have the meanings assigned in the accompanying prospectus supplement, prospectus, the relevant terms supplement and any related underlying supplement. The term "note" refers to each \$1,000 principal amount of our Notes Linked to an Index or a Basket, Converted into U.S. Dollars.*

### General

The notes are senior unsecured obligations of JPMorgan Chase & Co. that are linked to a single index (the "**Index**") or a basket of indices (the "**Basket**"), converted into U.S. dollars, as specified in the relevant terms supplement. In this product supplement, we refer to the Index or the Basket to which the notes are linked as the "**Underlying**." We also refer to an index that is included in a basket as an "**Index**." Unless otherwise specified in the relevant terms supplement, with respect to an Index or any relevant successor index, the "**Underlying Currency**" means the currency in which that Index (or that successor index) is denominated, as specified in the relevant terms supplement, or any relevant Successor Currency. See "General Terms of Notes — Currency Succession Events."

The notes are a series of debt securities referred to in the accompanying prospectus supplement and prospectus. The notes will be issued by JPMorgan Chase & Co. under an indenture dated May 25, 2001, as may be amended or supplemented from time to time, between us and Deutsche Bank Trust Company Americas (formerly Bankers Trust Company), as trustee.

Unless otherwise specified in the relevant terms supplement, the notes do not pay interest and do not guarantee any return of principal at, or prior to, maturity. **Any payment on the notes is subject to the credit risk of JPMorgan Chase & Co.**

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

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

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

The terms of specific issuances of the notes will be described in the relevant terms supplement accompanying this product supplement no. 5-I and any related underlying supplement. The terms described in that document supplement those described in this product supplement and in any related underlying supplement, the accompanying prospectus and prospectus supplement. If the terms described in the relevant terms supplement are inconsistent with those described in this product supplement or in any related underlying supplement, the accompanying prospectus or prospectus supplement, the terms described in the relevant terms supplement will control.

## Payment at Maturity

### *A. Determining the Payment at Maturity*

Your payment at maturity per \$1,000 principal amount note will be linked to the performance of the Underlying, converted into U.S. dollars, as specified in the relevant terms supplement.

If the relevant terms supplement specifies that a knock-out feature applies to the notes, the relevant terms supplement will specify (a) the circumstances that will constitute a **"Knock-Out Event"** and (b) the method by which your payment at maturity per \$1,000 principal amount note will be determined both with respect to whether a Knock-Out Event has occurred and with respect to whether a Knock-Out Event has not occurred. For example, the relevant terms supplement could specify that a Knock-Out Event will occur if the Underlying Value is less than the Initial Underlying Value by more than a specified percentage, which we may refer to in the relevant terms supplement as the **"Knock-Out Buffer Amount,"** on any day during a predetermined period within the term of the notes and that any minimum payment at maturity will not apply if a Knock-Out Event has occurred.

Without limiting the generality of the foregoing, set forth below are descriptions of the payments at maturity that may apply with respect to return notes, return enhanced notes, buffered return enhanced notes, knock-out buffered return enhanced notes, buffered notes, knock-out buffered notes, knock-out notes and review notes. The relevant terms supplement may specify a payment at maturity with respect to any of those notes that is different from the applicable payment at maturity set forth below, and the payment at maturity specified in the relevant terms supplement, and not the payment at maturity set forth below, will apply to those notes. **Any payment on the notes, including any payment at maturity described in the relevant terms supplement or below, is subject to the credit risk of JPMorgan Chase & Co.**

#### *1. Return Notes*

Unless otherwise specified in the relevant terms supplement, for return notes, the amount you will receive at maturity will be based on the value of the Ending Underlying Value relative to the Initial Underlying Value, subject to the Adjustment Factor, as described below.

Unless otherwise specified in the relevant terms supplement, your payment at maturity will be calculated as follows:

$$\$1,000 \times (1 + \text{Underlying Return}) \times \text{Adjustment Factor}$$

*For return notes, you will lose some or all of your investment at maturity if the Underlying Return is not sufficient to offset the negative effect of the Adjustment Factor.*

Unless otherwise specified in the relevant terms supplement, the **"Adjustment Factor"** is a percentage that will not be more than 100%, as specified in the relevant terms supplement.

## *2. Return Enhanced Notes*

Unless otherwise specified in the relevant terms supplement, for return enhanced notes, the amount you will receive at maturity will be based on the value of the Ending Underlying Value relative to the Initial Underlying Value and the upside leverage factor as described below.

- If the Ending Underlying Value is greater than the Initial Underlying Value, you will receive at maturity a cash payment per \$1,000 principal amount note that provides you with a return on your investment equal to the Underlying Return multiplied by the upside leverage factor subject, if applicable, to the Maximum Return on the notes. If applicable, the “**Maximum Return**” on the notes is a percentage that we will determine on the pricing date and that will be set forth in the relevant terms supplement. Accordingly, if the relevant terms supplement specifies a Maximum Return on the notes, the appreciation potential of the notes will be limited to the Maximum Return, even if the Underlying Return multiplied by the upside leverage factor is greater than the Maximum Return. Subject to any applicable Maximum Return on the notes, your payment at maturity per \$1,000 principal amount note will be calculated as follows:

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

The “**upside leverage factor**” will be a number set forth in the relevant terms supplement.

- If the Ending Underlying Value is equal to the Initial Underlying Value, you will receive at maturity a cash payment of \$1,000 per \$1,000 principal amount note.
- Your investment will be fully exposed to any decline in the Underlying. If the Ending Underlying Value is less than the Initial Underlying Value, you will lose 1% of the principal amount of your notes for every 1% that the Ending Underlying Value is less than the Initial Underlying Value. Under these circumstances, your payment at maturity per \$1,000 principal amount note will be calculated as follows:

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

*For return enhanced notes, you will lose some or all of your investment at maturity if the Ending Underlying Value is less than the Initial Underlying Value.*

## *3. Buffered Return Enhanced Notes and Knock-Out Buffered Return Enhanced Notes*

As described below, unless otherwise specified in the relevant terms supplement, the amount you will receive at maturity will be based on:

- for buffered return enhanced notes, the value of the Ending Underlying Value relative to the Initial Underlying Value, the upside leverage factor, the downside leverage factor, if applicable, and the buffer amount; and
- for knock-out buffered return enhanced notes, the value of the Ending Underlying Value relative to the Initial Underlying Value, the upside leverage factor and the circumstances that constitute a Knock-Out Event.

*Payment at Maturity if the Value of the Underlying Increases.* For buffered return enhanced notes and knock-out buffered return enhanced notes:

- If the Ending Underlying Value is greater than the Initial Underlying Value, you will receive at maturity a cash payment per \$1,000 principal amount note that provides you with a return on your investment equal to the Underlying Return multiplied by the upside leverage factor subject, if applicable, to the Maximum Return on the notes. If applicable, the “**Maximum Return**” on the notes is a percentage that we will determine on the pricing date

and that will be set forth in the relevant terms supplement. Accordingly, if the relevant terms supplement specifies a Maximum Return on the notes, the appreciation potential of the notes will be limited to the Maximum Return, even if the Underlying Return multiplied by the upside leverage factor is greater than the Maximum Return. Subject to any applicable Maximum Return on the notes, your payment at maturity per \$1,000 principal amount note will be calculated as follows:

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

The “**upside leverage factor**” will be a number set forth in the relevant terms supplement.

*Payment at Maturity if the Value of the Underlying Does Not Increase.* For buffered return enhanced notes:

- If the Ending Underlying Value is equal to the Initial Underlying Value or is less than the Initial Underlying Value by less than the buffer amount, you will receive the principal amount of your notes at maturity.

The “**buffer amount**” will be an amount set forth in the relevant terms supplement.

- Your investment will be fully exposed to any decline in the Underlying by more than the buffer amount. If the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount, for every 1% that the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount, you will lose an amount equal to 1% of the principal amount of your notes multiplied by, if applicable, the downside leverage factor and your payment at maturity per \$1,000 principal amount note will be calculated as follows:

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

If applicable, the “**downside leverage factor**” will be a number set forth in the relevant terms supplement. If no downside leverage factor is specified in the relevant terms supplement and the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount, your payment at maturity per \$1,000 principal amount note will be calculated as follows:

$$\$1,000 + [\$1,000 \times (\text{Underlying Return} + \text{buffer amount})]$$

*For buffered return enhanced notes, you will lose some or all of your investment at maturity if the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount.*

For knock-out buffered return enhanced notes:

- If the Ending Underlying Value is equal to the Initial Underlying Value or if the Ending Underlying Value is less than the Initial Underlying Value and a Knock-Out Event has not occurred, you will be entitled to a full repayment of your principal at maturity.
- Your investment will be fully exposed to any decline in the Underlying if a Knock-Out Event has occurred. If the Ending Underlying Value is less than the Initial Underlying Value and a Knock-Out Event has occurred, for every 1% that the Ending Underlying Value is less than the Initial Underlying Value, you will lose 1% of the principal amount of your notes. Under these circumstances, your payment at maturity per \$1,000 principal amount note will be calculated as follows:

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



*For knock-out buffered return enhanced notes, you will lose some or all of your investment at maturity if the Ending Underlying Value is less than the Initial Underlying Value and a Knock-Out Event has occurred.*

#### *4. Buffered Notes and Knock-Out Buffered Notes*

As described below, unless otherwise specified in the relevant terms supplement, the amount you will receive at maturity will be based on:

- for buffered notes, the value of the Ending Underlying Value relative to the Initial Underlying Value, the downside leverage factor, if applicable, and the buffer amount; and
- for knock-out buffered notes, the value of the Ending Underlying Value relative to the Initial Underlying Value and the circumstances that constitute a Knock-Out Event.

*Payment at Maturity if the Value of the Underlying Increases.* For buffered notes and knock-out buffered notes:

- If the Ending Underlying Value is greater than the Initial Underlying Value, you will receive at maturity a cash payment per \$1,000 principal amount note that provides you with a return on your investment equal to the Underlying Return subject, if applicable, to the Maximum Return on the notes. Accordingly, if the relevant terms supplement specifies a Maximum Return on the notes, the appreciation potential of the notes will be limited to the Maximum Return, even if the Underlying Return is greater than the Maximum Return. Subject to any applicable Maximum Return on the notes, your payment at maturity per \$1,000 principal amount note will be calculated as follows:

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

*Payment at Maturity if the Value of the Underlying Does Not Increase.* For buffered notes:

- If the Ending Underlying Value is equal to the Initial Underlying Value or is less than the Initial Underlying Value by less than the buffer amount, you will be entitled to a full repayment of your principal at maturity.

