Product Supplement No. EQUITY MLI-1 Registration Statement Nos. 333-270004 and 333-270004-01 To the prospectus dated April 13, 2023, Rule 424(b)(2) the prospectus supplement dated April 13, 2023 and Annex A to the accompanying prospectus addendum dated May 15, 2024.

August 6, 2024

#### JPMorgan Chase Financial Company LLC

## Notes Linked to One or More Equity Indices, Exchange Traded Funds or Securities Fully and Unconditionally Guaranteed by JPMorgan Chase & Co.

- The notes are unsecured and unsubordinated obligations issued by JPMorgan Chase Financial Company LLC ("JPMorgan Financial" or the "Issuer"), a direct wholly owned finance subsidiary of JPMorgan Chase & Co. (the "Guarantor"). Any payment due on the notes is fully and unconditionally guaranteed by the Guarantor. Any payments due on the notes, including any repayment of principal, will be subject to the credit risk of JPMorgan Financial, as issuer of the notes, and the credit risk of JPMorgan Chase & Co., as guarantor of the notes.
- The return on the notes will be based on the performance of an underlying "Market Measure," which will be an equity index (an "Index"); an exchange traded fund (an "Underlying Fund"); the equity securities or American Depositary Receipts ("ADRs") of a company other than us, the agents, or our respective affiliates (an "Underlying Stock"); a basket of the foregoing; the worst-performing of any of the foregoing; or the best-performing of any of the foregoing.
- For each offering of the notes, we will provide you with a pricing supplement (which we refer to as a "**term sheet**") that will describe the specific terms of that offering, including the specific Market Measure, maturity date and certain risk factors. Further, if specified in the applicable term sheet, a separate supplement, which we refer to as the applicable underlying supplement, will describe the specified Market Measure. The applicable term sheet will identify, if applicable, any additions or changes to the terms specified in this product supplement.
- The notes may or may not pay coupons on either a contingent or fixed basis. Depending on the terms of the notes, the amount payable at maturity per unit (the "**Redemption Amount**") may be less than, equal to or greater than the principal amount. The notes may or may not be callable or subject to early redemption prior to maturity.
- This product supplement describes the general terms of the notes, the risk factors to consider before investing, the general manner in which the notes may be offered and sold, and other relevant information.
- The notes will be issued in denominations of whole units. Unless otherwise set forth in the applicable term sheet, each unit will have a principal amount of \$10.00. The applicable term sheet may also set forth a minimum number of units that you must purchase.
- Unless otherwise specified in the applicable term sheet, the notes will not be listed on a securities exchange or quotation system.
- J.P. Morgan Securities LLC ("**JPMS**") will act as our selling agent to offer the notes and will act in a principal capacity in such role.

The notes are unsecured obligations of JPMorgan Financial and the related guarantee of the notes is an unsecured obligation of JPMorgan Chase & Co. The notes and the related guarantee are not savings accounts, deposits, or other obligations of a bank. The notes are not guaranteed by JPMorgan Chase Bank, N.A. or any other bank, and are not insured by the Federal Deposit Insurance Corporation (the "FDIC") or any other governmental agency and may involve investment risks, including possible loss of principal. Potential purchasers of the notes should consider the information in "Risk Factors" beginning on page PS-6 of this product supplement, page S-2 of the accompanying prospectus supplement and Annex A to the accompanying prospectus addendum. You may lose all or a significant portion of your investment in the notes.

Neither the Securities and Exchange Commission (the "SEC") nor any state securities commission has approved or

disapproved of the notes or passed upon the adequacy or accuracy of the relevant term sheet, this product supplement, the applicable underlying supplement, if any, or the accompanying prospectus supplement, prospectus or prospectus addendum. Any representation to the contrary is a criminal offense.

J.P. Morgan Securities LLC

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

The notes are not appropriate for all investors and involve a number of risks and important legal and tax consequences that should be discussed with your professional advisers. You should be aware that the regulations of Financial Industry Regulatory Authority, Inc., or "FINRA," and the laws of certain jurisdictions (including regulations and laws that require brokers to ensure that investments are suitable for their customers) may limit the availability of the notes. The applicable term sheet, this product supplement, any applicable underlying supplement and the accompanying prospectus supplement, Annex A to the accompanying prospectus supplement and prospectus do not constitute an offer to sell or a solicitation of an offer to buy the notes under any circumstances in which that offer or solicitation is unlawful.

#### **SUMMARY**

The information in this "Summary" section is qualified in its entirety by the more detailed explanation set forth elsewhere in this product supplement, any applicable underlying supplement and the accompanying prospectus supplement, Annex A to the accompanying prospectus supplement and prospectus, as well as the applicable term sheet. None of us, the Guarantor or JPMS have authorized any other person to provide you with any information different from the information set forth in these documents. If anyone provides you with different or inconsistent information about the notes, you should not rely on it.

## **Key Terms:**

#### General:

The notes are unsecured and unsubordinated obligations issued by JPMorgan Financial, and are not guaranteed or insured by the FDIC or secured by collateral. The notes are fully and unconditionally guaranteed by JPMorgan Chase & Co. The notes will rank equally in right of payment with all other unsecured and unsubordinated obligations of JPMorgan Financial from time to time outstanding, except obligations that are subject to any priorities or preferences by law. The guarantee of the notes will rank equally in right of payment with all other unsecured and unsubordinated obligations of JPMorgan Chase & Co., except obligations that are subject to any priorities or preferences by law, and senior in right of payment to its subordinated obligations. Any payments due on the notes, including any repayment of principal, are subject to the credit risk of JPMorgan Financial, as issuer of the notes, and the credit risk of JPMorgan Chase & Co., as guarantor of the notes.

The return on the notes will be based on the performance of a Market Measure. We may issue notes in which the payment(s) increase if the value of the Market Measure increases ("Bullish Notes") or we may also issue notes in which the payment(s) increase if the value of the Market Measure decreases ("Bearish Notes").

Each issue of the notes will mature on the date set forth in the applicable term sheet. The notes may or may not pay coupons on either a contingent or fixed basis. The notes may or may not be callable or subject to early redemption prior to maturity.

## Market Measure:

The Market Measure may consist of one or more of the following:

- U.S. broad-based Indices;
- U.S. sector or style-based Indices;
- non-U.S. or global Indices;
- Underlying Funds;
- The Underlying Stock of a company other than us, the agents or our respective affiliates (the "**Underlying Company**") represented either by a class of equity securities registered under the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), or by ADRs. ADRs are securities issued through depositary arrangements and registered under the Exchange Act that represent non-U.S. equity securities. If an Underlying Stock is an ADR, references to the "Underlying Company" of that Underlying Stock refer to the issuer of the shares underlying the ADR; or
- any combination of the above.

The Market Measure may consist of a group, or "**Basket**," of the foregoing. We refer to each Index, Underlying Fund or Underlying Stock included in any Basket as a

"Basket Component." If the Market Measure to which your notes are linked is a Basket, the Basket Components will be set forth in the applicable term sheet.

The Market Measure may also consist of the "Worst-Performing" (to be defined in the applicable term sheet) of two or more of any of the following types of components: Indices, Underlying Funds, Underlying Stocks and Baskets (the "Worst-Performing Market Measure"). If your notes are linked to the Worst-Performing Market Measure, references in this product supplement to "Market Measure" should be read as references to the applicable Worst-Performing Market Measure.

The Market Measure may also consist of the "Best-Performing" (to be defined in the applicable term sheet) of two or more of any of the following types of components: Indices, Underlying Funds, Underlying Stocks and Baskets (the "Best-Performing Market Measure"). If your notes are linked to the Best-Performing Market Measure, references in this product supplement to "Market Measure" should be read as references to the applicable Best-Performing Market Measure.

## Payment(s) on the Notes:

The applicable term sheet will set forth the manner in which payment(s) on the notes, including any coupon payment(s) or any payment at maturity or upon early redemption, will be determined. See "Description of the Notes."

The Issuer may accelerate your notes and adjust the amount of their final payment if a change-in-law event occurs in the case of notes linked in whole or in part to a Non-U.S. Index (as defined below). See "Description of the Notes — Certain Terms of Notes — Consequences of a Change-in-Law Event" for additional information.

## Principal at Risk:

Depending on the terms of the notes there may be no guaranteed return of principal at maturity and you may lose all or a significant portion of your principal amount. Further, if you are able to sell your notes prior to maturity or early redemption, the price you may receive may be less than the price that you paid for your notes.

# Calculation Agent:

The calculation agent will make all determinations associated with the notes. Unless otherwise set forth in the applicable term sheet, JPMS or one of its affiliates will act as the calculation agent for the notes. See "Description of the Notes—Role of the Calculation Agent."

### Listing:

Unless otherwise specified in the applicable term sheet, the notes will not be listed on a securities exchange or quotation system.

This product supplement relates only to the notes and does not relate to any Index, Underlying Fund or Underlying Stock that comprises the Market Measure described in any applicable term sheet. You should read carefully the entire prospectus, prospectus supplement, Annex A to the accompanying prospectus supplement, any applicable underlying supplement and this product supplement, together with the applicable term sheet, to understand fully the terms of your notes, as well as the tax and other considerations important to you in making a decision about whether to invest in any notes. In particular, you should review carefully the section in this product supplement entitled "Risk Factors," which highlights a number of risks of an investment in the notes, to determine whether an investment in the notes is appropriate for you. Additional risk factors may be set forth in the applicable term sheet. If information in this product supplement is inconsistent with the accompanying prospectus or prospectus supplement, Annex A to the accompanying prospectus supplement or any applicable underlying supplement, this product supplement will supersede those documents. However, if information in any term sheet is inconsistent with this product supplement, that term sheet will supersede this product supplement.

None of us, the Guarantor, any selling agent or any dealer participating in the offering is making an offer to sell the notes in any jurisdiction where the offer or sale is not permitted.

Certain terms used and not defined in this product supplement have the meanings ascribed to them in the accompanying prospectus supplement, Annex A to the accompanying prospectus supplement or prospectus. Unless otherwise indicated or unless the context requires otherwise, all references in this product supplement to "we," "us," "our," or similar references are to JPMorgan Financial, and not to JPMorgan Chase & Co. (or any other affiliate of ours).

You are urged to consult with your own attorneys and business and tax advisors before making a decision to purchase any notes.

#### **RISK FACTORS**

Your investment in the notes is subject to investment risks, many of which differ from those of a conventional debt security. Your decision to purchase the notes should be made only after carefully considering the risks, including those discussed below, together with the risk information contained in the applicable term sheet, any applicable underlying supplement the accompanying prospectus supplement, Annex A to the accompanying prospectus supplement and prospectus, in light of your particular circumstances. The notes are not an appropriate investment for you if you are not knowledgeable about the material terms of the notes or investments in equity or equity-based securities in general.

#### Structure-related Risks

Your investment may result in a loss; there may be no guaranteed return of principal. To the extent set forth in the applicable term sheet, there may not be a fixed principal repayment amount on the notes at maturity. The return on the notes will be based on the performance of a Market Measure and therefore you may lose all or a significant portion of your investment at maturity if the value of the Market Measure decreases over the term of the notes (or in the case of Bearish Notes, increases). You should read the applicable term sheet to determine the extent to which your investment in the notes may result in the loss of your investment due to changes in the value of a Market Measure.

The payment(s) on the notes may be limited to a maximum return and may be less than a comparable investment directly in the Market Measure or any of its underlying assets. If so specified in the applicable term sheet, the notes may have a fixed maximum return, regardless of the performance of the Market Measure. In such a case, your return on the notes may be less than the return that you could have realized if you invested directly in the Market Measure (or any securities or other assets represented by the Market Measure), and you will not receive the full benefit of any appreciation (or in the case of Bearish Notes, decreases) in the value of the Market Measure beyond that maximum return.

In addition, unless otherwise set forth in the applicable term sheet, the value of the Market Measure as of any date will not reflect the value of dividends paid, or distributions made, on the Market Measure or any of its underlying assets, or any other rights associated with the Market Measure or those underlying assets. Thus, any return on the notes will not reflect the return you would realize if you actually owned the Market Measure or any of its underlying assets.

Additionally, the Market Measure may consist of an Index or Underlying Fund that includes components traded in a non-U.S. currency that, for purposes of calculating the level of such Index or Underlying Fund, are not converted into U.S. dollars. If the value of that currency strengthens against the U.S. dollar during the term of your notes, you may not obtain the benefit of that increase, which you would have received if you had owned shares or units of the Market Measure or those components, as applicable.

You may not receive any coupons on the notes and any return on the notes may be less than the yield on a conventional debt security of comparable maturity. The applicable term sheet will state whether or not your notes may pay a coupon. If your notes are coupon bearing, they may only pay contingent coupons or pay coupons at a rate that is less than the rate we would pay on a conventional debt security of comparable maturity. Any return that you receive on the notes may be less than the return you would earn if you purchased a conventional debt security with the same maturity date. To the extent that coupon payments on the notes are contingent upon the performance of a Market Measure, the greater the expected volatility of the Market Measure at the time the terms of your notes are set, the greater the expectation is at that time that you may not receive the contingent coupon

payments. As a result, your investment in the notes may not reflect the full opportunity cost to you when you consider factors, such as inflation, that affect the time value of money.

Your notes may be called prior to maturity. If so specified in the applicable term sheet, your notes may be called at our option prior to maturity, or may be automatically called upon the occurrence of certain specified events prior to maturity. If the notes are called, the term of the notes will be short. In such a case, your ability to receive any coupons over the term of the notes, if applicable, will be limited. No further payment(s) will be made on the notes after they have been called. 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 called prior to maturity.

Payments on the notes will not reflect changes in the value of the Market Measure other than on the Observation Dates or during the Maturity Valuation Period, as applicable. Unless otherwise specified in the applicable term sheet, changes in the value of the Market Measure during the term of the notes other than on the Observation Dates or during the Maturity Valuation Period, as applicable, will not be reflected in the determinations as to payments on the notes. To make these determinations, the calculation agent will refer only to the value of the Market Measure on the Observation Dates or the calculation days during the Maturity Valuation Period, as applicable. As a result, even if the value of the Market Measure has increased (or in the case of Bearish Notes, decreased) at certain times during the term of the notes, you may not receive any positive return on the notes or may lose some or all of your investment if the value of the Market Measure subsequently declines (or in the case of Bearish Notes, increases) on the Observation Dates or the calculation days during the Maturity Valuation Period. In addition, if the Maturity Valuation Period for the notes consists of two or more scheduled calculation days, the Redemption Amount may be less than it would have been had the Redemption Amount been calculated based on the value of the Market Measure on any particular calculation day.

More favorable economic terms are generally associated with a Market Measure with greater expected volatility and therefore can indicate a greater risk of loss.

"Volatility" refers to the frequency and magnitude of changes in the value of the Market Measure. The greater the expected volatility with respect to the Market Measure on the pricing date, the higher the expectation as of the pricing date that the value of the Market Measure could decrease over the term of the notes (or in the case of Bearish Notes, increase), indicating a higher expected risk of loss on the notes. This greater expected risk will generally be reflected in a higher coupon rate than the yield payable on our conventional debt securities with a similar maturity or in more favorable terms than for similar securities linked to the performance of a Market Measure with a lower expected volatility as of the pricing date. You should therefore understand that a relatively higher coupon rate may or increased economic terms may indicate an increased risk of loss. The volatility of the Market Measure can change significantly over the term of the notes. The value of the Market Measure for your notes could fall sharply, which could adversely affect the return on the notes.

If your notes are linked to a Basket, changes in the values of one or more of the Basket Components may be offset by changes in the values of one or more of the other Basket Components. The Market Measure of your notes may include a Basket. In such a case, changes in the values of one or more of the Basket Components may not correlate with changes in the values of one or more of the other Basket Components. The values of one or more Basket Components may increase, while the values of one or more of the other Basket Components may decrease or not increase as much. Therefore, in calculating the value of the Basket at any time, increases in the value of one Basket Component may be moderated or wholly offset by decreases or lesser increases in the values of one or more of the other Basket

Components. If the weightings of the applicable Basket Components are not equal, adverse changes in the values of the Basket Components that are more heavily weighted could have a greater impact upon the value of the Basket and, consequently, the return on your notes. In each case, the reverse may be true as to Bearish Notes.

If your notes are linked to the Worst-Performing of two or more Indices, Underlying Funds, Underlying Stocks or Baskets, the notes will be subject to the risks of each Index, Underlying Fund, Underlying Stock or Basket, not a basket composed of the foregoing, and will be negatively affected if the value of any Index, Underlying Fund, Underlying Stock or Basket decreases, even if the value of any other Index, Underlying Fund, Underlying Stock or Basket does not. If your notes are linked to the Worst-Performing of two or more Indices, Underlying Funds, Underlying Stocks or Baskets (the "Worst-**Performing Notes**"), you will be subject to the risks associated with each Index, Underlying Fund, Underlying Stock or Basket. Worst-Performing Notes will not be linked to an overall basket composed of the Indices, Underlying Funds, Underlying Stocks or Baskets, where the depreciation in the value of one Index, Underlying Fund, Underlying Stock or Basket could be offset to some extent by the appreciation in the value of the other Index, Underlying Fund, Underlying Stock or Basket. In this case, the individual performance of each Index, Underlying Fund, Underlying Stock or Basket would not be combined, and the depreciation in the value of one Index, Underlying Fund, Underlying Stock or Basket would not be offset by any appreciation in the value of the other Index, Underlying Fund, Underlying Stock or Basket. For example, you could lose some or all of your investment in the notes if the value of one Index, Underlying Fund, Underlying Stock or Basket has declined over the term of the notes, even if the value of each other Index, Underlying Fund, Underlying Stock or Basket has increased over the term of the notes. The same analysis is true with respect to all determinations to be made for the Worst-Performing Notes. In each case, the reverse may be true as to Bearish Notes.

If your notes are Worst-Performing Notes, you will not benefit in any way from the performance of the better performing Index, Underlying Fund, Underlying Stock or Basket. If your notes are Worst-Performing Notes, the return on the notes will depend solely on the performance of the Worst-Performing Index, Underlying Fund, Underlying Stock or Basket, and you will not benefit in any way from the performance of the better performing Index, Underlying Fund, Underlying Stock or Basket. The notes may underperform a similar investment in each of the Indices, Underlying Funds, Underlying Stock or Baskets or a similar alternative investment linked to a basket composed of the Indices, Underlying Funds, Underlying Stock or Baskets. In either such case, the performance of the better performing Index, Underlying Fund, Underlying Stock or Basket, resulting in a potentially better return than what you would receive on the notes.

If your notes are Worst-Performing Notes, it is more likely that you will not receive a positive return on the notes and will lose some or all of your investment. With two Indices, Underlying Funds, Underlying Stocks or Baskets, it is more likely that the value of one Index, Underlying Fund, Underlying Stock or Basket will decline during the term of the notes than if the notes were linked to only one of the Indices, Underlying Funds, Underlying Stock or Baskets, in which case you may not receive a positive return on the notes and may lose some or all of your investment.

If your notes are Worst-Performing Notes, you will be subject to risks relating to the relationship between the Indices, Underlying Funds, Underlying Stocks or Baskets. By investing in Worst-Performing Notes, you assume the risk that the Indices, Underlying Funds, Underlying Stocks or Baskets may not exhibit a positive correlation (i.e., a tendency for their values to increase or decrease at similar times and by similar magnitudes). The less

correlated the Indices, Underlying Funds, Underlying Stocks or Baskets, the more likely it is that the value of one Index, Underlying Fund, Underlying Stock or Basket will decline during the term of the notes, in which case you may not receive a positive return on the notes and may lose some or all of your investment. It is impossible to predict what the relationship between the Indices, Underlying Funds, Underlying Stocks or Baskets will be over the term of the notes.

If your notes are linked to the Best-Performing of two or more Indices, Underlying Funds, Underlying Stocks or Baskets, the Best-Performing Index, Underlying Fund, Underlying Stock or Basket may have poor performance and may not significantly outperform the lesser-performing Indices, Underlying Funds, Underlying Stocks and/or Baskets, as applicable. Even if your notes are linked to the Best-Performing of two or more Indices, Underlying Funds, Underlying Stocks or Baskets (the "Best-Performing Notes"), the Best-Performing Market Measure may nevertheless have poor performance. Each Index, Underlying Fund, Underlying Stock or Basket included in the Market Measure may experience significant declines, and the fact that the Notes are Best-Performing Notes does not mean that you will receive any positive return or not suffer a loss on the Notes. Moreover, the Best-Performing Market Measure may not significantly outperform the lesser-performing Indices, Underlying Funds, Underlying Stocks and/or Baskets, as applicable. There is no assurance that having exposure to the Best-Performing Market Measure will provide a meaningful benefit relative to having exposure to only one Index, Underlying Fund, Underlying Stock or Basket, as applicable.

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

As a finance subsidiary, JPMorgan Financial has no independent operations and has limited assets. As a finance subsidiary of JPMorgan Chase & Co., JPMorgan Financial has no independent operations beyond the issuance and administration of its securities and the collection of intercompany obligations. Aside from the initial capital contribution from JPMorgan Chase & Co., substantially all of the assets of JPMorgan Financial relate to obligations of JPMorgan Chase & Co. to make payments under loans made by JPMorgan Financial to JPMorgan Chase & Co. or under other intercompany agreements with JPMorgan Financial. As a result, JPMorgan Financial is dependent upon payments from JPMorgan Chase & Co. to meet its obligations under the notes. JPMorgan Financial is not a key operating subsidiary of JPMorgan Chase & Co. and in a bankruptcy or resolution of JPMorgan Chase & Co. JPMorgan Financial is not expected to have sufficient resources to meet its obligations in respect of the notes as they come due. If JPMorgan Chase & Co. does not make payments to JPMorgan Financial and JPMorgan Financial is unable to make payments on the notes, you may have to seek payment under the related guarantee by JPMorgan Chase & Co., and that guarantee will rank pari passu with all other unsecured and unsubordinated obligations of JPMorgan Chase & Co. For more information, see the accompanying prospectus addendum.

Notes issued by JPMorgan Financial will not have the benefit of any cross-default or cross-acceleration with other indebtedness of JPMorgan Financial or the Guarantor; a covenant default or bankruptcy, insolvency or reorganization event with respect to the Guarantor does not constitute an event of default with respect to notes issued by JPMorgan Financial. Unless otherwise stated in the applicable term sheet, the notes issued by JPMorgan Financial will not have the benefit of any cross-default or cross-acceleration with other indebtedness of JPMorgan Financial or the Guarantor. In addition, a covenant default by the Guarantor, or an event of bankruptcy, insolvency or reorganization of the Guarantor, does not constitute an event of default with respect to any notes issued by JPMorgan Financial.

### Valuation- and Market-related Risks

The estimated value of the notes will be lower than the original issue price (price to public) of the notes. The estimated value of the notes is only an estimate determined by reference to several factors. Unless otherwise specified in the relevant term sheet, the original issue price of the notes will exceed the estimated value of the notes because costs associated with selling, structuring and hedging the notes are included in the original issue price of the notes. These costs include the selling commissions, referral fees, if any, structuring fees, if any, the projected profits, if any, that the Issuer's affiliates expect to realize for assuming risks inherent in hedging its obligations under the notes and the estimated cost of hedging its obligations under the notes. See "Estimated Value and Secondary Market Prices of the Notes—The Estimated Value of the Notes" in this product supplement.

The estimated value of the notes will not represent future values of the notes and may differ from others' estimates. The estimated value of the notes will be determined by reference to the internal pricing models of one or more of the Issuer's affiliates when the terms of the notes are set. This estimated value of the notes will be based on market conditions and other relevant factors existing at that time and assumptions about market parameters, which can include volatility, correlation, dividend rates, interest rates and other factors. Different pricing models and assumptions could provide valuations for notes that are greater than or less than the estimated value of the notes. In addition, market conditions and other relevant factors may change after the estimated value of the notes has been determined, and any assumptions may prove to be incorrect. The value of the notes could change significantly after the estimated value of the notes has been determined based on, among other things, changes in market conditions, the Issuer's or the Guarantor's creditworthiness, interest rate movements and other relevant factors, which may impact the price, if any, at which JPMS would be willing to buy notes from you in secondary market transactions. See "Estimated Value and Secondary Market Prices of the Notes—The Estimated Value of the Notes" in this product supplement.

The estimated value of the notes will be derived by reference to an internal funding rate and will not be determined by reference to credit spreads for JPMorgan Chase & Co.'s conventional fixed income instruments. The internal funding rate used in the determination of the estimated value of the notes will generally represent a discount from the credit spreads for JPMorgan Chase & Co.'s conventional fixed income instruments. This internal funding rate may differ from the market-implied funding rate for vanilla fixed income instruments of a similar maturity issued by JPMorgan Chase & Co. or its affiliates. Any difference may be based on, among other things, the Issuer's and its affiliates' view of the funding value of the notes as well as the higher issuance, operational and ongoing liability management costs of the notes in comparison to those costs for the conventional fixed income instruments of JPMorgan Chase & Co. This internal funding rate is based on certain market inputs and assumptions, which may prove to be incorrect, and is intended to approximate the prevailing market replacement funding rate for the notes. If the interest rate implied by JPMorgan Chase & Co.'s conventional fixed income credit spreads were used, the Issuer would

expect the economic terms of the notes to be more favorable to you. In addition, the estimated value of the notes might be lower if it were based on the interest rate implied by JPMorgan Chase & Co.'s conventional fixed income credit spreads. Consequently, the use of an internal funding rate and any potential changes to that rate may have an adverse effect on the terms of the notes and any secondary market prices of the notes. See "Estimated Value and Secondary Market Prices of the Notes—The Estimated Value of the Notes" in this product supplement.

The value of the notes as published by JPMS (and which may be reflected on customer account statements) may be higher than the then-current estimated value of the notes for a limited time period. The relevant term sheet may specify that the Issuer will generally expect that some of the costs included in the original issue price of the notes will be partially paid back to you in connection with any repurchases of your notes by JPMS in an amount that will decline to zero over an initial predetermined period. These costs can include selling commissions and structuring fees, if any, projected hedging profits, if any, and, in some circumstances, estimated hedging costs and the Issuer's internal secondary market funding rates for structured debt issuances. See "Estimated Value and Secondary Market Prices of the Notes—Secondary Market Prices of the Notes" in this product supplement. Accordingly, the estimated value of your notes during this initial period may be lower than the value of the notes as published by JPMS (and which may be shown on your customer account statements).

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

**Secondary trading may be limited.** Unless otherwise specified in the relevant term sheet, 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 the Issuer does 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 marketmaker, it is likely that there would be little or no secondary market for the notes.

The notes are not designed to be short-term trading instruments, and if you attempt to sell the notes prior to maturity, their market value, if any, will be affected by various factors that interrelate in complex ways, and their market value may be less than the principal amount. The notes are not designed to be short-term trading instruments. Unless otherwise set forth in the applicable term sheet, you have no right to have your notes redeemed prior to maturity. If you wish to liquidate your investment in the notes prior to maturity, your only option would be to sell them in the secondary market. At that time, there may be an illiquid market for your notes or no market at all. Even if you were able to sell your notes, it

may be at a substantial discount from the principal amount, and there are many factors outside of our control that may adversely affect their market value, aside from the customary bid-ask spreads for similar sized trades and the Issuer's internal secondary market funding rates for structured debt issuances, some of which, but not all, are stated below. The impact of any one factor may be offset or magnified by the effect of another factor. These factors may interact with each other in complex and unpredictable ways. The following paragraphs describe a specific factor's expected impact on the market value of the notes, assuming all other conditions remain constant.