The “**buffer amount**” will be an amount set forth in the relevant terms supplement.

- Your investment will be fully exposed to any decline in the Underlying by more than the buffer amount. If the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount, for every 1% that the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount, you will lose an amount equal to 1% of the principal amount of your notes multiplied by, if applicable, the downside leverage factor and your payment at maturity per \$1,000 principal amount note will be calculated as follows:

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

If applicable, the “**downside leverage factor**” will be a number set forth in the relevant terms supplement. If no downside leverage factor is specified in the relevant terms supplement and the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount, your payment at maturity per \$1,000 principal amount note will be calculated as follows:

$$\$1,000 + [\$1,000 \times (\text{Underlying Return} + \text{buffer amount})]$$

*For buffered notes, you will lose some or all of your investment at maturity if the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount.*

For knock-out buffered notes:

- If the Ending Underlying Value is equal to the Initial Underlying Value or if the Ending Underlying Value is less than the Initial Underlying Value and a Knock-Out Event has not occurred, you will be entitled to a full repayment of your principal at maturity.
- Your investment will be fully exposed to any decline in the Underlying if a Knock-Out Event has occurred. If the Ending Underlying Value is less than the Initial Underlying Value and a Knock-Out Event has occurred, for every 1% that the Ending Underlying Value is less than the Initial Underlying Value, you will lose 1% of the principal amount of your notes. Under these circumstances, your payment at maturity per \$1,000 principal amount note will be calculated as follows:

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

*For knock-out buffered notes, you will lose some or all of your investment at maturity if the Ending Underlying Value is less than the Initial Underlying Value and a Knock-Out Event has occurred.*

The relevant terms supplement may refer to buffered notes or knock-out buffered notes as buffered equity notes or knock-out buffered equity notes, respectively.

#### *5. Knock-Out Notes*

Unless otherwise specified in the relevant terms supplement, for knock-out notes, the amount you will receive at maturity will be based on the value of the Ending Underlying Value relative to the Initial Underlying Value, whether a Knock-Out Event has occurred, the Contingent Minimum Return and, if applicable, the Maximum Return as described below.

- Unless otherwise specified in the relevant terms supplement, if a Knock-Out Event has not occurred, your payment at maturity will reflect the performance of the Underlying, subject to the Contingent Minimum Return and, if applicable, the Maximum Return. Your payment at maturity per \$1,000 principal amount note will equal \$1,000 *plus* the product of (a) \$1,000 and (b) the greater of (i) the Contingent Minimum Return and (ii) the Underlying Return, subject to the Maximum Return, if applicable.

The “**Contingent Minimum Return**” will be a fixed percentage as specified in the relevant terms supplement.

If applicable, the “**Maximum Return**” will be a fixed percentage that is greater than or equal to the Contingent Minimum Return as specified in the relevant terms supplement. Accordingly, if the relevant terms supplement specifies a Maximum Return, the appreciation potential of the notes will be limited to the Maximum Return even if the Underlying Return is greater than the Maximum Return.

- Unless otherwise specified in the relevant terms supplement, if a Knock-Out Event has occurred, your payment at maturity will reflect the performance of the Underlying, subject to the Maximum Return, if applicable. Your payment at maturity per \$1,000 principal amount note will equal \$1,000 *plus* the product of (a) \$1,000 and (b) the Underlying Return, subject to the Maximum Return, if applicable.

*For knock-out notes, if a Knock-Out Event has occurred, you will lose some or all of your investment at maturity if the Ending Underlying Value is less than the Initial Underlying Value.*

## 6. Review Notes

Unless otherwise specified in the relevant terms supplement, for review notes, if the notes have not been automatically called, the amount you will receive at maturity will be based on the value of the Ending Underlying Value relative to the Initial Underlying Value, whether the notes have a buffer or contingent buffer and the amount of any buffer or contingent buffer. **See “— Automatic Call” below for information about the amount you will receive upon an automatic call.**

*Payment at Maturity if the Value of the Underlying Increases.* If the notes have not been automatically called and the Ending Underlying Value is greater than the Initial Underlying Value, you will receive at maturity a cash payment of \$1,000 per \$1,000 principal amount note.

*Payment at Maturity if the Value of the Underlying Does Not Increase.* For review notes without a buffer:

- If the notes have not been automatically called and the Ending Underlying Value is equal to the Initial Underlying Value, you will receive at maturity a cash payment of \$1,000 per \$1,000 principal amount note.
- Your investment will be fully exposed to any decline in the Underlying. If the notes have not been automatically called and the Ending Underlying Value is less than the Initial Underlying Value, you will lose 1% of the principal amount of your notes for every 1% that the Ending Underlying Value is less than the Initial Underlying Value. Under these circumstances, your payment at maturity per \$1,000 principal amount note will be calculated as follows:

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

*For review notes without a buffer, if the notes are not automatically called, you will lose some or all of your investment at maturity if the Ending Underlying Value is less than the Initial Underlying Value.*

For review notes with a buffer:

- If the notes have not been automatically called and the Ending Underlying Value is equal to the Initial Underlying Value or is less than the Initial Underlying Value by less than the buffer amount, you will be entitled to a full repayment of your principal at maturity.

The “**buffer amount**” will be an amount set forth in the relevant terms supplement.

- Your investment will be fully exposed to any decline in the Underlying by more than the buffer amount. If the notes have not been automatically called and the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount, for every 1% that the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount, you will lose an amount equal to 1% of the principal amount of your notes multiplied by, if applicable, the downside leverage factor and your payment at maturity per \$1,000 principal amount note will be calculated as follows:

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

If applicable, the “**downside leverage factor**” will be a number set forth in the relevant terms supplement. If no downside leverage factor is specified in the relevant terms supplement and the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount, your payment at maturity per \$1,000 principal amount note will be calculated as follows:

$$\$1,000 + [\$1,000 \times (\text{Underlying Return} + \text{buffer amount})]$$

*For review notes with a buffer, if the notes are not automatically called, you will lose some or all of your investment at maturity if the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount.*

For review notes with a contingent buffer,

- If the notes have not been automatically called and the Ending Underlying Value is equal to the Initial Underlying Value or is less than the Initial Underlying Value by less than the contingent buffer amount, you will be entitled to a full repayment of your principal at maturity.

The “**contingent buffer amount**” will be an amount set forth in the relevant terms supplement.

- Your investment will be fully exposed to any decline in the Underlying if the Underlying declines by more than the buffer amount. If the notes have not been automatically called and the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount, for every 1% that the Ending Underlying Value is less than the Initial Underlying Value, you will lose an amount equal to 1% of the principal amount of your notes and your payment at maturity per \$1,000 principal amount note will be calculated as follows:

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

*For review notes with a contingent buffer, if the notes are not automatically called, you will lose some or all of your investment at maturity if the Ending Underlying Value is less than the Initial Underlying Value by more than the contingent buffer amount.*

## ***B. Calculating the Underlying Return***

In this product supplement, we refer to:

- the Index Return or the Basket Return, as applicable, as the “**Underlying Return**”;
- the Initial Index Level (or Index Strike Level, if applicable) or the Starting Basket Level (or Basket Strike Level, if applicable), as applicable, as the “**Initial Underlying Value**”;
- the Ending Index Level or the Ending Basket Level, as applicable, as the “**Ending Underlying Value**”; and
- the Index closing level or the Basket Closing Level, as applicable, as the “**Underlying Value**.”

### ***1. Index Return***

Unless otherwise specified in the relevant terms supplement, with respect to an Index, the “**Index Return**,” as calculated by the calculation agent, is the percentage change in the Adjusted Index Level of that Index, calculated by comparing the Ending Index Level of that Index to the Initial Index Level (or Index Strike Level, if applicable) of that Index. The relevant terms supplement will specify the manner in which the Initial Index Level (or Index Strike Level, if applicable) and the Ending Index Level will be determined. The Index Return of an Index, unless otherwise specified in the relevant terms supplement, is calculated as follows:

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

Unless otherwise specified in the relevant terms supplement, with respect to an Index, the **“Initial Index Level”** means the Adjusted Index Level of that Index on the pricing date or such other date as specified in the relevant terms supplement, or the arithmetic average of the Adjusted Index Levels of that Index on each of the Initial Averaging Dates, if so specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, with respect to an Index, the **“Ending Index Level”** means the Adjusted Index Level of that Index on the Observation Date or such other date as specified in the relevant terms supplement, or, if the relevant terms supplement specifies Ending Averaging Dates, (a) for notes linked to a single Index, the arithmetic average of the Adjusted Index Levels of that Index on each of the Ending Averaging Dates, and (b) for notes linked to a Basket (where the Ending Basket Level is based on the weighted Index Returns calculated on each Ending Averaging Date), the Adjusted Index Level of that Index on the relevant Ending Averaging Date.

With respect to an Index, the relevant terms supplement may specify a level other than the Initial Index Level of that Index, which we refer to as the **“Index Strike Level,”** to be used for calculating the Index Return of that Index and the amount payable at maturity, if any. The Index Strike Level, if applicable, for an Index may be based on and/or expressed as a percentage of the Adjusted Index Level of that Index as of a specified date, or may be determined without regard to the Adjusted Index Level of that Index as of a particular date. For example, the relevant terms supplement may specify that, for a particular Index, an Index Strike Level equal to 95% of the Initial Index Level of that Index will be used to calculate the Index Return of that Index.

## *2. Basket Return*

Unless otherwise specified in the relevant terms supplement, the **“Basket Return,”** as calculated by the calculation agent, is the percentage change in the Basket Closing Level, calculated by comparing the Ending Basket Level to the Starting Basket Level (or Basket Strike Level, if applicable). The relevant terms supplement will specify the manner in which the Starting Basket Level (or Basket Strike Level, if applicable) and the Ending Basket Level will be determined. The Basket Return, unless otherwise specified in the relevant terms supplement, is calculated as follows:

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

Unless otherwise specified in the relevant terms supplement, the **“Starting Basket Level”** is set equal to 100 on the pricing date, the final Initial Averaging Date, if applicable, or such other relevant date as specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, the **“Ending Basket Level”** is the Basket Closing Level on the Observation Date or such other date as specified in the relevant terms supplement, or the arithmetic average of the Basket Closing Levels on each of the Ending Averaging Dates, if so specified in the relevant terms supplement.

The relevant terms supplement may specify a level other than the Starting Basket Level, which we refer to as the **“Basket Strike Level,”** to be used for calculating the Basket Return and the amount payable at maturity, if any. The Basket Strike Level, if applicable, may be based on and/or expressed as a percentage of the Basket Closing Level of a specified date, or may be determined without regard to the Basket Closing Level as of a particular date. For example, the relevant terms supplement may specify that a Basket Strike Level equal to 95% of the Starting Basket Level will be used to calculate the Basket Return.