- Our and the Guarantor's Financial Condition and Creditworthiness. Our and the Guarantor's perceived creditworthiness, including any increases in our respective credit spreads and any actual or anticipated decreases in our respective credit ratings, may adversely affect the market value of the notes. In general, we expect the longer the amount of time that remains until maturity, the more significant the impact will be on the value of the notes. However, a decrease in our or the Guarantor's credit spreads or an improvement in our or the Guarantor's credit ratings will not necessarily increase the market value of the notes.
- Value of the Market Measure. We anticipate that the market value of the notes prior to maturity or a call generally will depend to a significant extent on the value of the Market Measure. In general, it is expected that the market value of the notes will decrease as the value of the Market Measure decreases. The reverse will be true as to Bearish Notes. However, as the value of the Market Measure increases or decreases, the market value of the notes may not increase or decrease at the same rate. If you sell your notes when the value of the Market Measure is less than, or not sufficiently above (or in the case of Bearish Notes, below) its value on the pricing date, then you may receive less than the principal amount of your notes. Specifically, the market value of the notes may be affected by the occurrence of certain corporate events to the shares of an Underlying Stock that may or may not require an adjustment to the applicable Price Multiplier or, in the case of an Underlying Stock that is a non-U.S. equity security or an ADS, the selection of a Successor Underlying Stock (or Successor Foreign Underlying Stock).
- Volatility of the Market Measure. Volatility is the term used to describe the size and frequency of market fluctuations. The volatility of the Market Measure during the term of the notes may vary. In addition, an unsettled international environment and related uncertainties may result in greater market volatility, which may continue over the term of the notes. Increases or decreases in the volatility of the Market Measure may have an adverse impact on the market value of the notes. Even if the value of the Market Measure increases after the applicable pricing date, if you are able to sell your notes before their maturity date, you may receive substantially less than the amount that would be payable upon a call or at maturity based on that value because of the anticipation that the value of the Market Measure will continue to fluctuate prior to the maturity date of the notes.
- Economic and Other Conditions Generally. The general economic conditions of the capital markets in the United States, as well as geopolitical conditions and other financial, political, public health, regulatory and judicial events, natural disasters, acts of terrorism or war, and related uncertainties that affect stock or commodity markets generally, may adversely affect the value of the Market Measure and the market value of the notes. If the Market Measure or a Basket Component, as applicable, includes one or more Underlying Funds or Indices that have returns that are calculated based upon securities or other assets traded in one or more non-U.S. markets (a "non-U.S. Market Measure"), or if an Underlying Stock is an ADR, the value of your notes may also be adversely affected by similar events in the markets of the relevant foreign countries.

- Interest Rates. We expect that changes in interest rates will affect the market value of the notes. In general, if U.S. interest rates increase, we expect that the market value of the notes will decrease. In general, we expect that the longer the amount of time that remains until maturity, the more significant the impact of these changes will be on the value of the notes. The level of interest rates also may affect the U.S. economy and any applicable market outside of the United States, and in turn, the value of the Market Measure, and, thus, the market value of the notes may be adversely affected. In the case of non-U.S. Market Measures or any Underlying Stock that is an ADR, the level of interest rates in the relevant foreign countries may also affect their economies and in turn the value of the non-U.S. Market Measure or ADR, and, thus, the market value of the notes may be adversely affected.
- **Dividend Yields.** We expect that changes in the dividend rate on an Underlying Stock or on the equity securities underlying an Index or an Underlying Fund will affect the market value of the notes (while not paid to holders of the notes, dividend payments on an Underlying Stock or on any equity securities underlying an Index or an Underlying Fund may influence the value of the Market Measure(s) and the market value of options on the Market Measure(s) and therefore affect the market value of the notes). In general, if the cumulative dividend yields on the securities included in the Market Measure or a Basket Component or any Underlying Stock, as applicable, increase, we anticipate that the market value of the notes will decrease.
- Exchange Rate Movements and Volatility. If the Market Measure of your notes or any Basket Component, as applicable, consists of or includes any non-U.S. Market Measures, changes in, and the volatility of, the exchange rates between the U.S. dollar and the relevant non-U.S. currency or currencies could have an adverse impact on the value of your notes, and the payments on the notes may depend in part on the relevant exchange rates. In addition, the correlation between the relevant exchange rate and any applicable non-U.S. Market Measure reflects the extent to which a percentage change in that exchange rate corresponds to a percentage change in the applicable non-U.S. Market Measure, and changes in these correlations may have an adverse impact on the value of your notes.
- **Time to Maturity.** There may be a disparity between the market value of the notes prior to maturity and their value at maturity. This disparity is often called a time "value," "premium," or "discount," and reflects expectations concerning the value of the Market Measure prior to the maturity date. As the time to maturity decreases, this disparity may decrease, such that the value of the notes will approach the expected Redemption Amount to be paid at maturity.

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

#### **Conflict-related Risks**

The Issuer's offering of the notes does not constitute an expression of its views (or the views of the Guarantor or any dealer participating in the offering or their affiliates) about, or a recommendation of, any Underlying Stock, Index or Underlying Fund or the market measures underlying any Index or Underlying Fund. You should not take the Issuer's offering of the notes as an expression of its views (or the views of the Guarantor or any dealer participating in the offering or their affiliates) about how any Underlying Stock, Index or Underlying Fund or the market measures underlying any Index or

Underlying Fund will perform in the future or as a recommendation to invest (directly or indirectly, by taking a long or short position) in any of the foregoing, including through an investment in the notes. As a global financial institution, the Issuer, the Guarantor and their affiliates may, and often do, have positions (long, short or both) in one or more of the foregoing that conflict with an investment in the notes. See "—The Issuer, the Guarantor, any dealer participating in the offering or our or their respective affiliates may have economic interests that are adverse to those of the holders of the notes as a result of their hedging and other trading activities" below and "Use of Proceeds and Hedging" in this product supplement for some examples of potential conflicting positions the Issuer may have. The same may be true as to any dealer participating in the offering or their affiliates. You should undertake an independent determination of whether an investment in the notes is appropriate for you in light of your specific investment objectives, risk tolerance and financial resources.

The Issuer, the Guarantor, any dealer participating in the offering or our or their respective affiliates may have economic interests that are adverse to those of the holders of the notes as a result of their hedging and other trading activities. In anticipation of the sale of the notes, the Issuer expects to hedge its obligations under the notes through certain affiliates or unaffiliated counterparties (each of which may also be distributors of the notes) by taking positions in one or more Underlying Stocks or Underlying Funds, the securities or other assets underlying the Indices and the Underlying Funds or related currency exchange rates or instruments the value of which is derived from one or more Underlying Stocks, Indices or Underlying Funds, the securities or other assets or market measures underlying one or more Indices or Underlying Funds or related currency exchange rates. The Issuer may also adjust its hedge by, among other things, purchasing or selling any of the foregoing at any time and from time to time and close out or unwind its hedge by selling any of the foregoing on or before any calculation day(s) or Observation Date(s). In addition, JPMS and other affiliates of the Issuer or the Guarantor also trade the foregoing on a regular basis (taking long or short positions or both), for their accounts, for other accounts under their management and to facilitate transactions, including block transactions, on behalf of customers. The same may be true as to any dealer participating in the offering or their affiliates. While the Issuer cannot predict an outcome, any of these hedging or other trading activities could potentially affect the value of the Underlying(s) and may adversely affect the value of the notes or any payment on the notes. See "Use of Proceeds and Hedging" below for additional information about the Issuer's and its affiliates hedging activities.

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

The Issuer, the Guarantor any dealer participating in the offering or our or their respective affiliates may have economic interests that are adverse to those of the holders of the notes as a result of their business activities. The Issuer, the Guarantor, any dealer participating in the offering or our or their respective affiliates may currently or from time to time engage in business with an Underlying Company or with companies the securities of which are included in an Index, held by an Underlying Fund or included in a relevant

Underlying Index (the "Component Companies"), including extending loans to, making equity investments in or providing advisory services to an Underlying Company or the Component Companies, including merger and acquisition advisory services. None of the Issuer, the Guarantor, any dealer participating in the offering or their affiliates makes any representation or warranty to any purchaser of notes with respect to any matters whatsoever relating to its respective business with an Underlying Company or the Component Companies.

In addition, in the course of the Issuer's, the Guarantor's, or any dealers participating in the offering's business, it or its respective affiliates may acquire nonpublic information about one or more Underlying Stocks, Index or Underlying Funds or the securities or other assets or market measures underlying one or more Index or Underlying Funds or currency exchange rates relating to any of the foregoing, and the Issuer will not disclose any such information to you.

Furthermore, the Issuer, the Guarantor, any dealer participating in the offering or one of our or their respective affiliates may serve as issuer, agent or underwriter for issuances of other securities or financial instruments with returns linked or related to changes in the value of an Underlying Stock, an Index or an Underlying Fund or the securities or other assets or market measures underlying an Index or Underlying Fund. To the extent that the Issuer, the Guarantor, any dealer participating in the offering or one of our or their respective affiliates serves as issuer, agent or underwriter for the notes, the Issuer, the Guarantor, any dealer participating in the offering or our or their respective affiliate's interests with respect to the notes may be adverse to those of the holders of the notes. By introducing competing products into the marketplace in this manner, the Issuer, the Guarantor, any dealer participating in the offering or one or more of our or their respective affiliates could adversely affect the value of the notes.

The value of one or more Market Measure may be determined in whole or in part by reference to the value of a benchmark that is established based on quotes, prices, values or other data provided by market participants, including, in some cases, the Issuer, the Guarantor, any dealer participating in the offering or our or their respective affiliates. In addition, the Issuer, the Guarantor, any dealer participating in the offering or our or their respective affiliates may take part in, or have a supervisory role in connection with, the administration of certain benchmarks. The Issuer, the Guarantor, any dealer participating in the offering and our or their respective affiliates will have no obligation to consider your interests as a holder of the notes in taking any actions that might affect the value of any Market Measure or the notes.

The Issuer, the Guarantor or their 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 the Issuer's and the Guarantor's affiliates, will act as the calculation agent. The calculation agent makes all necessary calculations and determinations in connection with the notes, including with respect to any payments on the notes and the assumptions used to determine the pricing and estimated value of the notes. In performing these duties, JPMS may have interests adverse to the interests of the holders of the notes, which may affect your return on the notes, particularly where JPMS, as the calculation agent, is entitled to exercise discretion.

JPMS and its affiliates and any dealer participating in the offering and its affiliates may have published research, expressed opinions or provided recommendations that are inconsistent with investing in or holding the notes or that may adversely affect the value of the notes, and may do so in the future. JPMS and its affiliates and any dealer participating in the offering and its affiliates may publish research reports, express opinions or provide recommendations from time to time that relate to one or more Underlying Stocks, Index

or Underlying Funds, the securities or other assets underlying one or more Indices and the Underlying Funds or currency exchange rates relating to any of the foregoing. These research reports, opinions or recommendations may be inconsistent with purchasing or holding the notes and could adversely affect the value of the notes. Any research, opinions or recommendations expressed by JPMS or its affiliates or any dealer participating in the offering 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 Market Measure to which the notes are linked.

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

## Market Measure-related Risks

No sponsor, publisher, or investment advisor of an Underlying Fund, an Index, or any index underlying an Underlying Fund ("Underlying Index") (each a "Market Measure Publisher") will have any obligations relating to the notes. No Market Measure Publisher will have any financial or legal obligation with respect to the notes or the amounts to be paid to you, including any obligation to take our needs or the needs of noteholders into consideration for any reason, including taking any actions that might adversely affect the value of the Market Measure or the value of the notes. No Market Measure Publisher will receive any of the proceeds from any offering of the notes, and no Market Measure Publisher will be responsible for, or participate in, the offering of the notes. No Market Measure Publisher will be responsible for, or participate in, the determination or calculation of the amount receivable by holders of the notes.

We, the Guarantor, the selling agents, any dealer participating in the offering and our or their respective affiliates do not make any representation to any purchasers of the notes regarding any matters whatsoever relating to the issuers of the securities included in a Market Measure or Basket Component. Any prospective purchaser of the notes should undertake an independent investigation of the companies included in the Market Measure or Basket Component to a level that, in its judgment, is appropriate to make an informed decision regarding an investment in the notes. Neither we nor any agent has made any independent investigation as to the completeness or accuracy of publicly available information regarding any Market Measure or as to the future performance of any Market Measure.

The Market Measure Publisher of an Index or an Underlying Index may adjust it in a way that affects its level, and that Market Measure Publisher has no obligation to consider your interests. Unless otherwise specified in the applicable term sheet, we, the Guarantor, the selling agents, any dealer participating in the offering and our or their respective affiliates have no affiliation with any Market Measure Publisher of an Index or an Underlying Index. Consequently, we have no control of the actions of any Market Measure Publisher of an Index or Underlying Index. The Market Measure Publisher can add, delete, or substitute the components included in that Index or Underlying Index or make other methodological changes that could change its level. A new security included in an Index or Underlying Index may perform significantly better or worse than the replaced security, and the performance will impact the level of the applicable Index or Underlying Index. Additionally, a

Market Measure Publisher may alter, discontinue, or suspend calculation or dissemination of an Index or Underlying Index. Any of these actions could adversely affect the value of your notes. The Market Measure Publishers will have no obligation to consider your interests in calculating or revising any Index or any Underlying Index.

Unless otherwise set forth in the applicable terms sheet, we, the Guarantor, the selling agents, any dealer participating in the offering and our or their respective affiliates do not control any company included in any Market Measure or Basket Component, as applicable or any Underlying Company, and have not verified any disclosure made by any Market Measure Publisher or any of those companies or any Underlying Company. We, the Guarantor, the selling agents, any dealer participating in the offering and our or their respective affiliates currently, or in the future, may engage in business with Market Measure Publishers or companies included in a Market Measure, Basket Component, Underlying Index or any Underlying Company, and we, the Guarantor, the selling agents, any dealer participating in the offering and our or their respective affiliates may from time to time own securities of an Underlying Fund, of companies included in a Market Measure, Basket Component or Underlying Index or an Underlying Company. However, none of us, the Guarantor, the selling agents, any dealer participating in the offering or our or their respective affiliates have the ability to control the actions of any Market Measure Publisher, Underlying Company or any of these companies or have undertaken any independent review of, or made any due diligence inquiry with respect to, any Market Measure Publisher, Underlying Company or any of these companies, unless (and only to the extent that) our securities or the securities of the Guarantor or our other affiliates are included in that Market Measure or Basket Component or Underlying Index. In addition, unless otherwise set forth in the applicable term sheet, none of us, the Guarantor, the selling agents, any dealer participating in the offering or our or their respective affiliates are responsible for the calculation of any Index, Underlying Fund, Underlying Stock or Underlying Index. You should make your own investigation into the applicable Market Measure, Basket Component or Underlying Index.