### ***C. Determining the Value of the Underlying***

#### ***1. The Level of an Index***

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

Unless otherwise specified in the relevant terms supplement, the “**Index 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 Index closing level of an Index or any relevant successor index will be based on the alternative calculation of that Index described under “— Postponement of a Determination Date” or “General Terms of Notes — Discontinuation of an Index; Alteration of Method of Calculation.”

Unless otherwise specified in the relevant terms supplement, the “**Exchange Rate**” of an Index or any relevant successor index on any relevant day will equal an exchange rate of U.S. dollars per one unit of the Underlying Currency of that Index or successor index, as applicable, expressed as either (i) the number of U.S. dollars per one unit of the Underlying Currency of that Index or successor index, as applicable, or (ii) 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**”) on the relevant page or by 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 approximate time of the day at which the relevant page will be consulted to determine any Exchange Rate. If a currency disruption event has occurred or is continuing or a Currency Succession Event has occurred, the method of determining the Exchange Rate of an Index or successor index, as applicable, may be modified. See “General Terms of Notes — Currency Disruption Events” and “General Terms of Notes — Currency Succession Events.”

Unless otherwise specified in the relevant terms supplement or any relevant 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 (i) the relevant exchanges (as defined below) for securities underlying that Index or successor index, as applicable, and (ii) the exchanges on which futures or options contracts related to that Index or successor index, if applicable, are traded.

Unless otherwise specified in the relevant terms supplement, “**currency business day**,” is, with respect to an Index or any relevant successor index, a day 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 that principal financial center 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, each as determined by the calculation agent.

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

## *2. The Level of a Basket*

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

$$100 \times [1 + \text{sum of (Index Return of each Index} \times \text{Index Weight of each such Index)}]$$

For notes linked to a Basket, with respect to an Index, the “**Index Weight**” is a fixed percentage or fraction as specified in the relevant terms supplement, *provided* that the sum of the Index Weight for all Indices will equal 100% or 1, as applicable.

The relevant terms supplement will specify either (i) the weight of each Index in the Basket, which will be fixed for the term of the notes, or (ii) the manner in which the weight of each Index will be determined. For example, if the relevant terms supplement specifies that an Index is weighted to compose 18% of the value of the Basket, the Index Weight for that Index is 18%. Alternatively, the relevant terms supplement may specify that, for a Basket consisting of two Indices, the Index with the greater Index Return on the final Determination Date will make up 70% of the value of the Basket, and the Index with the lesser Index Return on the final Determination Date will make up 30% of the value of the Basket.

### *D. Other Terms*

The relevant terms supplement will specify Initial Averaging Dates, Call Dates, Review Dates, Valuation Dates, Observation Dates, Ending Averaging Dates or other relevant dates (each, a “**Determination Date**”), as applicable. Unless otherwise specified in the relevant terms supplement, Determination Dates are subject to adjustment as described in “— Postponement of a Determination Date” below.

The “**maturity date**” will be specified in the relevant terms supplement and is subject to adjustment as described below. If the scheduled maturity date (as specified in the relevant terms supplement) is not a business day, then the maturity date will be the next succeeding business day following the scheduled maturity date. If, due to a market disruption event, a currency disruption event or otherwise, the final Determination Date is postponed so that it falls less than three business days prior to the scheduled maturity date, the maturity date will be the third business day following the final Determination Date, as postponed, unless otherwise specified in the relevant terms supplement. We describe market disruption events under “General Terms of Notes — Market Disruption Events” and currency disruption events under “General Terms of Notes — Currency Disruption Events.” In addition, the maturity date may be accelerated if there is an event of default. See “General Terms of Notes — Payment upon an Event of Default.”

We will irrevocably deposit with DTC no later than the opening of business on the applicable date or dates funds sufficient to make payments of the amount payable, if any, 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.

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.

The “**calculation agent**” is the agent appointed by us to make certain calculations for the notes, which initially 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 the Notes Generally — 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.”

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

### **Automatic Call**

If the relevant terms supplement specifies that the notes include an automatic call feature, the notes will be automatically called in 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.

Unless otherwise specified in the relevant terms supplement, if the notes are automatically called on any day other than the final Determination Date, we will redeem each note and pay the applicable cash payment described in the relevant terms supplement (the “**Call Price**”) on the third business day after the date on which the notes are called, subject to postponement as described below under “Postponement of a Determination Date.” Unless otherwise specified in the relevant terms supplement, if the notes are called on the final Determination Date, we will redeem each note and pay the call price on the maturity date, subject to postponement as described in “Payment at Maturity” above. We refer to the date on which the call price is payable as the “**Call Settlement Date**.”

Without limiting the generality of the foregoing, set forth below is a description of the automatic call feature that may apply with respect to review notes. The relevant terms supplement may specify an automatic call feature with respect to review notes that is different from the automatic call feature set forth below, and the automatic call feature specified in the relevant terms supplement, and not automatic call feature set forth below, will apply to those notes.

Review notes will be automatically called if the Underlying Value on any Review Date is greater than or equal to the applicable value set forth in the relevant terms supplement (the “**Call Level**”) that triggers an automatic call and payment of the applicable Call Price. Unless otherwise specified in the relevant terms supplement, the Call Level for the final Review Date will not be greater than the Initial Underlying Value.

If the notes are automatically called, for every \$1,000 principal amount note, you will receive \$1,000 plus the Call Price applicable to the Review Date on which the notes are automatically called. The call premium is a percentage that will vary depending on the particular Review Date and will be specified in the relevant terms supplement. The Call Price is equal to \$1,000 multiplied by the call premium. Accordingly, the payment per \$1,000 principal amount note upon an automatic call on a Review Date will be calculated as follows:

$$\$1,000 + (\text{applicable call premium} \times \$1,000)$$

### **Interest Payments**

If the relevant terms supplement specifies that the notes will bear interest, the notes will bear interest at the per annum rate, or such other rate or rates, including rates that reference the performance of the Underlying, converted into U.S. dollars, as specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, if the notes do not include an automatic call feature or if the notes are not automatically called, interest will accrue from the issue date of the notes to but excluding the maturity date. Interest will be payable in arrears on each date specified in the relevant terms supplement (each such date, an “**Interest Payment Date**”) to and including the maturity date, to the holders of record at the close of business on the business day prior to that Interest Payment Date, unless otherwise specified in the relevant terms supplement.



Unless otherwise specified in the relevant terms supplement, if the notes include an automatic call feature and the notes are automatically called, interest will accrue from the issue date of the notes to but excluding the applicable Call Settlement Date. Interest will be payable in arrears on each Interest Payment Date occurring before the applicable Call Settlement Date and on that Call Settlement Date, to the holders of record at the close of business on the business day prior to that Interest Payment Date or that Call Settlement Date, as applicable, unless otherwise specified in the relevant terms supplement.

Interest on the notes will be calculated based on a 360-day year of twelve 30-day months, unless otherwise specified in the relevant terms supplement. If any day on which a payment of interest or principal is due is not a business day, the payment will be made with the same force and effect on the next succeeding business day, but no additional interest will accrue as a result of the delayed payment, and the next interest payment period, if applicable, will commence as if the payment had not been delayed. If the maturity date, any Interest Payment Date or any Call Settlement Date is adjusted as the result of a market disruption event or otherwise, the payment of interest due on that date will be made on the maturity date or Call Settlement Date as adjusted, with the same force and effect as if that date had not been adjusted, but no additional interest will accrue or be payable as a result of the delayed payment.

## **Postponement of a Determination Date**

### ***A. Notes Linked to a Single Index***

If a Determination Date is not a trading day or if there is a market disruption event on a Determination Date (any such day, a “**Market Disrupted Day**”) or if a Determination Date is not a currency business day or if there is a currency disruption event on a Determination Date (any such day, a “**Currency Market Disrupted Day**”), the applicable Determination Date will be postponed to the earliest day on which the Index closing level and Exchange Rate 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 Index closing level and the Exchange Rate on the immediately succeeding business day that is not a Market Disrupted Day to calculate the Adjusted Closing Level for that Determination Date, *provided* that if that business day is a Currency Market Disrupted Day, the calculation agent will use the Exchange Rate on the immediately succeeding business day that is not a Currency Market Disrupted Day instead; and
- (b) if the applicable Determination Date is being postponed due to a Currency Market Disrupted Day (but not a Market Disrupted Day), the calculation agent will use the Index closing level on the originally scheduled Determination Date and the Exchange Rate on the immediately succeeding business day that is not a Currency Market Disrupted Day to calculate the Adjusted Closing Level for that Determination Date.

In no event, however, will any Determination Date be postponed to a date that is after the Final Disrupted Determination Date.

If a Determination Date is or has been postponed to the Final Disrupted Determination Date and the Final Disrupted Determination Date is a Market Disrupted Day, the calculation agent will determine the Index closing level for that Determination Date on the Final Disrupted Determination Date, unless otherwise specified in the relevant terms supplement or any relevant underlying supplement, in accordance with the formula for and method of calculating the Index closing level of the Index 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 the Final Disrupted Determination Date of each security most recently constituting the Index.

If a Determination Date is or has been postponed to the Final Disrupted Determination Date and the Final Disrupted Determination Date is a Currency Market Disrupted Day, the calculation agent will determine the Exchange Rate for that Determination Date on the Final Disrupted Determination Date in good faith and in a commercially reasonable manner, taking into account the latest available quotation for the Exchange Rate and any other information that it deems relevant.

With respect to a Determination Date, unless otherwise specified in the relevant terms supplement or any relevant underlying supplement, the **"Final Disrupted Determination Date"** means the tenth business day after that Determination Date, as originally scheduled.

### ***B. Notes Linked to a Basket***

If a Determination Date is a Market Disrupted Day or a Currency Market Disrupted Day for any Index (any Index affected by a Market Disrupted Day or a Currency Market Disrupted Day, a **"Disrupted Index"**), the applicable Determination Date will be postponed to the earliest day on which the Index closing level and 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 calculation agent will use the Index closing level and the Exchange Rate on the originally scheduled Determination Date to calculate the Adjusted Closing Level of that Index for such Determination Date;
- (b) for each Disrupted Index that is affected by a Market Disrupted Day, the calculation agent will use the Index closing level and the Exchange Rate on the immediately succeeding business day that is not a Market Disrupted Day to calculate the Adjusted Closing Level of that Index for such Determination Date, *provided* that if such business day is a Currency Market Disrupted Day, the calculation agent will use the Exchange Rate on the immediately succeeding business day that is not a Currency Market Disrupted Day instead; and
- (c) for each Disrupted Index that is affected by a Currency Market Disrupted Day (but not a Market Disrupted Day), the calculation agent will use the Index closing level on the originally scheduled Determination Date and the Exchange Rate on the immediately succeeding business day that is not a Currency Market Disrupted Day to calculate the Adjusted Closing Level of that Index for such Determination Date.