You will have no rights as a security holder, you will have no rights to receive shares or units of any Market Measure or Basket Component, as applicable, or any of the assets included in the Market Measure or a Basket Component, as applicable, and you will not be entitled to dividends or other distributions by the issuers of those securities.

The notes are our debt securities. They are not equity instruments, shares of stock, or securities of any other issuer, other than the related guarantees, which are the securities of the Guarantor. Investing in the notes will not make you a holder of shares or units of the Market Measure or Basket Component or any of the assets included in the Market Measure or a Basket Component, as applicable. You will not have any voting rights, any rights to receive dividends or other distributions, any rights against a Market Measure Publisher, or any other rights with respect to the Market Measure or any of its underlying assets. As a result, the return on your notes may not reflect the return you would realize if you actually owned the Market Measure or Basket Component or any of its underlying assets and received the dividends paid or other distributions made in connection with them. Additionally, the values of certain Underlying Funds or Indices reflect only the prices of the securities included in such Underlying Funds or Indices and do not take into consideration the value of dividends paid on those securities. Your notes will be paid in cash and you have no right to receive the Market Measure or any of its underlying assets.

**Exchange rate movements may adversely impact the value of the notes.** If any security or commodity represented by a Market Measure or a Basket Component, as applicable, is traded in a currency other than U.S. dollars, and, for purposes of calculating the value of the Market Measure, is converted into U.S. dollars, then the value of the Market Measure may depend in part on the relevant exchange rates. If the value of the U.S. dollar strengthens against the currencies of those underlying assets, the value of the applicable Market Measure may be adversely affected and payments on the notes may be reduced.

Exchange rate movements may be impacted particularly by existing and expected rates of inflation and interest rate levels; political, civil or military unrest; the balance of payments between countries; and the extent of governmental surpluses or deficits in the relevant countries and the United States. All of these factors are in turn sensitive to the monetary, fiscal and trade policies pursued by the governments of those countries and the United States and other countries important to international trade and finance.

If the Market Measure or a Basket Component, as applicable, to which your notes are linked includes equity securities traded on foreign exchanges, or if shares of an Underlying Company are also listed on a foreign exchange your return may be affected by factors affecting international securities markets. The value of securities traded outside of the United States may be adversely affected by a variety of factors relating to the relevant securities markets. Factors which could affect those markets, and therefore the return on your notes, include:

- **Market Liquidity and Volatility.** The relevant foreign securities markets may be less liquid and/or more volatile than U.S. or other securities markets and may be affected by market developments in different ways than U.S. or other securities markets.
- **Political, Economic and Other Factors.** The prices and performance of securities of companies in foreign countries may be affected by political, economic, financial, and social factors in those regions. Direct or indirect government intervention to stabilize a particular securities market and cross-shareholdings in companies in the relevant foreign markets may affect prices and the volume of trading in those markets. In addition, recent or future changes in government, economic and fiscal policies in the relevant jurisdictions, the possible imposition of, or changes in, currency exchange laws, or other laws or restrictions, and possible fluctuations in the rate of exchange between currencies, are factors that could adversely affect the relevant securities markets. The relevant foreign economies may differ from the U.S. economy in economic factors such as growth of gross national product, rate of inflation, capital reinvestment, resources and self-sufficiency.

In particular, many emerging nations are undergoing rapid change involving the restructuring of economic, political, financial and legal systems. Regulatory and tax environments may be subject to change without review or appeal, and many emerging markets suffer from underdevelopment of capital markets and tax systems. In addition, in some of these nations, issuers of the relevant securities face the threat of expropriation of their assets and/or nationalization of their businesses. The economic and financial data about some of these countries may be unreliable.

• **Publicly Available Information.** There is generally less publicly available information about foreign companies than about U.S. companies that are subject to the reporting requirements of the SEC. Additionally, the accounting, auditing and financial reporting standards and requirements applicable to foreign companies may differ from those applicable to U.S. companies.

For notes linked in whole or in part to a Non-U.S. Index, if a change-in-law event occurs, the Issuer may accelerate your notes and adjust the amount of their final payment. For notes linked in whole or in part to a Non-U.S. Index, upon the announcement or occurrence of legal or regulatory changes that the calculation agent determines are likely to interfere with the ability of the Issuer or holders of the notes to transact in or hold the notes, the ability of the Issuer to perform its obligations under the notes or the ability of the Issuer or any entity acting on its behalf to enter into or maintain hedge positions it deems necessary to hedge the Issuer's obligations under the notes, the Issuer may, in its sole and absolute discretion, accelerate the payment on your notes and pay you an amount determined in good faith and in a commercially reasonable manner by the calculation agent. If a change-in-law event occurs and the Issuer decides to exercise its right to accelerate the payment on your notes, your investment may result in a loss and you may not be able to reinvest the proceeds in a comparable investment. See "General Terms of Notes — Consequences of a Change-in-Law Event" and "— Governmental legislative and regulatory actions, including sanctions, could adversely affect your investment in the notes and, for notes linked to a Non-U.S. Index, could lead to the early acceleration of your notes" below.

Governmental legislative and regulatory actions, including sanctions, could adversely affect your investment in the notes and, for notes linked to a Non-U.S. Index, could lead to the early acceleration of your notes. Governmental legislative and regulatory actions, including, without limitation, sanctions-related actions by the U.S. or a foreign government, could prohibit or otherwise restrict persons from holding the notes, any Underlying Stock or Underlying Fund or any of the securities, if any, underlying any Index or Underlying Fund, or engaging in transactions in them, and any such action could adversely affect the value of the notes. These legislative and regulatory actions could result in restrictions on the notes. You may lose a significant portion or all of your initial investment in the notes, including if you are forced to divest the notes due to the government mandates, especially if such divestment must be made at a time when the value of the notes has declined.

For notes linked in whole or in part to a Non-U.S. Index, upon the announcement or occurrence of legal or regulatory changes that the calculation agent determines are likely to interfere with the ability of the Issuer or holders of the notes to transact in or hold the notes, the ability of the Issuer to perform its obligations under the notes or the ability of the Issuer or any entity acting on its behalf to enter into or maintain hedge positions that it deems necessary to hedge the Issuer's obligations under the notes, the Issuer may, in its sole and absolute discretion, accelerate your notes. See "— For notes linked in whole or in part to a Non-U.S. Index, if a change-in-law event occurs, the Issuer may accelerate your notes and adjust the amount of their final payment" above.

The historical performance of the Market Measure should not be taken as an indication of its performance during the term of the notes. The Market Measure or a Basket Component may perform better or worse during the term of the notes than it has historically. The historical performance of the Market Measure or a Basket Component, including any historical performance set forth in the applicable term sheet, should not be taken as an indication of its future performance.

#### Additional Risks Relating to Underlying Funds

There are liquidity and management risks associated with Underlying Funds. Although shares or units of any Underlying Fund to which your notes are linked will be listed for trading on a securities exchange and a number of similar products have been traded on various exchanges for varying periods of time, there is no assurance that an active trading

market will continue for the shares or units of that Underlying Fund or that there will be liquidity in the trading market.

Underlying Funds are subject to management risk, which is the risk that the investment adviser's investment strategy, the implementation of which is subject to a number of constraints, may not produce the intended results.

A Market Measure Publisher may adjust the Underlying Fund or its Underlying Index in a way that affects its value, and it has no obligation to consider your interests. A Market Measure Publisher can change the investment policies of the applicable Underlying Fund's net asset value, or add, delete, or substitute the underlying assets held by the Underlying Fund or the components included in an Underlying Index, as the case may be, or make other methodological changes that could change the value of that Underlying Fund or Underlying Index. Additionally, a Market Measure Publisher may alter, discontinue, or suspend calculation or dissemination of the price of its Underlying Fund, the net asset value of its Underlying Fund, or the level of its Underlying Index, as the case may be. Any of these actions could adversely affect the value of your notes. This could also result in the early redemption of your notes. See "Description of the Notes—Anti-Dilution and Discontinuance Adjustments Relating to Underlying Funds—Discontinuance of or Material Change to an Underlying Fund." The Market Measure Publishers will have no obligation to consider your interests in calculating or revising any Underlying Fund or Underlying Index.

Risks associated with the applicable Underlying Index, or underlying assets of an Underlying Fund, as applicable, will affect the value of that Underlying Fund and hence the value of the notes. An Underlying Fund is a fund that may hold a variety of underlying assets, including stocks, bonds, commodities or derivative instruments, and its performance may be designed to track the performance of an Underlying Index. While the notes are linked to an Underlying Fund and not to its underlying assets or Underlying Index, risks associated with its underlying assets or Underlying Index will affect the share or unit price of that Underlying Fund and hence the value of the notes. Some of the risks that relate to an Underlying Fund include those discussed below in this product supplement in relation to equity based- and commodity-based Underlying Funds, which you should review before investing in the notes.

The performance of an Underlying Fund may not correlate with the performance of its Underlying Index, as applicable, as well as the net asset value per share or unit of the Underlying Fund, especially during periods of market volatility. If an Underlying Fund is designed to track the performance of an Underlying Index, the performance of the Underlying Fund and that of its Underlying Index generally will vary due to, for example, transaction costs, management fees, certain corporate actions, and timing variances. Moreover, it is also possible that the performance of an Underlying Fund may not fully replicate or may, in certain circumstances, diverge significantly from the performance of its Underlying Index. This could be due to, for example, the Underlying Fund not holding all or substantially all of the underlying assets included in the Underlying Index and/or holding assets that are not included in the Underlying Index, the temporary unavailability of certain securities in the secondary market, the performance of any derivative instruments held by the Underlying Fund, differences in trading hours between the Underlying Fund (or the underlying assets held by the Underlying Fund) and the Underlying Index, or due to other circumstances. This variation in performance is called the "tracking error," and, at times, the tracking error may be significant.

In addition, because the shares or units of an Underlying Fund are traded on a securities exchange and are subject to market supply and investor demand, the market price of one share or unit of the Underlying Fund may differ from its net asset value per share or unit;

shares or units of the Underlying Fund may trade at, above, or below its net asset value per share or unit.

During periods of market volatility, securities held by an Underlying Fund may be unavailable in the secondary market, market participants may be unable to calculate accurately the net asset value per share or unit of the Underlying Fund and the liquidity of the Underlying Fund may be adversely affected. This kind of market volatility may also disrupt the ability of market participants to create and redeem shares or units of the Underlying Fund. Further, market volatility may adversely affect, sometimes materially, the prices at which market participants are willing to buy and sell shares or units of the Underlying Fund. As a result, under these circumstances, the market value of shares or units of the Underlying Fund may vary substantially from the net asset value per share or unit of the Underlying Fund.

For the foregoing reasons, the performance of an Underlying Fund may not match the performance of its Underlying Index over the same period. Because of this variance, the return on the notes to the extent dependent on the performance of the Underlying Fund may not be the same as an investment directly in the securities, commodities or other assets included in the Underlying Index or the same as a debt security with a return linked to the performance of the Underlying Index.

If an Underlying Fund holds underlying assets traded on foreign exchanges, time zone differences may create discrepancies between the values of those underlying assets and the value of the notes. As a result of the time zone difference, if applicable, between the cities where the underlying assets held by an Underlying Fund trade and the cities in which shares or units of that Underlying Fund are traded, there may be discrepancies between the values of the relevant underlying assets and the trading prices of that Underlying Fund. In addition, there may be periods when the foreign exchange markets are closed for trading (for example during holidays in a country other than the United States) that may result in the values of the relevant non-U.S. underlying assets remaining unchanged for multiple Market Measure Business Days in the locations where the notes (or any related Underlying Fund) trade. Conversely, there may be periods in which the foreign exchange markets are open, but the securities markets in which the notes (or any related Underlying Fund) trade are closed.

The payment on the notes will not be adjusted for all events that could affect an Underlying Fund. The Price Multiplier(s), the value of an Underlying Fund, the amount payable on the notes, and other terms of the notes may be adjusted for specified events affecting any Underlying Fund, as described in the section entitled "Description of the Notes—Anti-Dilution and Discontinuance Adjustments Relating to Underlying Funds." However, these adjustments do not cover all events that could affect the market price of an Underlying Fund. The occurrence of any event that does not require the calculation agent to adjust the applicable Price Multiplier or the amount payable on the notes may adversely affect the Closing Market Price of any Underlying Fund and the amount payable on the notes, and, as a result, the market value of the notes.

## Additional Risks Relating to Underlying Stocks

An Underlying Company will have no obligations relating to the notes and none of us, the Guarantor, the selling agents, any dealer participating in the offering or our or their respective affiliates will perform any due diligence procedures with respect to any Underlying Company. An Underlying Company will not have any financial or legal obligation with respect to the notes or the amounts to be paid to you, including any obligation to take our interest or the interests of holders of the notes into consideration for any reason, including when taking any corporate actions that might adversely affect the price of an Underlying Stock or the value of the notes. An Underlying Company will not receive any of the proceeds from any offering of the notes, and will not be responsible for, or participate in, the offering of the notes. No Underlying Company will be responsible for, or participate in, the determination or calculation of any payments on the notes.

None of us, the Guarantor, the selling agents, any dealer participating in the offering or our or their respective affiliates will conduct any due diligence inquiry with respect to any Underlying Stock in connection with an offering of the notes. None of us, the Guarantor, the selling agents, any dealer participating in the offering or our or their respective affiliates has made any independent investigation as to the completeness or accuracy of publicly available information regarding any Underlying Stock or any Underlying Company or as to the future performance of any Underlying Stock, and we, the Guarantor, the selling agents, any dealer participating in the offering and our or their affiliates do not make any representation to any purchasers of the notes regarding any matters whatsoever relating to any Underlying Company. Any prospective purchaser of the notes should undertake such independent investigation of any Underlying Stock and any Underlying Company as in its judgment is appropriate to make an informed decision with respect to an investment in the notes.