Accordingly, if a Determination Date is postponed as described above, the calculation agent may reference the Index closing levels and Exchange Rates of the Indices from different business days when calculating the Basket Closing Level or making other determinations with respect to that Determination Date, as postponed.

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

- (a) Business 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) Business Day 2 is not a Market Disrupted Day for Index B but is a Currency Market Disrupted Day for Index B; and
- (c) Business Day 3 is not a Currency Market Disrupted Day for Index B.

Under these circumstances, the Determination Date originally scheduled to occur on Business Day 1 would be postponed to Business Day 3 and, with respect to that Determination Date, as postponed, the calculation agent would determine the Adjusted Index Level (a) for Index A, using the Index closing level and Exchange Rate on Business Day 1; and (b) for Index B, using the Index closing level on Business Day 2 and the Exchange Rate on Business Day 3.

In no event, however, will any Determination Date be postponed to a date that is after the Final Disrupted Determination Date. If a Determination Date is or has been postponed to the Final Disrupted Determination Date and on that day, the Index closing level and/or Exchange Rate for any Disrupted Index has not been established in accordance with the first paragraph above (a **"Final Disrupted Index"**), the Index closing level and Exchange for that Determination Date will be determined by the calculation agent on the Final Disrupted Determination Date and will be deemed to be:

- (a) for each Unaffected Index, the Index closing level and Exchange Rate on the originally scheduled Determination Date;
- (b) for each Disrupted Index that is not a Final Disrupted Index, the Index closing level and Exchange Rate determined in the manner described in the first paragraph above;
- (c) for each Final Disrupted Index:
  - (i) if the Index closing level has not been established in accordance with the first paragraph above, unless otherwise specified in the relevant terms supplement or any relevant underlying supplement, the Index closing level of that Index determined by the calculation agent in accordance with the formula for and method of calculating the Index closing level of this Index 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 the Final Disrupted Determination Date of each security most recently constituting that Index; and/or
  - (ii) if the Exchange Rate has not been established in accordance with the first paragraph above, the Exchange Rate of that Index determined by the calculation agent on the Final Disrupted Determination Date in good faith and in a commercially reasonable manner, taking into account the latest available quotation for the Exchange Rate and any other information that it deems relevant.

## 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, any Underlying Currency relative to the U.S. dollar or any of the equity 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 before you decide that an investment in the notes is suitable for you.***

### Risks Relating to the Notes Generally

**The notes differ from conventional securities and may not pay interest or guarantee the return of your investment.**

The notes differ from conventional securities and may not pay interest and may not return any of your investment. The amount payable at maturity or, if applicable, upon automatic call will be determined pursuant to the terms described in the relevant terms supplement. The relevant terms supplement will specify the circumstances in which you may lose some or all of your investment at maturity or, if applicable, upon automatic call. In addition, unless otherwise specified in the relevant terms supplement, you will lose some or all of your investment in the notes at maturity:

- for return notes, if the Ending Underlying Value is not greater than the Initial Underlying Value by a percentage sufficient to offset the negative effect of the Adjustment Factor, which will reduce your return, or if the Ending Underlying Value is less than the Initial Underlying Value;
- for return enhanced notes, if the Ending Underlying Value is less than the Initial Underlying Value;
- for buffered return enhanced notes and buffered notes, if the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount;
- for knock-out notes, knock-out buffered return enhanced notes and knock-out buffered notes, if the Ending Underlying Value is less than the Initial Underlying Value and a Knock-Out Event has occurred;
- for review notes without a buffer, if the notes are not automatically called and the Ending Underlying Value is less than the Initial Underlying Value;
- for review notes with a buffer, if the notes are not automatically called and the Ending Underlying Value is less than the Initial Underlying Value by more than the buffer amount; and
- for review notes with a contingent buffer, if the notes are not automatically called and the Ending Underlying Value is less than the Initial Underlying Value by more than the contingent buffer amount.

For all other notes, the relevant terms supplement will specify the circumstances in which you may lose some or all of your investment at maturity.

**If the relevant terms supplement specifies that a Maximum Return applies, the appreciation potential of the notes will be limited to the Maximum Return.**

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

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

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

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

You should not take our offering of the notes as an expression of our views about how any Index, any Underlying Currency relative to the U.S. dollar or the equity 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 Index, any Underlying Currency relative to the U.S. dollar or the equity securities underlying any Index, 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 Indices, Underlying Currencies relative to the U.S. dollar and the equity securities underlying one or more Indices 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 instruments the value of which is derived from one or more Indices or Underlying Currencies relative to the U.S. dollar or the equity securities underlying one or more Indices or Underlying Currencies relative to the U.S. dollar. We may also adjust our hedge by, among other things, purchasing or selling instruments the value of which is derived from one or more Indices or Underlying Currencies relative to the U.S. dollar or the equity securities underlying one or more Indices or Underlying Currencies relative to the U.S. dollar 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. We cannot give you any assurances that our hedging will not negatively affect the value of the Underlying or the performance of the notes. See "Use of Proceeds and Hedging" below for additional information about our hedging activities.

This hedging activity may present a conflict of interest between your interest as a holder of the notes and the interests our affiliates have in executing, maintaining and adjusting hedge transactions. These hedging activities could also affect the price at which JPMS is willing to purchase your notes in the secondary market.

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.

JPMS and other affiliates of ours also trade the Underlying Currencies relative to the U.S. dollar, the equity securities underlying the Indices and other financial instruments related to the Indices, the Underlying Currencies relative to the U.S. dollar and the equity securities underlying the Indices 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 activities or other trading activities of ours could potentially increase the Underlying Value on the pricing date or any Initial Averaging Dates, as applicable, and/or decrease the Underlying Value on any other Determination Date, which could adversely affect your payment at maturity, or, if applicable, upon automatic call or the amount of interest you may receive over the term of the notes.

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 equity 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. In the course of this business, we or our affiliates may acquire nonpublic information about the underlying companies, and we will not disclose any such information to you. In addition, we or one or more of our affiliates may publish research reports or otherwise express views about the underlying companies. Any prospective purchaser of notes should undertake an independent investigation of each of the underlying companies as in its judgment is appropriate to make an informed decision with respect to an investment in the notes. 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.

Additionally, 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 level of an Index or the equity 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.

We or one of our affiliates may currently or from time to time engage in trading activities related to one or more Underlying Currencies, the U.S. dollar and currencies in which the equity securities underlying a foreign Index are denominated. These trading activities could potentially affect the applicable Exchange Rates, and the exchange rates of the currencies in which the equity securities underlying that foreign Index are denominated, the Index closing levels of that foreign Index and, accordingly, the value of the notes. A “**foreign Index**” is one that is composed primarily of equity securities issues by non-U.S. companies.

In the course of our or our affiliates' currency trading activities, we or our affiliates may acquire material nonpublic information with respect to currency exchange rates, and we will not disclose any such information to you. In addition, one or more of our affiliates may produce and/or publish research reports, or otherwise express views, with respect to expected movements in currency exchange rates. We do not make any representation or warranty to any purchaser of notes with respect to any matters whatsoever relating to future currency exchange rate movements and any prospective purchaser of the notes should undertake an independent investigation of any relevant Underlying Currency and Exchange Rate, the currencies in which equity securities underlying a foreign Index are denominated and their related exchange rates as, in its judgment, is appropriate to make an informed decision with respect to an investment in 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 will determine, among other things, any Initial Index Level (or Index Strike Level, if applicable), the Starting Basket Level (or Basket Strike Level, if applicable), if applicable, any Ending Index Level, the Ending Basket Level, if applicable, any Index Return, the Basket Return, if applicable, any Adjusted Index Level, Index closing level, Exchange Rate or Basket Closing Level on each Determination Date and the payment, if any, on any Interest Payment Date and at maturity or, if applicable, upon automatic call, as well as whether a Knock-Out Event has occurred, if applicable. In addition, the calculation agent will determine, among other things:

- whether a market disruption event or a currency disruption event has occurred;
- whether an Index has been discontinued, whether the method of calculating an Index has changed in a material respect or whether an Index has been otherwise modified so that it does not, in the opinion of the calculation agent, fairly represent the level of that Index had those changes or modifications not been made and, if applicable, which index to select as a successor index;
- the Exchange Rate, if the Exchange Rate is not available on Reuters or Bloomberg, as applicable; and
- whether a Currency Succession Event has occurred and, if applicable, the Successor Currency.

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.

**JPMS and its affiliates may have published research, expressed opinions or provided recommendations that are inconsistent with investing in or holding the notes, and may do so in the future. Any such research, opinions or recommendations could affect the value of any relevant Index or Underlying Currency relative to the U.S. dollar, and, therefore, the market value of the notes.**

JPMS and its affiliates publish research from time to time on underlying companies, financial and currency markets and other matters that may influence the value of the notes, or express opinions or provide recommendations that are inconsistent with purchasing or holding the notes. JPMS and its affiliates may have published or may publish research or other opinions that call into question the investment view implicit in an investment in the notes. Any research, opinions or recommendations expressed by 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 Index and Underlying Currency to which the notes are linked.

**Movements in the level of an Index and its Exchange Rate may be highly correlated.**

The correlation of an Index and its Exchange Rate refers to the relationship between the percentage changes in the level of that Index and the percentage changes in its Exchange Rate. The direction of the correlation (whether positive or negative) and the extent of the correlation between the percentage changes in the level of that Index and the percentage changes in its Exchange Rate could affect the value of the notes. High correlation of movements in the level of an Index and its Exchange Rate during periods of negative returns among that Index and its Exchange Rate could have an adverse effect on the return on your investment at maturity or, if applicable, upon automatic call. However, the movements in an Index and its Exchange Rate may become uncorrelated in the future. At a time when the level of that Index or its Exchange Rate increases, that Exchange Rate or level, respectively, may decline. See “— Changes in the level of an Index and its Exchange Rate may offset each other” below.

**Changes in the level of an Index and its Exchange Rate may offset each other.**

Movements in the level of an Index and its Exchange Rate may not correlate with each other. At a time when the level of the Index or its Exchange Rate increases, that Exchange Rate or level, respectively, may decline. Therefore, in calculating any Ending Index Level, increases in the level of the applicable Index or its Exchange Rate may be moderated, or more than offset, by declines in that Exchange Rate or level, respectively. See “— Risks Relating to an Index” and “— Risks Relating to an Underlying Currency” below for additional risks related an Index or an Underlying Currency, respectively.

**For return notes, even if the Ending Underlying Value is greater than the Initial Underlying Value, you may receive less than the principal amount of your notes due to the Adjustment Factor.**

For return notes, because the Adjustment Factor reduces the Underlying Return, if the Ending Underlying Value is not greater than the Initial Underlying Value by a percentage sufficient to offset the negative effect of the Index Adjustment Factor, you will lose some or all of your investment in the notes at maturity or, if applicable, upon automatic call, if any.

**For return notes, the Adjustment Factor will magnify any negative Underlying Return.**

For return notes, because the Adjustment Factor will be a percentage that is less than 100%, unless otherwise specified in the relevant terms supplement, its effect on the calculation of your payment at maturity is to reduce any positive Underlying Return and to magnify any negative Underlying Return. If the Underlying Return is negative, for each 1% that the Ending Underlying Value is less than the Initial Underlying Value, you will lose more than 1% of your investment in the notes, *provided* that the payment at maturity will not be less than zero.

**If the relevant terms supplement specifies that a contingent buffer or a knock-out buffer applies, the benefit provided by such contingent buffer or knock-out buffer may terminate during the term of the notes.**

If the relevant terms supplement specifies that a contingent buffer applies, you will at maturity be fully exposed to any depreciation of the Underlying if the Ending Underlying Value is less than the Initial Underlying Value by more than the contingent buffer amount. If the relevant terms supplement specifies that a knock-out buffer applies, you will at maturity be fully exposed to any depreciation of the Underlying if a Knock-Out Event has occurred. Under either of these circumstances, you will lose 1% of the principal amount of your investment for every 1% that the Ending Underlying Value is less than the Initial Underlying Value. If these notes had provided a buffer feature that was not contingent or not subject to a Knock-Out Event, under the same scenario, the amount you would have received at maturity would have been increased by the contingent buffer amount or the Knock-Out Buffer Amount, as applicable. As a result, your investment in the notes may not perform as well as an investment in a security with a return that includes a buffer feature that is not contingent and not subject to a Knock-Out Event.



**If so specified in the relevant terms supplement, the notes will be subject to automatic call prior to maturity and the corresponding reinvestment risk.**

If the relevant terms supplement specifies that the notes include an automatic call feature, the term of the notes may be limited by the automatic call feature of the notes. The notes will be automatically called prior to the maturity date under the circumstances set forth in the relevant terms supplement. Because of this automatic call feature, the term of your investment in the notes may be limited to a period that is shorter than the original term of the notes. If the notes pay interest and the notes are automatically called, the holding period over which you would receive interest payments could be significantly shorter than the full 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 the notes are automatically called prior to the maturity date.

**The Ending Underlying Value may be less than the Underlying Value at other times during the term of the notes.**

Because the Ending Underlying Value is calculated based on the Underlying Value on one or more Determination Dates during the term of the notes, the Underlying Value at various other times during the term of the notes could be higher than the Ending Underlying Value. This difference could be particularly large if there is a significant increase in the Underlying Value before and/or after the Determination Date(s), if there is a significant decrease in the Underlying Value around the time of the Determination Date(s) or if there is significant volatility in the Underlying Value during the term of the notes (especially on dates near the Determination Date(s)). For example, when the Determination Date of the notes is near the end of the term of the notes, if the Underlying Value increases or remains relatively constant during the initial term of the notes and then decreases below the Initial Underlying Value, the Ending Underlying Value 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 payment at maturity than you would have received if you had invested directly in any Index, the equity securities underlying any Index or contracts relating to any Index for which there is an active secondary market.

**The Initial Index Level of any Index may be determined after the issue date of the notes.**

If so specified in the relevant terms supplement, the Initial Index Level of any Index may be determined based on the arithmetic average of the Adjusted Index Levels on the Initial Averaging Dates specified in that relevant terms supplement. One or more of the Initial Averaging Dates specified may occur on or following the issue date of the notes; as a result, the Initial Index Level of any Index may not be determined, and you may therefore not know the value of that Initial Index Level until after the issue date. Similarly, the global note certificate representing the notes, which will be deposited with DTC on the issue date as described under "General Terms of Notes — Book-Entry Only Issuance — The Depository Trust Company," will not set forth that Initial Index Level. If there are any increases in the Adjusted Index Levels on the Initial Averaging Dates that occur after the issue date and those increases result in the Initial Underlying Value being higher than the Underlying Value on the issue date, your payment at maturity or, if applicable, upon automatic call may be adversely affected.

**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 the Underlying has appreciated since the pricing date. The potential returns described in the relevant terms supplement assume that your notes are held to maturity unless automatically called prior to maturity, 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.

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

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

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

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

- the actual and expected frequency and magnitude of changes in any Index closing level or Exchange Rate (*i.e.*, volatility);
- the time to maturity of the notes;
- the dividend rate 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 and the market value of options on the Underlying and therefore affect the market value of the notes);
- if applicable, whether a Knock-Out Event has occurred or is expected to occur;
- interest and yield rates in the market generally as well as in the markets of the equity securities underlying an Index;
- economic, financial, political, regulatory and judicial events that affect the equity securities underlying an Index or stock markets generally, the value of an Underlying Currency relative to the U.S. dollar or currency markets generally or the economies of the originating country or region of an Underlying Currency;

- for notes linked to a Basket, changes in correlation (the extent to which the level of the Indices increase or decrease to the same degree at the same time) between the Indices;
- changes in correlation between the level of an Index and its Exchange Rate; and
- our creditworthiness, including actual or anticipated downgrades in our credit ratings.

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

**If the Adjusted Index Level of an Index changes, the market value of your notes may not change in the same manner.**

Owning the notes is not the same as owning the equity securities included in any Index. Accordingly, changes in the Adjusted Index Level of an Index may not result in a comparable change in the market value of the notes. If the Adjusted Index Level of any Index on any day has increased, the value of the notes may not increase comparably, if at all. It is also possible for Adjusted Index Level of an Index to increase moderately while the value of the notes declines.

**You will have no ownership rights in any Index or the equity securities underlying any Index.**

Investing in the notes is not equivalent to investing in any Index, the equity securities underlying any Index or exchange-traded or over-the-counter instruments based on any Index or the equity securities underlying any Index. As an investor in the notes, you will not have any ownership interests or rights in any Index or the equity securities underlying any Index.

**Your return on the notes will not reflect dividends or other distributions on the equity securities underlying any 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 equity securities underlying any Index that is not a total return index and received the dividends or other distributions paid on those equity securities. This is because the calculation agent will calculate the amount payable to you at maturity of the notes by reference to the Ending Underlying Value. The Ending Underlying Value will reflect the prices of the equity securities underlying any relevant Index that is not a total return index on the Determination Date(s) without taking into consideration the value of dividends or other distributions paid on those equity securities.

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

If the notes are linked to a single Index or to a small number of Indices 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 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.

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

The calculation agent may, in its sole discretion, determine that the markets have been affected in a manner that prevents it from properly determining any Index closing level or Exchange Rate on any Determination Date and determining whether a Knock-Out Event has occurred, if applicable, or calculating the amount, if any, that we will pay you at maturity or, if applicable, upon automatic call or on any Interest Payment Date. 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 the maturity date will be postponed and your return will be adversely affected. See “General Terms of Notes — Market Disruption Events” and “General Terms of Notes — Currency Disruption Events.” Moreover, if any Determination Date is postponed to the last possible day and the Index closing level and/or Exchange Rate of any Index is not available on that day because of a market disruption event or if such day is not a trading day or currency business day, the calculation agent will nevertheless determine the Index closing level and/or Exchange Rate of that Index on such last possible day. See “Description of Notes — Postponement of a Determination Date” for more information.

**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 Internal Revenue Service (the “IRS”) regarding the notes. The IRS might not accept, and a court might not uphold, the treatment of the notes as open transactions that are not debt instruments, as described in “Material U.S. Federal Income Tax Consequences.” If the IRS were successful in asserting an alternative treatment for the notes, the timing and/or character of income on the notes could be affected materially and adversely. 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, which may include the notes. The notice focuses in particular on whether to require holders of these instruments to accrue income over the term of their investment. It also asks for comments on a number of related topics, including the character of income or loss with respect to these instruments; the relevance of factors such as the nature of the underlying property to which the instruments are linked; the degree, if any, to which income (including any mandated accruals) realized by Non-U.S. Holders should be subject to withholding tax; and whether these instruments are or should be subject to the “constructive ownership” regime, which very generally can operate to recharacterize certain long-term capital gain as ordinary income and impose an interest charge. While the notice requests comments on appropriate transition rules and effective dates, any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the notes, possibly with retroactive effect. Both U.S. and Non-U.S. Holders should review carefully the section entitled “Material U.S. Federal Income Tax Consequences” in this product supplement no. 5-I and consult their tax advisers regarding the U.S. federal income tax consequences of an investment in the notes, including possible alternative treatments and the issues presented by this notice.

**Historical performance of any Index or Underlying Currency should not be taken as an indication of the future performance of that Index or Underlying Currency during the terms of the notes.**

The actual performance of any Index or Underlying Currency over the term of the notes, as well as the amount payable at maturity or, if applicable, upon automatic call or on any Interest Payment Date may bear little relation to the historical performance of that Index or Underlying Currency. The level of any Index will be determined by the trading prices of the equity securities underlying that Index, and the value of any Underlying Currency relative to the U.S. dollar will determine the Exchange Rate. As a result, it is impossible to predict whether the level of any Index will rise or fall or any Underlying Currency will appreciate or depreciate relative to the U.S. dollar.

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

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

## **Risks Relating to a Basket**

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

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

### **The Index Weights may be determined on a date other than the pricing date.**

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

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

Level movements in the Indices may not correlate with each other. At a time when the level of one or more of the Indices increases, the level of the other Indices may not increase as much or may even decline. Therefore, in calculating the Ending Basket Level, increases in the level of one or more of the Indices may be moderated, or more than offset, by lesser increases or declines in the level of the other Index or Indices, particularly if the Index or Indices that appreciate are of relatively low weight in the Basket.

### **Movements in the Indices may be highly correlated.**

High correlation of movements in the Indices during periods of negative returns among the Indices could have an adverse effect on your return on your investment at maturity or, if applicable, upon automatic call. However, the movements in the Indices may become uncorrelated in the future. Accordingly, at a time when the level of one or more of the Indices increases, the level of the other Indices may not increase as much or may even decline. See “— Changes in the level of the Indices may offset each other” above.