The payment on the notes will not be adjusted for all corporate events that could affect an Underlying Company. The Price Multiplier(s), the values of an Underlying Stock, the amount payable on the notes, and other terms of the notes may be adjusted for the specified corporate events affecting an Underlying Stock, as described in the section entitled "Description of the Notes—Anti-Dilution Adjustments for Underlying Stocks." However, these adjustments do not cover all corporate events that could affect the market price of an Underlying Stock, such as offerings of equity securities for cash or in connection with certain acquisition transactions. The occurrence of any event that does not require the calculation agent to adjust the applicable Price Multiplier or any other terms of the notes may adversely affect the Closing Market Price of an Underlying Stock and the amount payable on the notes, and, as a result, the market value of the notes.

## Risks Relating to Underlying Stocks That Are ADRs

The value of an ADR may not accurately track the value of the equity securities of the related Underlying Company. If an Underlying Stock is an ADR, each ADR will represent shares of the relevant Underlying Company. Generally, the ADRs are issued under a deposit agreement that sets forth the rights and responsibilities of the depositary, the Underlying Company and the holders of the ADRs. The trading patterns of the ADRs will generally reflect the characteristics and valuations of the underlying equity securities; however, the value of the ADRs may not completely track the value of those shares. There are important differences between the rights of holders of ADRs and the rights of holders of the underlying equity securities. In addition, trading volume and pricing on the applicable non-U.S. exchange may, but will not necessarily, have similar characteristics as the ADRs. For example, certain factors may increase or decrease the public float of the ADRs and, as a result, the ADRs may have less liquidity or lower market value than the underlying equity securities.

**Exchange rate movements may adversely affect the value of an Underlying Stock that is an ADR.** If an Underlying Stock is an ADR, the market price of that Underlying Stock will generally track the U.S. dollar value of the market price of its underlying equity securities. Therefore, if the value of the related foreign currency in which the underlying equity securities are traded decreases relative to the U.S. dollar, the market price of the Underlying Stock may decrease while the market price of the underlying equity securities remains stable or increases, or does not decrease to the same extent. As a result, changes in, and the volatility of, the exchange rates between the U.S. dollar and the relevant non-U.S. currency could have an adverse impact on the value of that Underlying Stock and consequently, the value of your notes and the amount payable on the notes.

Exchange rate movements may be impacted particularly by existing and expected rates of inflation and interest rate levels; political, civil or military unrest; the balance of payments between countries; and the extent of governmental surpluses or deficits in the relevant countries and the United States. All of these factors are in turn sensitive to the monetary, fiscal and trade policies pursued by the governments of those countries and the United Sates and other countries important to international trade and finance.

Adverse trading conditions in the applicable non-U.S. market may negatively affect the value of an Underlying Stock that is an ADR. Holders of an Underlying Company's ADRs may usually surrender the ADRs in order to receive and trade the underlying equity securities. This provision permits investors in the ADRs to take advantage of price differentials between markets. However, this provision may also cause the market prices of the applicable Underlying Stock to more closely correspond with the values of the equity securities in the applicable non-U.S. markets. As a result, a market outside of the United States for the underlying equity securities that is not liquid may also result in an illiquid market for the ADRs, which may negatively impact the value of such ADRs and, consequently, the value of your notes.

Delisting of an Underlying Stock that is an ADR may adversely affect the value of the notes. If an Underlying Stock that is an ADR is no longer listed or admitted to trading on a U.S. securities exchange registered under the Exchange Act or included in the Over-The-Counter Bulletin Board Service (the "OTC Bulletin Board") operated by FINRA, or if the ADR facility between the Underlying Company and the ADR depositary is terminated for any reason, that Underlying Stock will be deemed to be the Underlying Company's equity securities rather than the ADRs, and the calculation agent will determine the price of the Underlying Stock by reference to those equity securities, as described below under "Description of the Notes—Delisting of ADRs or Termination of ADR Facility." Replacing the original ADRs with the underlying equity securities may adversely affect the value of the notes and the amounts payable on the notes.

## Other Risk Factors Relating to the Applicable Market Measure

The applicable term sheet may set forth additional risk factors as to the Market Measure or Basket Components, as applicable, that you should review prior to purchasing the notes.

## Tax-related Risks

The tax consequences of an investment in the notes are uncertain. There is no direct legal authority as to the proper U.S. federal income tax treatment of the notes, and the Issuer does 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 Issuer's

treatment of the notes, in which case the timing and/or character of income on the notes could be affected materially and adversely. The relevant term sheet will describe the tax treatment of a particular offering of notes. You should review carefully the section entitled "Material U.S. Federal Income Tax Consequences" in this product supplement and consult your tax adviser regarding the U.S. federal income tax consequences of an investment in the notes, including possible alternative treatments.

#### **USE OF PROCEEDS AND HEDGING**

Unless otherwise specified in the relevant term sheet, JPMorgan Financial intends to lend the net proceeds from the sale of the notes to the Guarantor and/or its affiliates. The Guarantor expects that it and/or its affiliates will use the proceeds from these loans to provide additional funds for its and/or their operations and for other general corporate purposes. General corporate purposes may include investments in JPMorgan Chase & Co.'s subsidiaries, payments of dividends to JPMorgan Chase & Co., extensions of credit to JPMorgan Chase & Co. or its subsidiaries or the financing of possible acquisitions or business expansion. Net proceeds may be temporarily invested pending application for their stated purpose. The notes will be offered to meet investor demand for products that reflect the risk-return profile and market exposure provided by the notes as set forth in the relevant term sheet.

Unless otherwise specified in the relevant term sheet, the original issue price of the notes will be equal to the estimated value of the notes plus the selling commissions, referral fees, if any, and structuring fees, if any, paid to each agent and/or other affiliated or unaffiliated dealers (as shown on the cover page of the relevant term sheet), plus (minus) the projected profits (losses) that the Issuer's affiliates expect to realize for assuming risks inherent in hedging its obligations under the notes, plus the estimated cost of hedging its obligations under the notes. See "Estimated Value and Secondary Market Prices of the Notes—The Estimated Value of the Notes" and the relevant term sheet for additional information about the estimated value of the notes. See also "Use of Proceeds" in the prospectus.

On or prior to the date of the relevant term sheet, the Issuer, through its affiliates or others, expects to hedge some or all of its anticipated exposure in connection with the notes. In addition, from time to time after the notes are issued, the Issuer, through its affiliates or others, may enter into additional hedging transactions and close out or unwind those the Issuer has entered into, in connection with the notes and possibly in connection with its or its affiliates' exposure to one or more Underlying Stocks, Indices or Underlying Funds or the securities or other assets or market measures underlying one or more Indices or Underlying Funds or related currency exchange rates. To accomplish this, the Issuer, through its affiliates or others, may take positions in one or more Underlying Stocks, Indices or Underlying Funds, the securities or other assets or market measures underlying one or more Indices or Underlying Funds or related currency exchange rates, or instruments the value of which is derived from one or more Underlying Stocks, Indices or Underlying Funds or the securities or other assets or market measures underlying one or more Indices or Underlying Funds or related currency exchange rates. From time to time, prior to maturity of the notes, the Issuer may pursue a dynamic hedging strategy that may involve taking long or short positions in the instruments described above.

While the Issuer cannot predict an outcome, any of these hedging activities or other trading activities of the Issuer could potentially affect the value of the Market Measure in a manner that adversely affects the value of the notes or any payment on the notes. Because hedging the Issuer's obligations entails risk and may be influenced by market forces beyond its control, this hedging may result in a profit that is more or less than expected, or it may result in a loss. It is possible that these hedging or trading activities could result in substantial returns for the Issuer or its affiliates while the value of the notes declines. See "Risk Factors—Conflict-related Risks—The Issuer, the Guarantor, any dealer participating in the offering or our or their respective affiliates may have economic interests that are adverse to those of the holders of the notes as a result of their hedging and other trading activities" above.

The Issuer has no obligation to engage in any manner of hedging activity and will do so solely at its discretion and for its own account. The Issuer may hedge its exposure on the notes directly or it may aggregate this exposure with other positions taken by it and its affiliates with

respect to its exposure to one or more Underlying Stocks, Indices or Underlying Funds or the securities or other assets or market measures underlying one or more Indices or Underlying Funds or related currency exchange rates. No note holder will have any rights or interest in the Issuer's hedging activity or any positions that the Issuer, any of its affiliates or any unaffiliated counterparties may take in connection with the Issuer's hedging activity.

#### **DESCRIPTION OF THE NOTES**

#### General

Each issue of the notes will be part of a series of debt securities issued by JPMorgan Financial under an indenture dated February 19, 2016, as may be amended or supplemented from time to time, among us, JPMorgan Chase & Co., as guarantor, and Deutsche Bank Trust Company Americas, as trustee. The indenture is described more fully in the accompanying prospectus and prospectus supplement. The following description of the notes supplements and, to the extent it is inconsistent with, supersedes the description of the general terms and provisions of the notes and debt securities set forth under the headings "Description of Notes of JPMorgan Chase Financial Company LLC" in the prospectus supplement and "Description of Debt Securities of JPMorgan Chase Financial Company LLC" in the prospectus. These documents should be read in connection with the applicable term sheet.

Our payment obligations on the notes are fully and unconditionally guaranteed by the Guarantor. The notes will rank equally in right of payment with all of our other unsecured and unsubordinated obligations from time to time outstanding, except obligations that are subject to any priorities or preferences by law. The guarantee of the notes will rank equally in right of payment with all other unsecured and unsubordinated obligations of the Guarantor from time to time outstanding, except obligations that are subject to any priorities or preferences by law, and senior in right of payment to its subordinated obligations. Any payments due on the notes, including any repayment of principal, are subject to our credit risk, as issuer, and the credit risk of JPMorgan Chase & Co., as guarantor.

The maturity date of the notes and the aggregate principal amount of each issue of the notes will be stated in the applicable term sheet. If any scheduled payment date, including the maturity date, is not a business day, we will make the required payment on the next business day, and no interest will accrue as a result of such delay.

The notes may not guarantee the return of principal at maturity. The notes will be payable only in U.S. dollars. Except as set forth in the applicable pricing supplement and as discussed below, the notes are not redeemable by us or repayable at the option of any holder. The notes are not subject to any sinking fund.

We will issue the notes in denominations of whole units. Unless otherwise set forth in the applicable term sheet, each unit will have a principal amount of \$10.00. The CUSIP number for each issue of the notes will be set forth in the applicable term sheet. You may transfer the notes only in whole units.

Notes issued by JPMorgan Financial will initially be represented by a type of global note referred to as a master note. Unless otherwise specified in the relevant term sheet, in connection with each issuance of notes, the trustee and/or paying agent will, in accordance with instructions from the Issuer, make appropriate entries or notations in its records relating to the master note representing the notes to indicate that the master note evidences the notes of that issuance.

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

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

#### Certain Terms of the Notes

Coupons. We may issue notes that are coupon-bearing, or that do not bear coupons. We may issue notes in which the payment of coupons for one or more periods is contingent upon the occurrence of one or more specified events. For so long as the notes are held in book-entry only form, we will pay coupons to the persons in whose names the notes are registered at the close of business one business day prior to each coupon payment date. If the notes are not held in book-entry only form, the record dates will be the first day of the month in which the applicable coupon payment is due. The applicable term sheet will set forth whether the notes are coupon-bearing and, if so, the applicable coupon and calculation method.

Payment(s) on the Notes. The amount payable at maturity, or the "Redemption Amount", may be determined according to one or more "calculation days" occurring shortly before the maturity date of the notes (such period, the "Maturity Valuation Period"). We may also issue notes in which coupon payments, the Redemption Amount, or payment in connection with redemption of the notes, is determined according to one or more "Observation Dates" occurring during the term of the notes. If so specified in the applicable term sheet, we may use a different term to refer to calculation days or Observation Dates. The Redemption Amount and any amounts payable in connection with redemption of the notes will be paid to the person in whose names the notes are registered on the applicable payment date or the maturity date. The Issuer may accelerate your notes and adjust the amount of their final payment if a change-in-law event occurs in the case of notes linked in whole or in part to a Non-U.S. Index. See "— Consequences of a Change-in-Law Event" for additional information. Any payment on the notes is subject to the credit risks of the Issuer and the Guarantor.

Redemption Prior to Maturity. If so specified in the applicable term sheet, your notes may be called prior to maturity at our option, or may be automatically called prior to maturity upon the occurrence of certain specified events, in each case in whole or in part, on the date or dates as specified in the applicable term sheet and, if called at our option, upon such notice as specified in the applicable term sheet. The applicable term sheet will also set forth the manner in which any payment due upon such early redemption will be calculated. Unless otherwise set forth in the applicable term sheet, the notes are not subject to redemption at the option of the holder prior to maturity.

A "business day" is, unless otherwise specified in the relevant term sheet, 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.

Market Measure Business Days. Unless otherwise specified in the applicable term sheet, as to any Index, a "Market Measure Business Day" means a day on which (1) the New York Stock Exchange (the "NYSE") and The Nasdaq Stock Market, or their successors, are open for trading and (2) the Index(es) (or any successor) is calculated and published. Unless otherwise specified in the applicable term sheet, as to any Underlying Fund, a "Market Measure Business Day" means a day on which the securities exchange on which that Underlying Fund has its primary listing is open for trading. Unless otherwise specified in the applicable term sheet, as to any Underlying Stock, a "Market Measure Business Day" means a day on which trading is generally conducted (or was scheduled to have been generally conducted, but for the occurrence of a Market Disruption Event) on the NYSE, the Nasdaq Stock Market, the Chicago

Board Options Exchange, and in the over-the-counter market for equity securities in the United States, or any successor exchange or market, or in the case of a security traded on one or more non-U.S. securities exchanges or markets, on the principal non-U.S. securities exchange or market for such security.