## **Risks Relating to an Index**

### **The sponsor of an Index (an “Index Sponsor”) may adjust such 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 equity 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 equity securities included in an Index may affect that Index, as a newly added equity 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 related underlying supplement or the relevant terms supplement for additional information.

**Unless otherwise specified in the relevant terms supplement or any related underlying supplement, to our knowledge, we are not currently affiliated with any other company the equity securities of which are included in an Index.**

Unless otherwise specified in the relevant terms supplement or any related underlying supplement, to our knowledge, we are not currently affiliated with any issuers the equity securities of which are included in an Index. As a result, we will have no ability to control the actions of the issuers of those equity securities, including actions that could affect the value of the equity securities underlying an Index or your notes. Unless otherwise specified in the relevant terms supplement or any relevant underlying supplement, none of the money you pay us will go to any Index Sponsor or any of the issuers of the equity securities included in any Index, and none of those issuers will be involved in the offering of the notes in any way. Neither those issuers nor we will have any obligation to consider your interests as a holder of the notes in taking any corporate actions that might affect the value of your notes. See any related 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 we become affiliated with any issuer of equity securities that 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 such issuer that might affect the value of your 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, the equity securities that compose a foreign 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, including risks of volatility in those markets, governmental intervention in those markets and cross shareholdings in companies in certain countries. Also, there is generally less publicly available information about companies in some of these jurisdictions than about U.S. companies that are subject to the reporting requirements of the Securities and Exchange Commission (the “SEC”), and generally non-U.S. companies are subject to accounting, auditing and financial reporting standards and requirements and securities trading rules different from those applicable to U.S. reporting companies.

The prices of securities in non-U.S. markets may be affected by political, economic, financial and social factors in such markets, including changes in a country’s government, economic and fiscal policies, currency exchange laws or other 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 a foreign Index composed of securities traded in one or more emerging market countries.

Some or all of these factors may influence the Index closing level for a foreign 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 decrease, which may adversely affect your payment at maturity or, if applicable, upon automatic call.

### **Risks Relating to an Underlying Currency**

**Depreciation in the value of an Underlying Currency relative to the U.S. dollar may adversely affect your return on the notes.**

The return on the notes is based on the performance of each relevant Index and its Exchange Rate. Any Ending Index Level is determined based on its Adjusted Closing Level, which is the Index closing level of that Index, converted into U.S. dollars based on the applicable Exchange Rate. Accordingly, any depreciation in the value of an Underlying Currency relative to the U.S. dollar (or conversely, any appreciation in the value of the U.S. dollar relative to an Underlying Currency) may adversely affect your return on the notes. If an Underlying Currency significantly depreciates relative to the U.S. dollar (or conversely, the U.S. dollar significantly appreciates relative to an Underlying Currency), the applicable Index Return may be reduced, and any such reduction will have the effect of reducing or eliminating the amount payable in respect of the notes at maturity or, if applicable, upon automatic call.

**Your return on the notes will not reflect the return of a direct investment in any Underlying Currency.**

Your return on the notes will not reflect the return you would realize if you directly invested in or traded any Underlying Currency or instruments related to any Underlying Currency.

**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 any Underlying Currency and the U.S. dollar is at any moment a result of the supply and demand for that currency. Changes in foreign currency exchange rates over time result from the interaction of many factors directly or indirectly affecting economic and political conditions in any Underlying Currency's country, the United States, and economic and political developments in other relevant countries.

Of particular importance to potential currency exchange risk are:

- existing and expected rates of inflation;
- existing and expected interest rate levels;
- the balance of payments in any Underlying Currency's country and the United States and between each country and its major trading partners;
- the monetary policies of any Underlying Currency's country and the United States, especially as related to the supply of money;
- political, civil or military unrest in any Underlying Currency's country and the United States; and
- the extent of governmental surplus or deficit in any Underlying Currency's country and the United States.

All of these factors are, in turn, sensitive to the monetary, fiscal and trade policies pursued by any Underlying Currency's country and the United States and those of other countries important to international trade and finance.

**Changes in the volatility of Exchange Rates are likely to affect the market value of the notes.**

The Exchange Rate refers to a foreign exchange spot rate that measures the relative values of two currencies — the applicable Underlying Currency and the U.S. dollar. This Exchange Rate reflects the amount of U.S. dollars that can be purchased for one unit of the applicable Underlying Currency and thus increases when the applicable Underlying Currency appreciates relative to the U.S. dollar. The volatility of the Exchange Rate between the U.S. dollar and each of the Underlying Currencies refers to the size and frequency of changes in that Exchange Rate. Because the Index Return of an Index is calculated by converting the closing level of that Index into U.S. dollars using the applicable Exchange Rate, the volatility of the Exchange Rate between the U.S. dollar and each of the Underlying Currencies could affect the market value of the notes.



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

Foreign exchange rates can either be fixed by sovereign governments or floating. Exchange rates of most economically developed nations are permitted to fluctuate in value relative to the value of other currencies. However, governments do not always allow their currencies to float freely in response to economic forces. Governments use a variety of techniques, such as intervention by their central bank or imposition of regulatory controls or taxes, to affect the trading value of their respective currencies. They may also issue a new currency to replace an existing currency or alter the exchange rate or relative exchange characteristics by devaluation or revaluation of a currency. Thus, a special risk in purchasing the notes is that their liquidity, trading value and amounts payable, if any, under the notes could be affected by the actions of sovereign governments which could change or interfere with theretofore freely determined currency valuation, fluctuations in response to other market forces and the movement of currencies across borders. Unless such an event constitutes a currency 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 an Underlying Currency, the U.S. dollar or any other currency. See "General Terms of Notes — Currency Disruption Events" and "General Terms of Notes — Currency Succession Events."

**Even though the Underlying Currencies 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 the Underlying Currencies and the U.S. dollar is a global, around-the-clock market and the Underlying Currencies and the U.S. dollar values are quoted 24 hours a day. Therefore, the hours of trading for the notes, if any, may not conform to the hours during which an Underlying Currency and the U.S. dollar are traded. To the extent that U.S. markets are closed while the markets for other currencies remain open, significant price and rate movements may take place in the underlying foreign exchange markets, and thus in the level of the relevant Index or 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 an Underlying Currency 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 your payment at maturity, if any, on the notes or, if applicable, upon automatic call. There is no regulatory requirement that those quotations be firm or revised on a timely basis. The absence of last-sale information and the limited availability of quotations to individual investors may make it difficult for many investors to obtain timely, accurate data about the state of the underlying foreign exchange markets.

In addition, certain relevant information relating to the originating country of an Underlying Currency 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 an Underlying Currency 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. Such interventions affect currency exchange rates globally and, in particular, the value of an 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 your return on your investment in the notes at maturity.

**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, assuming no change in the relevant Index closing level, if interest rates in the United States increase or interest rates in the country issuing an Underlying Currency decrease, we expect the trading value of the notes will decrease. Conversely, in general, assuming no change in the relevant Index closing level, if the interest rates in the United States decrease or interest rates in the country issuing an Underlying Currency increase, we expect that the trading value of the notes will increase.

If interest rates increase or decrease in markets based on an Underlying Currency, the trading value of the notes may be adversely affected. Interest rates may affect the economies of the country issuing an Underlying Currency or the United States, and, in turn, the Exchange Rates. Prior to maturity, the impact of interest rates in the United States and the interest rates in the country issuing an Underlying Currency may either offset or magnify each other.

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

The currency markets are subject to temporary distortions or other disruptions due to various factors, including the participation of speculators and government regulation and intervention. These circumstances could affect the value of any Underlying Currency, the U.S. dollar and any applicable Exchange Rate and, therefore, the amount, if any, we will pay you at maturity or, if applicable, upon automatic call, and in the market value of the notes.

**An Underlying Currency and/or the U.S. dollar may be replaced by other currencies 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 country or economic region, as applicable, in which the lawful currency is an Underlying Currency or the U.S. dollar (the “**Relevant Country**”) divides into two or more countries or economic regions, as applicable, each with a different lawful currency immediately after such 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 any such Currency Succession Event, you will become subject to the performance of any Successor Currency relative to the U.S. dollar or the performance of any Underlying Currencies relative to the Successor Currency, as applicable. In addition, for notes linked to a Basket, if an Underlying Currency is replaced with a Successor Currency that is the same as another Underlying Currency, the weight of such Underlying Currency in the Basket will be effectively increased. You should read “General Terms of Notes — 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 original issue price of the notes includes each agent's commissions (as shown on the cover page of the relevant terms supplement) paid with respect to the notes and the estimated cost of hedging our obligations under the notes. We may have hedged our obligations under the notes through certain affiliates or unaffiliated counterparties.

If so specified in the relevant terms supplement, each agent's commission will include the projected profit that our affiliates expect to realize in consideration for assuming the risks inherent in hedging our obligations under the notes. If the relevant terms supplement does not specify that such projected profit is included in each agent's commission, the original issue price of the notes will include the reimbursement of certain issuance costs and the estimated cost of hedging our obligations under the notes. Under these circumstances, the estimated cost of hedging will include the projected profit, which will not exceed \$50.00 per \$1,000 principal amount note. 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 could result in a loss. See also "Use of Proceeds" in the accompanying prospectus.

On or prior to the date of the relevant terms supplement, we, through our affiliates or others, 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, Underlying Currencies relative to the U.S. dollar or the equity securities underlying one or more Indices. To accomplish this, we, through our affiliates or others, may take positions in one or more Indices, Underlying Currencies relative to the U.S. dollar, the equity securities underlying one or more Indices or instruments the value of which is derived from one or more Indices, Underlying Currencies relative to the U.S. dollar or the equity 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 increase the Underlying Value on the pricing date or any Initial Averaging Dates, as applicable, and/or decrease the Underlying Value on any other Determination Date, which could adversely affect your payment at maturity or, if applicable, upon automatic call or the amount of interest you may receive over the term of the notes. 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 the Notes Generally — 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, Underlying Currencies relative to the U.S. dollar or the equity 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.

## THE INDICES AND THE UNDERLYING CURRENCIES

A separate underlying supplement or the relevant terms supplement will provide additional information relating to any Index to which the notes are linked.

### **Conflicts of Interest**

See the relevant terms supplement, any relevant underlying supplement and “Risk Factors — Risks Relating to the Notes Generally — 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” for information about economic interests with respect to any Index or Underlying Currency that we or our affiliates make may have that are adverse to your interests.