Events Relating to Observation Dates. If a scheduled Observation Date is determined by the calculation agent not to be a Market Measure Business Day by reason of an extraordinary event, occurrence, declaration or otherwise, or, if there is a Market Disruption Event on that day, the applicable Observation Date will be the immediately succeeding Market Measure Business Day during which no Market Disruption Event occurs or is continuing; provided that the closing level or Closing Market Price of the applicable Index, Underlying Fund or Underlying Stock for such Observation Date will not be determined on a date later than the fifth scheduled Market Measure Business Day after the scheduled Observation Date, and if such date is not a Market Measure Business Day, or if there is a Market Disruption Event on that date, the calculation agent will determine (or, if not determinable, estimate) the closing level or Closing Market Price of the applicable Index, Underlying Fund or Underlying Stock for such Observation Date in a manner which the calculation agent considers commercially reasonable under the circumstances on that fifth scheduled Market Measure Business Day.

If, due to a Market Disruption Event or otherwise, a scheduled Observation Date is postponed, the applicable payment date will be approximately the fifth business day following the Observation Date as postponed, unless otherwise specified in the applicable term sheet.

Notwithstanding the foregoing, if a scheduled Observation Date overlaps with a calculation day during the Maturity Valuation Period and is determined by the calculation agent not to be a Market Measure Business Day by reason of an extraordinary event, occurrence, declaration or otherwise, or, if there is a Market Disruption Event on that day, such Observation Date will be postponed, and the closing level or the Closing Market Price of the applicable Index, Underlying Fund or Underlying Stock for such Observation Date will be determined, in accordance with the same procedures for such overlapped calculation day during the Maturity Valuation Period as described under "—Events Relating to Calculation Days" below.

For the avoidance of doubt, if your notes are linked to more than one Index, Underlying Fund or Underlying Stock, the occurrence of a Market Disruption Event or non-Market Measure Business Day as to any Index, Underlying Fund or Underlying Stock will not impact any other Index, Underlying Fund or Underlying Stock that is not so affected.

*Events Relating to Calculation Days.* 

Notes with a Maturity Valuation Period which Consists of Two or More Scheduled Calculation Days. If the Maturity Valuation Period for the notes consists of two or more scheduled calculation days and, with respect to an Index, Underlying Fund or Underlying Stock, (i) a Market Disruption Event occurs on a scheduled calculation day during the Maturity Valuation Period or (ii) any scheduled calculation day is determined by the calculation agent not to be a Market Measure Business Day by reason of an extraordinary event, occurrence, declaration, or otherwise (any such day in either (i) or (ii) being a "non-calculation day"), the closing level or the Closing Market Price, as applicable, of the Index, the Underlying Fund or the Underlying Stock for the applicable non-calculation day will be the closing level or the Closing Market Price, as applicable, of the Index, the Underlying Fund or the Underlying Stock on the next calculation day that occurs during the Maturity Valuation Period. For example, if the first and second scheduled calculation days during the Maturity Valuation Period are non-calculation days, then the closing level or the Closing Market Price, as applicable, of the Index,

the Underlying Fund or the Underlying Stock on the next calculation day will also be deemed to be the closing level or the Closing Market Price, as applicable, of the Index, the Underlying Fund or the Underlying Stock on the first and second scheduled calculation days during the Maturity Valuation Period. If no further scheduled calculation days occur after a non-calculation day, or if every scheduled calculation day after that non-calculation day is also a non-calculation day, then the closing level or the Closing Market Price, as applicable, of the Index, the Underlying Fund or the Underlying Stock for that non-calculation day and each following non-calculation day, if any, will be determined (or, if not determinable, estimated) by the calculation agent in a manner which the calculation agent considers commercially reasonable under the circumstances on the final scheduled calculation day during the Maturity Valuation Period, regardless of whether that final scheduled calculation day is a non-calculation day.

For the avoidance of doubt, if your notes are linked to more than one Index, Underlying Fund or Underlying Stock, the occurrence of a Market Disruption Event or non-Market Measure Business Day as to any Index, Underlying Fund or Underlying Stock will not impact any other Index, Underlying Fund or Underlying Stock that is not so affected.

Notes with a Maturity Valuation Period which Consists of Only One Scheduled Calculation Day. If the Maturity Valuation Period for the notes consists of only one scheduled calculation day and, with respect to an Index, Underlying Fund or Underlying Stock, the scheduled calculation day is determined by the calculation agent not to be a Market Measure Business Day by reason of an extraordinary event, occurrence, declaration or otherwise, or, if there is a Market Disruption Event on that day, the calculation day will be the immediately succeeding Market Measure Business Day during which no Market Disruption Event occurs or is continuing; provided that the closing level or Closing Market Price, as applicable, of the Index, the Underlying Fund or the Underlying Stock for such calculation day will be determined (or, if not determinable, estimated) by the calculation agent in a manner which the calculation agent considers commercially reasonable under the circumstances on a date no later than the second scheduled Market Measure Business Day prior to the maturity date, regardless of the occurrence of a Market Disruption Event or non-Market Measure Business Day on that second scheduled Market Measure Business Day.

For the avoidance of doubt, if your notes are linked to more than one Index, Underlying Fund or Underlying Stock, the occurrence of a Market Disruption Event or non-Market Measure Business Day as to any Index, Underlying Fund or Underlying Stock will not impact any other Index, Underlying Fund or Underlying Stock that is not so affected.

## Consequences of a Change-in-Law Event

Unless otherwise specified in the relevant term sheet or any accompanying underlying supplement, for notes linked in whole or in part to a Non-U.S. Index, if a change-in-law event occurs, the Issuer will have the right, but not the obligation, to accelerate the payment on the notes. If a change-in-law event occurs and the Issuer chooses to exercise this right, (a) the Issuer will provide, or cause the calculation agent to provide, written notice of the Issuer's election to exercise this right to the trustee at its New York office, on which notice the trustee may conclusively rely, and DTC, as holder of the notes, (b) the amount due and payable per note upon early acceleration will be determined by the calculation agent in good faith and in a commercially reasonable manner on the date on which the Issuer (or the calculation agent) delivers notice of acceleration and (c) that amount will be payable on the fifth business day following the date on which the Issuer (or the calculation agent) delivers notice of acceleration, and the maturity date will be accelerated to that fifth business day.

The Issuer will provide, or will cause the calculation agent to provide, written notice to the trustee at its New York office, on which notice the trustee may conclusively rely, and to DTC of the cash amount due with respect to the notes as promptly as possible and in no event later than two business days prior to the date on which payment is due.

A "**change-in-law event**," unless otherwise specified in the relevant term sheet or any accompanying underlying supplement, means that:

- (a) due to (i) the announcement, adoption of, or any change in, any applicable law, regulation, rule, sanction, directive or order (including, without limitation, relating to any tax law or any financial sanction or embargo program); or (ii) the promulgation of, any change in, or public announcement of, the formal or informal interpretation, application, exercise or operation by any court, tribunal, regulatory authority, exchange or trading facility or any other relevant entity with competent jurisdiction of any applicable law, rule, regulation, order, decision or determination (including any action taken by a taxing or sanctioning authority), in each case occurring on or after the pricing date, the calculation agent determines in good faith that it is likely to be contrary (or upon adoption, it is likely to be contrary) to that law, rule, regulation, order, decision or determination (1) for the Issuer or the holders of the notes to purchase, sell, enter into, maintain, hold, acquire or dispose of the notes or any underlying component to which the notes are linked, (2) for the Issuer to perform its obligations under the terms of the notes or (3) for any Hedging Entity to purchase, sell, enter into, maintain, hold, acquire or dispose of its or its affiliates' hedge positions; or
- (b) for any reason set forth in (a) above, any Hedging Entity is unable, after using commercially reasonable efforts, to (i) acquire, establish, re-establish, substitute, maintain, unwind or dispose of any transaction(s) or asset(s) that the Hedging Entity deems necessary to hedge the risk (including, but not limited to, stock price and volatility risk) of entering into and performing the Issuer's obligations with respect to the notes, or (ii) realize, recover or remit the proceeds of any of those transaction(s) or asset(s).

"Hedging Entity" means the Issuer or any affiliate(s) of the Issuer or any entity (or entities) acting on behalf of the Issuer engaged in any hedging transactions relating to the notes or any Market Measure to which the notes are linked in respect of the Issuer's obligations under the notes.

"Hedge positions" means one or more (A) positions or contracts in securities, options, futures, derivatives or foreign exchange, (B) stock loan transactions or (C) other instruments or arrangements, in each case, in order to hedge the Issuer's obligations under the notes (in the aggregate on a portfolio basis or incrementally on a trade by trade basis).

"Non-U.S. Index" means an Index that is designed to track primarily securities issued by non-U.S. companies.

Please see "Risk Factors — Risks Relating to the Notes Generally — Governmental legislative and regulatory actions, including sanctions, could adversely affect your investment in the notes and, for notes linked to a Non-U.S. Index, could lead to the early acceleration of your notes" for more information.

#### The Market Measure

The applicable term sheet will set forth information as to the specific Market Measure, including information as to the historical values of the Market Measure or the Basket Components, as applicable. However, historical values of the Market Measure or the Basket Components are not indicative of its future performance or the performance of your notes.

An investment in the notes does not entitle you to any ownership interest in or any other rights with respect to the Market Measure or any of its underlying assets, including any voting rights, dividends paid, or other distributions made, or any other rights with respect to the Market Measure, a Basket Component or their respective underlying assets.

Any information regarding any Underlying Stock or any Underlying Company will be derived from publicly available documents. Information provided to or filed with the SEC by any Underlying Company can be located through the SEC's website, www.sec.gov. None of us, the Guarantor, the selling agent or any of our or their affiliates will have independently verified the accuracy or completeness of any of the information or reports of an Underlying Company.

The selection of an Underlying Stock is not a recommendation to buy or sell the Underlying Stock. None of us, the Guarantor, the selling agent or any of our or their affiliates makes any representation to any purchaser of the notes as to the performance of any Underlying Stock.

## **Closing Market Price**

The "Closing Market Price" for one share of an Underlying Fund or Underlying Stock (or one unit of any other security for which a Closing Market Price must be determined) on any Market Measure Business Day means any of the following:

- if the Underlying Fund or Underlying Stock (or such other security) is listed or admitted to trading on a national securities exchange, the last reported sale price, regular way (or, in the case of The Nasdaq Stock Market, the official closing price), of the principal trading session on that day on the principal U.S. securities exchange registered under the Securities Exchange Act of 1934, as amended, on which the Underlying Fund or Underlying Stock (or such other security) is listed or admitted to trading;
- if the Underlying Fund or Underlying Stock (or such other security) is not listed or admitted to trading on any national securities exchange but is included in the Over-The-Counter Bulletin Board (the "OTC Bulletin Board"), the last reported sale price of the principal trading session on the OTC Bulletin Board on that day;
- if the closing price of the Underlying Fund or Underlying Stock (or such other security) cannot be determined as set forth in the two bullet points above, and the Underlying Fund or Underlying Stock (or such other security) is listed or admitted to trading on a non-U.S. securities exchange or market, the last reported sale price, regular way, of the principal trading session on that day on the primary non-U.S. securities exchange or market on which the Underlying Fund or Underlying Stock (or such other security) is listed or admitted to trading (converted to U.S. dollars using such exchange rate as the calculation agent, in its sole discretion, determines to be commercially reasonable); or
- if the Closing Market Price cannot be determined as set forth in the prior bullets, the mean, as determined by the calculation agent, of the bid prices for the Underlying Fund or Underlying Stock (or such other security) obtained from as many dealers in that security (which may include us, JPMS and/or any of our affiliates), but not exceeding

three, as will make the bid prices available to the calculation agent. If no such bid price can be obtained, the Closing Market Price will be determined (or, if not determinable, estimated) by the calculation agent in its sole discretion in a commercially reasonable manner.

Unless otherwise set forth in the applicable term sheet, for any applicable Market Measure Business Day under the terms of the notes, the value of an Underlying Fund or Underlying Stock will be determined by multiplying its Closing Market Price on that day by its "**Price Multiplier**." The initial Price Multiplier for an Underlying Fund or Underlying Stock will be 1, unless otherwise set forth in the applicable term sheet. The Price Multiplier for each Underlying Fund will be subject to adjustment for certain events relating to that Underlying Fund as described in "—Anti-Dilution and Discontinuance Adjustments Relating to Underlying Funds." The Price Multiplier for each Underlying Stock will be subject to adjustment for certain corporate events relating to that Underlying Stock as described in "—Anti-Dilution Adjustments Relating to Underlying Stocks."

### **Market Disruption Events**

As to any Index, a "**Market Disruption Event**" means one or more of the following events, as determined by the calculation agent in its sole discretion:

- (A) the suspension of or material limitation on trading, in each case, for more than two consecutive hours of trading, or during the one-half hour period preceding the close of trading, on the primary exchange where the securities included in the Index trade, as determined by the calculation agent (without taking into account any extended or after-hours trading session), in 20% or more of the securities which then comprise the Index or any successor index (as defined in "— Discontinuance of an Index");
- (B) a breakdown or failure in the price and trade reporting systems of any relevant exchange as a result of which the reported trading prices for equity securities then constituting 20% or more of the level of that Index (or that successor index) during the one-hour period preceding the close of the principal trading session on that relevant exchange are materially inaccurate;
- (C) the suspension of or material limitation on trading, in each case, for more than two consecutive hours of trading, or during the one-half hour period preceding the close of trading, on the primary exchange that trades options contracts or futures contracts related to the Index, as determined by the calculation agent (without taking into account any extended or after-hours trading session), in options contracts or futures contracts related to the Index, or any successor index, whether by reason of movements in price otherwise exceeding levels permitted by the relevant exchange or otherwise; or
- (D) a decision to permanently discontinue trading in the relevant futures or options contracts related to the Index, or any successor Index,

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

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

For the purpose of determining whether a Market Disruption Event as to any Index has occurred:

- (1) a limitation on the hours in a Market Measure Business Day and/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;
- (2) a suspension in trading in a futures or options contract on the Index, or any successor index, by a major securities market by reason of (a) a price change violating limits set by that securities market, (b) an imbalance of orders relating to those contracts, or (c) a disparity in bid and ask quotes relating to those contracts will constitute a suspension of or material limitation on trading in futures or options contracts related to the Index, or any successor index;
- (3) a suspension of or material limitation on trading on the relevant exchange will not include any time when that exchange is closed for trading under ordinary circumstances; or
- (4) if applicable to Indices with component securities listed on the NYSE, for the purpose of clause (A) above, any limitations on trading during significant market fluctuations under NYSE Rule 80B, or any applicable rule or regulation enacted or promulgated by the NYSE or any other self-regulatory organization or the SEC of similar scope as determined by the calculation agent, will be considered "material."

As to any Underlying Fund, a "**Market Disruption Event**" means one or more of the following events, as determined by the calculation agent in its sole discretion:

- (A) the suspension of or material limitation on trading, in each case, for more than two consecutive hours of trading, or during the one-half hour period preceding the close of trading, of the shares or units of the Underlying Fund (or successor underlying fund, as defined in "—Anti-Dilution and Discontinuance Adjustments Relating to Underlying Funds—Discontinuance of or Material Change to an Underlying Fund") on the primary exchange where such shares or units trade, as determined by the calculation agent (without taking into account any extended or after-hours trading session);
- (B) a breakdown or failure in the price and trade reporting systems of the relevant exchange for the shares of that Underlying Fund (or that successor underlying fund) as a result of which the reported trading prices for the shares of that Underlying Fund (or that successor underlying fund) during the last one-half hour preceding the close of the principal trading session on that relevant exchange are materially inaccurate;
- (C) the suspension of or material limitation on trading, in each case, for more than two consecutive hours of trading, or during the one-half hour period preceding the close of trading, on the primary exchange that trades options contracts or futures contracts related to the shares or units of the Underlying Fund (or successor underlying fund) as determined by the calculation agent (without taking into account any extended or after-hours trading session), in options contracts or futures contracts related to the shares or units of the Underlying Fund;
- (D) with respect to an Underlying Fund that holds equity securities, the suspension of or material limitation on trading, in each case, for more than two consecutive hours of trading, or during the one-half hour period preceding the close of trading, on the primary exchange where component stocks of the relevant Underlying

Index (or the successor underlying index, as defined in "—Anti-Dilution and Discontinuance Adjustments Relating to Underlying Funds—Discontinuance of or Material Change to an Underlying Fund") trade, as determined by the calculation agent (without taking into account any extended or after-hours trading session), in 20% or more of the stocks which then comprise the Underlying Index or any successor underlying index;

- (E) the suspension of or material limitation on trading, in each case, for more than two consecutive hours of trading, or during the one-half hour period preceding the close of trading, on the primary exchange that trades options contracts or futures contracts related to the relevant Underlying Index (or the successor underlying index) as determined by the calculation agent (without taking into account any extended or after-hours trading session), in options contracts or futures contracts related to the Underlying Index or any successor underlying index; or
- (F) a decision to permanently discontinue trading in the shares or units of the Underlying Fund (or the successor underlying fund) or the relevant futures or options contracts relating to such shares or units or the relevant Underlying Index (or any successor underlying index) will constitute a Market Disruption Event,

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 the Issuer's ability or the ability of any of its affiliates to adjust or unwind all or a material portion of any hedge with respect to the notes.

The applicable term sheet will identify, if applicable, any additions or changes to the Market Disruption Events for an Underlying Fund.

For the purpose of determining whether a Market Disruption Event as to any Underlying Fund has occurred:

- (1) a limitation on the hours in a Market Measure Business Day and/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;
- (2) a suspension in trading in a futures or options contract on the shares or units of the Underlying Fund (or the successor underlying fund) or the relevant Underlying Index (or any successor underlying index), by a major securities market by reason of (a) a price change violating limits set by that securities market, (b) an imbalance of orders relating to those contracts, or (c) a disparity in bid and ask quotes relating to those contracts, will each constitute a suspension of or material limitation on trading in futures or options contracts relating to the Underlying Fund;
- (3) subject to paragraph (2) above, a suspension of or material limitation on trading on the relevant exchange will not include any time when that exchange is closed for trading under ordinary circumstances; or
- (4) if applicable to an Underlying Fund or an Underlying Index with component stocks listed on the NYSE, for the purpose of clauses (A) and (C) above, any limitations on trading during significant market fluctuations under NYSE Rule 80B, or any applicable rule or regulation enacted or promulgated by the NYSE

or any other self-regulatory organization or the SEC of similar scope as determined by the calculation agent, will be considered "material."

As to any Underlying Stock (which, for purposes of this section includes any "successor Underlying Stock," which refers to the equity securities or the ADRs of any Successor Entity (as defined below in "—Anti-Dilution Adjustments—Reorganization Events")), a "**Market Disruption Event**" means one or more of the following events, as determined by the calculation agent in its sole discretion:

- (A) the suspension of or material limitation on trading, in each case, for more than two consecutive hours of trading, or during the one-half hour period preceding the close of trading, of the shares of the Underlying Stock on the primary exchange where such shares trade, as determined by the calculation agent (without taking into account any extended or after-hours trading session);
- (B) a breakdown or failure in the price and trade reporting systems of the relevant exchange for that Reference Stock (or that security) as a result of which the reported trading prices for that Reference Stock (or that security) during the one-half hour period preceding the close of the principal trading session on that relevant exchange are materially inaccurate;
- (C) the suspension of or material limitation on trading, in each case, for more than two consecutive hours of trading, or during the one-half hour period preceding the close of trading, in options contracts or futures contracts related to the shares of the Underlying Stock on the primary exchange that trades options contracts or futures contracts related to the shares of the Underlying Stock, as determined by the calculation agent (without taking into account any extended or after-hours trading session); or
- (D) a decision to permanently discontinue trading in the shares of the Underlying Stock or the relevant futures or options contracts relating to such shares,

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

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

For the purpose of determining whether a Market Disruption Event as to any Underlying Stock has occurred:

- (1) a limitation on the hours in a Market Measure Business Day and/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;
- (2) a suspension in trading in a futures or options contract on the shares of the Underlying Stock, by a major securities market by reason of (a) a price change violating limits set by that securities market, (b) an imbalance of orders relating to those contracts, or (c) a disparity in bid and ask quotes relating to those contracts, will each constitute a suspension of or material limitation on trading in futures or options contracts relating to the Underlying Stock;

- (3) Subject to paragraph (2) above, a suspension of or material limitation on trading on the relevant exchange will not include any time when that exchange is closed for trading under ordinary circumstances; or
- (4) for the purpose of clause (A) above, any limitations on trading during significant market fluctuations under NYSE Rule 80B, or any applicable rule or regulation enacted or promulgated by the NYSE or any other self-regulatory organization or the SEC of similar scope as determined by the calculation agent, will be considered "material."

## Adjustments to an Index

After the applicable pricing date, the publisher of an Index to which your notes are linked (an "**Index Publisher**") may make a material change in the method of calculating an Index or in another way that changes the Index such that it does not, in the opinion of the calculation agent, fairly represent the level of the Index had those changes or modifications not been made. In this case, the calculation agent will, at the close of business in New York, New York, on each date that the closing level is to be calculated, make adjustments to the Index. Those adjustments will be made in good faith as necessary to arrive at a calculation of a level of the Index as if those changes or modifications had not been made, and calculate the closing level of the Index, as so adjusted.

#### Discontinuance of an Index

After the applicable pricing date, an Index Publisher may discontinue publication of an Index to which an issue of the notes is linked. The Index Publisher or another entity may then publish a substitute index that the calculation agent determines, in its sole discretion, to be comparable to the original Index (a "successor index"). If this occurs, the calculation agent will substitute the successor index as calculated by the relevant Index Publisher or other entity and calculate the level of the Index at any time required under the terms of the notes.

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, the Issuer, the Guarantor and DTC, as holder of the notes.

If an Index Publisher discontinues publication of the applicable Index before the end of the Maturity Valuation Period and the calculation agent does not select a successor index, then on each relevant day that the level of the Index must be determined, until the earlier to occur of:

- the determination of final payment on the notes; and
- a determination by the calculation agent that a successor index is available,

the calculation agent will compute a substitute level for the Index in accordance with the procedures last used to calculate the Index before any discontinuance.

If a successor index is selected or the calculation agent calculates a level as a substitute as to any Index, the successor index or level will be used as a substitute for all purposes, including for the purpose of determining whether a Market Disruption Event exists.

Notwithstanding these alternative arrangements, any modification or discontinuance of the publication of any Index to which your notes are linked may adversely affect trading in the notes.

## Anti-Dilution and Discontinuance Adjustments Relating to Underlying Funds

As to any Underlying Fund, the calculation agent, in its sole discretion, may adjust the Price Multiplier and any other terms of the notes if an event described below occurs after the applicable pricing date and on or before the final calculation day during the Maturity Valuation Period and if the calculation agent determines that such an event has a dilutive or concentrative effect on the theoretical value of the shares of the applicable Underlying Fund or successor underlying fund.

The Price Multiplier for an Underlying Fund resulting from any of the adjustments specified below will be rounded to the eighth decimal place with five one-billionths being rounded upward. No adjustments to the Price Multiplier will be required unless the adjustment would require a change of at least 0.1% in the Price Multiplier then in effect. Any adjustment that would require a change of less than 0.1% in the Price Multiplier which is not applied at the time of the event may be reflected at the time of any subsequent adjustment that would require an adjustment of the Price Multiplier. The required adjustments specified below do not cover all events that could affect an Underlying Fund.

No adjustments to the Price Multiplier for any Underlying Fund or any other terms of the notes will be required other than those specified below. However, the calculation agent may, at its sole discretion, make additional adjustments or adjustments that differ from those described herein to the Price Multiplier or any other terms of the notes to reflect changes to an Underlying Fund if the calculation agent determines in good faith and a commercially reasonable manner that the adjustment is appropriate to ensure an equitable result.

The calculation agent will be solely responsible for the determination of any adjustments to the Price Multiplier for any Underlying Fund or any other terms of the notes and of any related determinations with respect to any distributions of stock, other securities or other property or assets, including cash, in connection with any event described below; its determinations and calculations will be conclusive absent a determination of a manifest error.

No adjustments are required to be made for certain other events, such as offerings of equity securities by the Underlying Fund for cash or in connection with the occurrence of a partial tender or exchange offer for shares of the Underlying Fund by the Underlying Fund.

Following an event that results in an adjustment to the Price Multiplier for any Underlying Fund or any of the other terms of the notes, the calculation agent may (but is not required to) provide holders of the notes with information about that adjustment as it deems appropriate, depending on the nature of the adjustment. Upon written request by any holder of the notes, the calculation agent will provide that holder with information about such adjustment.

#### **Anti-Dilution Adjustments**

The calculation agent, in its sole discretion and as it deems reasonable, may adjust the Price Multiplier for any Underlying Fund and the other terms of the notes as a result of certain events related to an Underlying Fund, which include, but are not limited to, the following:

Share Splits and Reverse Share Splits. If an Underlying Fund is subject to a share split or reverse share split, then once such split has become effective, the Price Multiplier for that Underlying Fund will be adjusted such that the new Price Multiplier will equal the product of:

• the prior Price Multiplier; and

• the number of shares or units that a holder of one share or unit of the Underlying Fund before the effective date of the share split or reverse share split would have owned immediately following the applicable effective date.

For example, a two-for-one share split would ordinarily change a Price Multiplier of one into a Price Multiplier of two. In contrast, a one-for-two reverse share split would ordinarily change a Price Multiplier of one into a Price Multiplier of one-half.

Share Dividends. If an Underlying Fund is subject to (i) a share dividend (i.e., an issuance of additional shares or units of Underlying Fund) that is given ratably to all holders of the Underlying Fund, then, once the dividend has become effective and the Underlying Fund is trading ex-dividend, the Price Multiplier for that Underlying Fund will be adjusted on the exdividend date such that the new Price Multiplier will equal the prior Price Multiplier plus the product of:

- the prior Price Multiplier; and
- the number of additional shares or units issued in the share dividend with respect to one share or unit of the Underlying Fund;

provided that no adjustment will be made for a share dividend for which the number of shares or units of the Underlying Fund paid or distributed is based on a fixed cash equivalent value, unless such distribution is an Extraordinary Dividend (as defined below).

For example, a share or unit dividend of one new share or unit for each share or unit held would ordinarily change a Price Multiplier of one into a Price Multiplier of two.

Extraordinary Dividends. There will be no adjustments to the Price Multiplier of an Underlying Fund to reflect any cash dividends or cash distributions paid with respect to that Underlying Fund other than Extraordinary Dividends, as defined below, and distributions described in "—Other Distributions" below and in "—Anti-Dilution and Discontinuance Adjustments Relating to Underlying Funds—Reorganization Events" below.

An "Extraordinary Dividend" means, with respect to a cash dividend or other distribution with respect to an Underlying Fund, a dividend or other distribution that the calculation agent determines, in its sole discretion, is not declared or otherwise made according to the relevant Underlying Fund's then existing policy or practice of paying such dividends on a quarterly or other regular basis. If an Extraordinary Dividend occurs, the Price Multiplier for that Underlying Fund will be adjusted on the ex-dividend date so that the new Price Multiplier will equal the product of:

- the prior Price Multiplier; and
- a fraction, the numerator of which is the Closing Market Price per share or unit of the Underlying Fund on the Market Measure Business Day preceding the exdividend date and the denominator of which is the amount by which the Closing Market Price per share or unit of the Underlying Fund on that preceding Market Measure Business Day exceeds the Extraordinary Dividend Amount.

The "**Extraordinary Dividend Amount**" with respect to an Extraordinary Dividend will equal:

• in the case of cash dividends or other distributions that are paid as regular dividends, the amount per share or unit of the applicable Underlying Fund of that

Extraordinary Dividend minus the amount per share or unit of the immediately preceding non-Extraordinary Dividend for that share or unit; or

• in the case of cash dividends or other distributions that are not paid as regular dividends, the amount per share or unit of the applicable Underlying Fund of that Extraordinary Dividend.