### **Historical performance of the Indices and the Underlying Currencies**

We will provide historical level information on any Index or Underlying Currency in the relevant terms supplement. You should not take any of those historical levels as an indication of future performance. **Neither we nor any of our affiliates makes any representation to you as to the performance of any Index or Underlying Currency.**

## GENERAL TERMS OF NOTES

### Calculation Agent

J.P. Morgan Securities LLC, one of our affiliates, will act as the calculation agent. The calculation agent will determine, among other things, any Initial Index Level (or Index Strike Level, if applicable), the Starting Basket Level (or Basket Strike Level, if applicable), if applicable, any Ending Index Level, the Ending Basket Level, if applicable, any Index Return, the Basket Return, if applicable, any Adjusted Index Level, Index closing level, Exchange Rate or Basket Closing Level on each Determination Date and the payment, if any, on any Interest Payment Date and at maturity or, if applicable, upon automatic call, as well as whether a Knock-Out Event has occurred, if applicable. In addition, the calculation agent will determine, among other things:

- whether a market disruption event or a currency disruption event has occurred;
- whether an Index has been discontinued, whether the method of calculating an Index has changed in a material respect or whether an Index has been otherwise modified so that it does not, in the opinion of the calculation agent, fairly represent the level of that Index had those changes or modifications not been made and, if applicable, which index to select as a successor index;
- the Exchange Rate, if the Exchange Rate is not available on Reuters or Bloomberg, as applicable; and
- whether a Currency Succession Event has occurred and, if applicable, the Successor Currency.

All determinations made by the calculation agent will be at the sole discretion of the calculation agent and will, in the absence of manifest error, be conclusive for all purposes and binding on you and on us. We may appoint a different calculation agent from time to time after the date of the relevant terms supplement without your consent and without notifying you.

The calculation agent will provide written notice to the trustee at its New York office, on which notice the trustee may conclusively rely, of the amount, if any, to be paid at maturity or upon automatic call, if applicable, and on each Interest Payment Date, if applicable, on or prior to 11:00 a.m., New York City time, on the business day preceding the maturity date, the applicable Call Settlement Date or such Interest Payment Date, as applicable.

All calculations with respect to any Initial Index Level (or Index Strike Level, if applicable), the Starting Basket Level (or Basket Strike Level, if applicable), if applicable, any Ending Index Level, the Ending Basket Level, if applicable, any Index Return, the Basket Return, if applicable, any Adjusted Closing Level, any Index closing level and any Basket Closing Level 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); 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 \$1,000 principal amount 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 paid, if any, on the aggregate principal amount of notes per holder will be rounded to the nearest cent, with one-half cent rounded upward.

## Market Disruption Events

Certain events may prevent the calculation agent from determining any Index closing level on any Determination Date, determining whether a Knock-Out Event has occurred or calculating the amount, if any, that we will pay you at maturity or, if applicable, upon automatic call or on any Interest Payment Date. These events may include disruptions or suspensions of trading on the markets as a whole.

With respect to an Index or any relevant successor index, a “**market disruption event**,” unless otherwise specified in the relevant terms supplement or any relevant 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 (as defined below) 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 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) 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 the 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 the 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 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.

### Currency Disruption Events

Certain events may prevent the calculation agent from determining any Exchange Rate on any Determination Date, determining whether a Knock-Out Event has occurred or calculating the amount, if any, that we will pay you at maturity or, if applicable, upon automatic call or on any Interest Payment Date. These events may include disruptions or suspensions of trading on the markets as a whole.

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

- (a) a Convertibility Event;
- (b) a Deliverability Event (*provided* that a Deliverability Event will not constitute a market disruption event with respect to 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 Chinese renminbi, the Colombian peso, the Indian rupee, the Indonesian rupiah, the Korean won, the Malaysian ringgit, the New Taiwan dollar, the Peruvian nuevo sol, the Philippine peso and the Russian ruble.

Unless otherwise specified in the relevant terms supplement, a **“Convertibility Event”** 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:

- (i) convert an Underlying Currency into U.S. dollars through customary legal channels; or
- (ii) convert an Underlying Currency into U.S. dollars at a rate at least as favorable as the rate for domestic institutions located in the country or economic region the lawful currency of which is the Underlying Currency (the **“Underlying Currency Country”**).

Unless otherwise specified in the relevant terms supplement, a **“Deliverability Event”** means an event that has the effect of preventing, restricting or delaying a market participant from:

- (i) delivering an Underlying Currency from accounts inside the Underlying Currency Country to accounts outside the Underlying Currency Country; or
- (ii) delivering the Underlying Currency between accounts inside the Underlying Currency Country or to a party that is a non-resident of the Underlying Currency Country.

Unless otherwise specified in the relevant terms supplement, a **“Liquidity Event”** means the imposition by an Underlying Currency Country (or any political subdivision or regulatory authority thereof) or the United States (each Underlying Currency Country and the United States, a **“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 a 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, which the calculation agent determines in good faith and in a commercially reasonable manner is likely to materially affect an investment in the applicable Underlying Currency or U.S. dollars.

Unless otherwise specified in the relevant terms supplement, a **“Taxation Event”** means the implementation by the applicable 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 the Relevant Country, as applicable (including, but not limited to, changes in tax laws and/or laws relating to capital markets and corporate ownership), which the calculation agent determines in good faith in a commercially reasonable manner are likely to materially affect an investment in the applicable Underlying Currency or U.S. dollars.

Unless otherwise specified in the relevant terms supplement, a **“Discontinuity Event”** means the pegging or de-pegging of an Underlying Currency to the U.S. dollar or the controlled appreciation or devaluation by the Relevant Country (or any political subdivision or regulatory authority thereof) of an Underlying Currency relative to the U.S. dollar, 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”** means the non-publication or unavailability of the applicable spot rate for an 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.



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

Unless otherwise specified in the relevant terms supplement or any relevant 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 herein as a “**successor index**”), then the Index closing level and Exchange Rate of that Index on any Determination Date or any other relevant date on which the Index 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 and the Exchange Rate for that successor index 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 the holders of the notes.

Unless otherwise specified in the relevant terms supplement or any relevant 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 Index 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 such 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 Index closing level for that Index for that Determination Date or that other relevant date on that date. Unless otherwise specified in the relevant terms supplement or any relevant underlying supplement, the Index 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 New York City on each date on which the Index 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 Index 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).

## Currency Succession Events

A “**Currency Succession Event**” means the occurrence of either of the following events:

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

We refer to the applicable 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:

- (i) 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
- (ii) 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 applicable Underlying Currency relative to the U.S. dollar, as applicable, and any other information that it deems relevant.

We refer to the replacement currency determined as described in clause (i) or (ii) above as a “**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 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 1.4 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 2.0 Deutsche marks for each European Union euro, the new Exchange Rate for that prior day will be equal to 0.7 U.S. dollars per Deutsche mark (or 1.4 multiplied by the ratio of 1 over 2.0). 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 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 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, we will apply all calculations in a manner consistent with the original market convention in accounting for any adjustments resulting from a Currency Succession Event.

## **Events of Default**

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

## **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 call feature, the amount declared due and payable per \$1,000 principal amount note upon any acceleration of the notes will be determined by the calculation agent and will be an amount in cash equal to the amount payable at maturity per \$1,000 principal amount note as described in the relevant terms supplement under the caption “Payment at Maturity,” calculated as if the date of acceleration were (a) the final Determination Date, (b) if applicable, the final day on which a Knock-Out Event may occur and (c) the Final Disrupted Determination Date, which amount will include any accrued and unpaid interest on the notes.

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 call feature, the amount declared due and payable per \$1,000 principal amount note upon any acceleration of the notes will be determined by the calculation agent and will be (1) if (a) the date of acceleration is a day on which the notes may be called and an automatic call would have been triggered on the date of acceleration or (b) the date of acceleration is not a day on which the notes may be called, but an automatic call would have been triggered on the date of acceleration if the date of acceleration were the next succeeding date on which the notes may be called, an amount in cash equal to the amount payable upon an automatic call per \$1,000 principal amount note as described in the relevant terms supplement under the caption “Automatic Call,” calculated as if the date of acceleration were that date on which the notes may be called, or (2) in all other circumstances, an amount in cash equal to the amount payable at maturity per \$1,000 principal amount note as described in the relevant terms supplement under the caption “Payment at Maturity,” calculated as if the date of acceleration were (i) the final Determination Date, (ii) if applicable, the final day on which a Knock-Out Event may occur and (iii) the Final Disrupted Determination Date.

If the Ending Underlying Value 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.

Unless otherwise specified in the relevant terms supplement, upon any acceleration of the notes, if the notes pay interest, any interest will be calculated on the basis of a 360-day year of twelve 30-day months and the actual number of days elapsed from and including the previous Interest Payment Date for which interest was paid.

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

### **Modification**

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

### **Defeasance**

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

### **Listing**

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

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

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

## MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES

The following is a discussion of the material U.S. federal income tax consequences of the ownership and disposition of the notes. It applies to you only if you are an initial holder 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 or if you are a holder 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.

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 of this product supplement, may affect the tax consequences described herein. The effects of any applicable state, local or foreign tax laws are not discussed. **You should consult your tax adviser concerning the application of U.S. federal income and estate tax laws to your particular situation (including the possibility of alternative treatments of the notes), as well as any tax consequences arising under the laws of any state, local or foreign jurisdictions.**

### Tax Treatment of the Notes

The tax consequences of an investment in the notes are unclear. There is no direct legal authority as to the proper U.S. federal income tax treatment of the notes, and we do not intend to request a ruling from the IRS regarding the notes. Unless otherwise indicated in the relevant terms supplement, insofar as we have tax reporting responsibilities with respect to your notes, we intend to treat them as "open transactions" that are not debt instruments for U.S. federal income tax purposes.

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 of the notes described above, we generally expect that counsel will be able to opine that the following are the material tax consequences of owning and disposing of the notes if the treatment of the notes described above is respected, as well as material tax consequences that may apply if it is not respected. The following discussion assumes this treatment is respected, except where otherwise indicated. The relevant terms supplement may indicate 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, or other entity taxable as 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.

*Tax Treatment as Open Transactions That Are Not Debt Instruments.* Under this treatment, you should not recognize taxable income or loss over the term of the notes prior to maturity, other than pursuant to a sale, exchange or redemption. Upon a sale or exchange of a note (including early redemption or redemption 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. 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.

*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 your ownership and disposition of the notes. 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 held your notes. 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, which may include the notes. The notice focuses in particular on whether to require holders of these instruments to accrue income over the term of their investment. It also asks for comments on a number of related topics, including the character of income or loss with respect to these instruments; the relevance of factors such as the nature of the underlying property to which the instruments are linked; and whether these instruments are or should be subject to the "constructive ownership" regime, which very generally can operate to recharacterize certain long-term capital gain as ordinary income and impose an interest charge. While the notice requests comments on appropriate transition rules and effective dates, any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the notes, possibly with retroactive effect.

*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 (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 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.

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

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

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

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

If you are a Non-U.S. Holder of a note and if the treatment of the notes as “open transactions” that are not debt instruments is respected, any income or gain from the note should not be subject to U.S. federal income or withholding tax unless it is 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—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, which may include the notes, should be subject to U.S. withholding tax. Any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the withholding tax consequences of an investment in the notes, possibly with retroactive effect.

If the notes are treated as debt instruments, any income or gain from a note will be exempt from U.S. federal income tax (including withholding tax) if you provide a properly completed IRS Form W-8BEN and these amounts are not effectively connected with your conduct of a U.S. trade or business.

If you are engaged in a U.S. trade or business, and if income or gain from a note is effectively connected with your conduct of that trade or business, although exempt from the withholding tax discussed above, you generally will be taxed in the same manner as a U.S. Holder. You will not be subject to withholding 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 the ownership and disposition of notes, including the possible imposition of a 30% branch profits tax if you are a corporation.

### ***Recent Legislation***

Recent legislation generally imposes a withholding tax of 30% on payments to certain foreign entities (including financial intermediaries) with respect to certain financial instruments issued after March 18, 2012, unless various U.S. information reporting and due diligence requirements (that are in addition to, and potentially significantly more onerous than, the requirement to deliver an IRS Form W-8BEN) have been satisfied. Pursuant to published guidance from Treasury and the IRS, this legislation will apply to payments of interest made after December 31, 2013 and to payments of gross proceeds of the sales of certain financial instruments made after December 31, 2014. Accordingly, if the notes are treated as debt instruments, as described above in “—Tax Consequences to U.S. Holders—Tax Consequences if Treated as Debt Instruments,” these rules will apply to sales or exchanges after December 31, 2014 of notes issued after March 18, 2012.



### ***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 furnished to the IRS.

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

## 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 the Agent received, a commission as set forth in the relevant terms supplement. An Agent will allow a concession to other dealers, or we may pay other fees, in the amount set forth on the cover page of the relevant terms supplement.

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

Our affiliates, including JPMS, may use this product supplement no. 5-I, any related underlying supplement and the accompanying 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 such offer or sale; accordingly, the Agents or a dealer may change the public offering price, concession and discount after the offering has been completed.

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

Each Agent has represented and agreed 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**

We own, directly or indirectly, all of the outstanding equity securities of JPMS. 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 seek offers to buy, the notes only in jurisdictions where offers and sales are permitted. None of the accompanying prospectus supplement and prospectus, this product supplement no. 5-I, any related underlying supplement and the terms supplement (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. 17,811, as amended (the "Argentine Public Offering Law").

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

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

## **The Bahamas**

The notes will not be offered or sold in or into The Bahamas except in circumstances that do not constitute a “public offering” according to the Securities Industry Act, 1999. The offer of the notes, directly or indirectly, in or from within The Bahamas may only be made by an entity or person who is licensed as a Broker Dealer by the Securities Commission of The Bahamas. Persons deemed “resident” in The Bahamas pursuant to the Exchange Control Regulations, 1956 must receive the prior approval of the Central Bank of The Bahamas prior to accepting an offer to purchase any notes.

## **Bermuda**

The Disclosure Documents have not been and will not be registered or filed with any regulatory authority in Bermuda. The offering of the notes pursuant to the Disclosure Documents to persons resident in Bermuda is not prohibited, *provided* we are not thereby carrying on business in Bermuda.

## **Brazil**

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

## **British Virgin Islands**

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

## **Cayman Islands**

The Disclosure Documents and the notes have not been and will not be registered under the laws and regulations of the Cayman Islands, nor has any regulatory authority in the Cayman Islands passed comment upon or approved the accuracy or adequacy of the Disclosure Documents. The notes will not be offered or sold, directly or indirectly, in the Cayman Islands.

## **Chile**

The Agents, we and the notes have not been and will not be registered with the *Superintendencia de Valores y Seguros de Chile* (Chilean Securities and Insurance Commission) pursuant to *Ley No. 18,045 de Mercado de Valores* (the “Chilean Securities Act”), as amended, of the Republic of Chile and, accordingly, the notes will not be offered or sold within Chile or to, or for the account of benefit of, persons in Chile, except in circumstances that will not result in a public offering and/or securities intermediation in Chile within the meaning of the Chilean Securities Act.

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

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

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

## Colombia

The notes have not been and will not be registered in the National Securities Registry of Colombia (*Registro Nacional de Valores y Emisores*) kept by the Colombian Financial Superintendency (*Superintendencia Financiera de Colombia*) or in the Colombian Stock Exchange (*Bolsa de Valores de Colombia*). Therefore, the notes will not be marketed, offered, sold or distributed in Colombia or to Colombian residents in any manner that would be characterized as a public offering, as such is defined in article 1.2.1.1 of Resolution 400, issued on May 22, 1995 by the Securities Superintendency General Commission (*Sala General de la Superintendencia de Valores*), as amended from time to time.

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

Therefore, the notes should not be marketed within Colombian territory or to Colombian residents, by any given means, that may be considered as being addressed to an indeterminate number of persons or to more than ninety-nine (99) persons, including but not limited to:

- (i) any written material or other means of communication, such as subscription lists, bulletins, pamphlets or advertisements;
- (ii) any offer or sale of the notes at offices or branches open to the public;
- (iii) use of any oral or written advertisements, letters, announcements, notices or any other means of communication that may be perceived to be addressed to an indeterminate number of persons for the purpose of marketing and/or offering the notes; or
- (iv) use (a) non-solicited emails or (b) email distribution lists to market the notes.

The Disclosure Documents are for your sole and exclusive use, including any of your shareholders, administrators or employees, as applicable. You acknowledge the Colombian laws and regulations (specifically foreign exchange and tax regulations) applicable to any transaction or investment consummated pursuant thereto and represent that you are the sole liable party for full compliance with those laws and regulations.

## **El Salvador**

The notes may not be offered to the general public in El Salvador, and according to Article 2 of the *Ley de Mercado de Valores* (Securities Market Law) of the Republic of El Salvador, Legislative Decree number 809 dated 16 February 1994, published on the *Diario Oficial* (Official Gazette) number 73-BIS, Number 323, dated 21 April 1994, and in compliance with the aforementioned regulation, each Agent has represented and agreed that it will not make an invitation for subscription or purchase of the notes to indeterminate individuals, nor will it make known any Disclosure Document 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 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 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, 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 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:

- (i) at any time to any legal entity that is a qualified investor as defined in the Prospectus Directive;
- (ii) 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
- (iii) 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.

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

## Hong Kong

Each Agent has represented and agreed that:

- (i) it 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) 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 Ordinance (Cap. 32) of Hong Kong or that do not constitute an offer to the public within the meaning of that Ordinance; and
- (ii) 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.

## Jersey

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

## Mexico

The notes have not been and will not be registered with the Mexican National Registry of Securities maintained by the Mexican National Banking and Securities Commission nor with the Mexican Stock Exchange and therefore, may not be offered or sold publicly in the United Mexican States. The Disclosure Documents may not be publicly distributed in the United Mexican States. The notes may be privately placed in Mexico among institutional and qualified investors, pursuant to the private placement exemption set forth in Article 8 of the Mexican Securities Market Law.

## The Netherlands

Each Agent has represented and agreed that with effect from and including January 1, 2012, it will not make an offer of notes that are the subject of the offering contemplated by the Disclosure Documents to the public in The Netherlands in reliance on Article 3(2) of the Prospectus Directive if and to the extent article 5:20(5) of the Dutch Financial Supervision Act (Wet op het financieel toezicht, the “DFSA”) will be applied, unless such offer is made exclusively to qualified investors in The Netherlands as defined in the Prospectus Directive, *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. For the purposes of this provision, the expressions (i) an “offer of 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.”



## **Panama**

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

## **Peru**

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

## **Singapore**

None of the Disclosure Documents has been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, the Disclosure Documents and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the notes may not be circulated or distributed, nor may the notes be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the “SFA”), (ii) to a relevant person pursuant to Section 275(1) of the SFA, or to any person pursuant to Section 275(1A) of the SFA, 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: (1) 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; (2) where no consideration is or will be given for the transfer; (3) where the transfer is by operation of law; or (4) as specified in Section 276(7) of the SFA.

## **Switzerland**

The Disclosure Documents are not intended to constitute an offer or solicitation to purchase or invest in the notes described therein. The notes may not be publicly offered, sold or advertised, directly or indirectly, in, into or from Switzerland and will not be listed on the SIX Swiss Exchange or on any other exchange or regulated trading facility in Switzerland. Neither the Disclosure Documents nor any other offering or marketing material relating to the notes constitutes a prospectus as such term is understood pursuant to article 652a or article 1156 of the Swiss Code of Obligations or the Swiss Collective Investment Scheme Act, and neither the Disclosure Documents nor any other offering or marketing material relating to the notes may be publicly distributed or otherwise made publicly available in Switzerland.

Neither the Disclosure Documents nor any other offering or marketing material relating to us, the offering or the notes have been or will be filed with or approved by any Swiss regulatory authority. The notes are not subject to the supervision by any Swiss regulatory authority, *e.g.*, the Swiss Financial Markets Supervisory Authority (FINMA), and investors in the notes will not benefit from protection or supervision by any such authority.

## **United Kingdom**

Each Agent has represented and agreed that:

- (a) in relation to any notes that have a maturity of less than one year, (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 where the issue of the notes would otherwise constitute a contravention of Section 19 of the Financial Services and Markets Act 2000 (the "FSMA")) by the Issuer;
- (b) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of the notes in circumstances in which Section 21(1) of the FSMA does not apply to us; and
- (c) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the notes in, from or otherwise involving the United Kingdom.

## **Uruguay**

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

## **Venezuela**

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

## BENEFIT PLAN INVESTOR CONSIDERATIONS

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

Section 406 of ERISA and Section 4975 of the Internal Revenue Code of 1986, as amended, (the "Code") prohibit ERISA Plans, as well as plans (including individual retirement accounts and Keogh plans) subject to Section 4975 of the Code (together with ERISA Plans, "Plans"), from engaging in certain transactions involving the "plan assets" with persons who are "parties in interest" under ERISA or "disqualified persons" under 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.