To the extent an Extraordinary Dividend is not paid in cash, the value of the non-cash component will be determined by the calculation agent, whose determination will be conclusive. A distribution on the applicable Underlying Fund described in "—Other Distributions" below and in "—Anti-Dilution and Discontinuance Adjustments Relating to Underlying Funds—Reorganization Events" below that also constitutes an Extraordinary Dividend will only cause an adjustment under those respective sections.

Other Distributions. If an Underlying Fund, after the applicable pricing date, declares or makes a distribution to all holders of the shares or units of the applicable Underlying Fund of any class of its securities (other than shares or units of the applicable Underlying Fund), evidences of its indebtedness or other non-cash assets, including, but not limited to, transferable rights and warrants, then, in each of these cases, once the distribution has become effective and the shares or units are trading ex-dividend, the Price Multiplier for such Underlying Fund will be adjusted such that the new Price Multiplier will equal the product of:

- the prior Price Multiplier; and
- a fraction, the numerator of which will be the Current Market Price per share or unit of the applicable Underlying Fund, and the denominator of which will be the Current Market Price per share or unit of the applicable Underlying Fund, less the fair market value, as determined by the calculation agent, as of the time the adjustment is effected of the portion of the capital stock, evidences of indebtedness, rights or warrants, or other non-cash assets so distributed or issued applicable to one share or unit of the applicable Underlying Fund.

The "**Current Market Price**" of any Underlying Fund means the arithmetic average of the Closing Market Prices of one share of such Underlying Fund for the five Market Measure Business Days prior to the Market Measure Business Day immediately preceding the exdividend date of the distribution requiring an adjustment to the Price Multiplier.

**"Ex-dividend date"** means the first Market Measure Business Day on which transactions in the shares or units of the Underlying Fund trade on the relevant exchange without the right to receive that cash dividend or other cash distribution.

The "fair market value" of any such distribution means the value of such distribution on the ex-dividend date for such distribution, as determined by the calculation agent. If such distribution consists of property traded on the ex-dividend date on a U.S. national securities exchange, the fair market value will equal the Closing Market Price of such distributed property on such ex-dividend date.

## **Reorganization Events**

If after the pricing date and on or before the final calculation day during the Maturity Valuation Period as to any Underlying Fund, the Underlying Fund (or successor underlying fund, as defined below) has been subject to a merger, combination, consolidation, or statutory

exchange of securities with another exchange traded fund, and the Underlying Fund (or successor underlying fund) is not the surviving entity, then, on or after the date of such event, the calculation agent shall, in its sole discretion, make an adjustment to the Price Multiplier for such Underlying Fund (or successor underlying fund) or any other terms of the notes as the calculation agent, in its sole discretion, determines appropriate to account for the economic effect on the notes of that event (including adjustments to account for changes in volatility, expected dividends, stock loan rate, or liquidity relevant to the Underlying Fund (or successor underlying fund) or to the notes), and determine the effective date of that adjustment. If the calculation agent determines that no adjustment that it could make will produce a commercially reasonable result, then the calculation agent may deem the Underlying Fund (or successor underlying fund) to be de-listed, liquidated, discontinued, or otherwise terminated, the treatment of which is described in "—Anti-Dilution and Discontinuance Events Relating to Underlying Funds—Discontinuance of or Material Change to an Underlying Fund." For the avoidance of doubt, any adjustment will be made after the effective date of the reorganization and not on the date of the announcement or a plan or intention to effect such an event.

# Discontinuance of or Material Change to an Underlying Fund

If shares or units of an Underlying Fund are de-listed from its primary securities exchange (or any other relevant exchange), liquidated, or otherwise terminated, the calculation agent will substitute an exchange traded fund that the calculation agent determines, in its sole discretion, is comparable to the discontinued Underlying Fund (that exchange traded fund being referred to herein as a "successor underlying fund"). In that event, the calculation agent will adjust the applicable Price Multiplier, as necessary, such that the successor underlying fund closely replicates the performance of the Underlying Fund.

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

If an Underlying Fund (or a successor underlying fund) is de-listed, liquidated, or otherwise terminated and the calculation agent determines that no adequate substitute for the Underlying Fund (or a successor underlying fund) is available, then the calculation agent will, in its sole discretion, calculate the Closing Market Price of that Underlying Fund (or a successor underlying fund) by a computation methodology that the calculation agent determines will as closely as reasonably possible replicate that Underlying Fund (or a successor underlying fund). If the calculation agent determines that no such computation methodology will produce a commercially reasonable result, then the calculation agent will determine the Closing Market Price of the Underlying Fund (or the successor underlying fund) in good faith and in its sole discretion.

If a successor underlying fund is selected or the calculation agent calculates the Closing Market Price by a computation methodology that the calculation agent determines will as closely as reasonably possible replicate the Underlying Fund (or a successor underlying fund), that successor underlying fund or substitute computation methodology, as applicable, will be substituted for the Underlying Fund (or that successor underlying fund) for all purposes of the notes.

## If at any time:

• the Underlying Index of an Underlying Fund (or the underlying index related to a successor underlying fund) is discontinued or ceases to be published and (i) the Market Measure Publisher of the Underlying Index or another entity does not

publish a successor or substitute underlying index that the calculation agent determines, in its sole discretion, to be comparable to the Underlying Index (a "successor underlying index") or (ii) the Market Measure Publisher of the Underlying Fund does not announce that the Underlying Fund will track the successor underlying index; or

 an Underlying Fund (or a successor underlying fund) in any way is modified (including, but not limited to, a material change in the investment policies, objectives or methodology of the Underlying Fund, or a material change to the related Underlying Index) so that the Underlying Fund does not, in the opinion of the calculation agent, fairly represent the price per share or unit of that Underlying Fund (or that successor underlying fund) had those changes or modifications not been made;

then, from and after that time, the calculation agent will make those calculations and adjustments that, in the good faith judgment of the calculation agent, may be necessary in order to arrive at a Closing Market Price of that Underlying Fund (or that successor underlying fund) as if those changes or modifications had not been made. The calculation agent also may determine that no adjustment is required. If the calculation agent determines that no such calculation or adjustment will produce a commercially reasonable result, then the calculation agent will determine the Closing Market Price of the Underlying Fund (or the successor underlying fund) in good faith and in its sole discretion.

The calculation agent will be solely responsible for the method of calculating the Closing Market Price of the Underlying Fund (or any successor underlying fund) and of any related determinations and calculations, and its determinations and calculations with respect thereto will be conclusive in the absence of manifest error.

Notwithstanding these alternative arrangements, any modification or discontinuance of the Underlying Fund or the related Underlying Index may adversely affect trading in the notes.

## Anti-Dilution Adjustments Relating to Underlying Stocks

As to any Underlying Stock (which, for purposes of this section includes any successor Underlying Stock), the calculation agent, in its sole discretion, may adjust the Price Multiplier and any other terms of the notes if an event described below occurs after the applicable pricing date and on or before the final calculation day during the Maturity Valuation Period and if the calculation agent determines that such an event has a dilutive or concentrative effect on the theoretical value of the shares of the applicable Underlying Stock or successor Underlying Stock.

The Price Multiplier for an Underlying Stock resulting from any of the adjustments specified below will be rounded to the eighth decimal place with five one-billionths being rounded upward. No adjustments to the Price Multiplier will be required unless the adjustment would require a change of at least 0.1% in the Price Multiplier then in effect. Any adjustment that would require a change of less than 0.1% in the Price Multiplier which is not applied at the time of the event may be reflected at the time of any subsequent adjustment that would require an adjustment of the Price Multiplier. The required adjustments specified below do not cover all events that could affect an Underlying Stock.

No adjustments to the Price Multiplier for any Underlying Stock or any other terms of the notes will be required other than those specified below. However, the calculation agent may, at its sole discretion, make additional adjustments or adjustments that differ from those described herein to the Price Multiplier or any other terms of the notes to reflect changes to an Underlying Stock if the calculation agent determines in good faith and a commercially reasonable manner that the adjustment is appropriate to ensure an equitable result.

The calculation agent will be solely responsible for the determination of any adjustments to the Price Multiplier for any Underlying Stock or any other terms of the notes and of any related determinations with respect to any distributions of stock, other securities or other property or assets, including cash, in connection with any corporate event described below; its determinations and calculations will be conclusive absent a determination of a manifest error.

No adjustments are required to be made for certain other events, such as offerings of equity securities by any Underlying Company for cash or in connection with the occurrence of a partial tender or exchange offer for any Underlying Stock by the Underlying Company.

Following certain corporate events relating to an Underlying Stock, where the Underlying Company is not the surviving entity, any payment you receive on the notes may be based on the equity securities of a successor to the Underlying Company or on any cash or other assets distributed to holders of the Underlying Stock in such corporate event.

Following an event that results in an adjustment to the Price Multiplier for any Underlying Stock or any of the other terms of the notes, the calculation agent may (but is not required to) provide holders of the notes with information about that adjustment as it deems appropriate, depending on the nature of the adjustment. Upon written request by any holder of the notes, the calculation agent will provide that holder with information about such adjustment.

## Anti-Dilution Adjustments to Underlying Stocks that Are Equity

The calculation agent, in its sole discretion and as it deems reasonable, may adjust the Price Multiplier for any Underlying Stock and the other terms of the notes as a result of certain events related to an Underlying Stock, which include, but are not limited to, the following:

Stock Splits and Reverse Stock Splits. If an Underlying Stock is subject to a stock split or reverse stock split, then once such split has become effective, the Price Multiplier for that Underlying Stock will be adjusted such that the new Price Multiplier will equal the product of:

- the prior Price Multiplier; and
- the number of shares that a holder of one share of the Underlying Stock before the effective date of the stock split or reverse stock split would have owned immediately following the applicable effective date.

For example, a two-for-one stock split would ordinarily change a Price Multiplier of one into a Price Multiplier of two. In contrast, a one-for-two reverse stock split would ordinarily change a Price Multiplier of one into a Price Multiplier of one-half.

Stock Dividends. If an Underlying Stock is subject to (i) a stock dividend (i.e., an issuance of additional shares of Underlying Stock) that is given ratably to all holders of the Underlying Stock or (ii) a distribution of additional shares of the Underlying Stock as a result of the triggering of any provision of the organizational documents of the Underlying Company, then, once the dividend or distribution has become effective and the Underlying Stock is trading ex-dividend, the applicable Price Multiplier will be adjusted on the first Market Measure

Business Day on which transactions in shares of the Underlying Stock trade on the relevant exchange without the right to receive an applicable dividend or other distribution (the "exdividend date") such that the new Price Multiplier will equal the prior Price Multiplier plus the product of:

- the prior Price Multiplier; and
- the number of additional shares issued in the stock dividend with respect to one share of the Underlying Stock;

provided that no adjustment will be made for a stock dividend for which the number of shares of the Underlying Stock paid or distributed is based on a fixed cash equivalent value, unless such distribution is an Extraordinary Dividend (as defined below).

For example, a stock dividend of one new share for each share held would ordinarily change a Price Multiplier of one into a Price Multiplier of two.

Extraordinary Dividends. There will be no adjustments to the Price Multiplier of an Underlying Stock to reflect any cash dividends or cash distributions paid with respect to that Underlying Stock other than Extraordinary Dividends, as defined below, and distributions described in "—Reorganization Events" below.

An "Extraordinary Dividend" means, with respect to a cash dividend or other distribution with respect to an Underlying Stock, a dividend or other distribution that the calculation agent determines, in its sole discretion, is not declared or otherwise made according to the Underlying Company's then existing policy or practice of paying such dividends on a quarterly or other regular basis. If an Extraordinary Dividend occurs, the applicable Price Multiplier will be adjusted on the ex-dividend date so that the new Price Multiplier will equal the product of:

- the prior Price Multiplier; and
- a fraction, the numerator of which is the Closing Market Price per share of the Underlying Stock on the Market Measure Business Day preceding the ex-dividend date and the denominator of which is the amount by which the Closing Market Price per share of the Underlying Stock on that preceding Market Measure Business Day exceeds the Extraordinary Dividend Amount.

The "**Extraordinary Dividend Amount**" with respect to an Extraordinary Dividend will equal:

- in the case of cash dividends or other distributions that are paid as regular dividends, the amount per share of the applicable Underlying Stock of that Extraordinary Dividend minus the amount per share of the immediately preceding non-Extraordinary Dividend for that share; or
- in the case of cash dividends or other distributions that are not paid as regular dividends, the amount per share of the applicable Underlying Stock of that Extraordinary Dividend.

To the extent an Extraordinary Dividend is not paid in cash, the value of the non-cash component will be determined by the calculation agent, whose determination will be conclusive. A distribution on the Underlying Stock described in "—Issuance of Transferable Rights or Warrants" below or clause (a), (d) or (e) of the section entitled "—Reorganization

Events" below that also constitutes an Extraordinary Dividend will only cause an adjustment under those respective sections.

Issuance of Transferable Rights or Warrants. If an Underlying Company issues to all holders of record of the Underlying Stock transferable rights or warrants to subscribe for or purchase the Underlying Stock, including new or existing rights to purchase the Underlying Stock under a shareholder rights plan or arrangement, then the applicable Price Multiplier will be adjusted on the Market Measure Business Day immediately following the issuance of those transferable rights or warrants so that the new Price Multiplier will equal the prior Price Multiplier plus the product of:

- the prior Price Multiplier; and
- the number of shares of the Underlying Stock that can be purchased with the cash value of those warrants or rights distributed on one share of the Underlying Stock.

The number of shares that can be purchased will be based on the Closing Market Price of the Underlying Stock on the date the new Price Multiplier is determined. The cash value of those warrants or rights, if the warrants or rights are traded on a registered national securities exchange, will equal the closing price of that warrant or right. If the warrants or rights are not traded on a registered national securities exchange, the cash value will be determined by the calculation agent and will equal the average of the bid prices obtained from three dealers at 3:00 p.m., New York time on the date the new Price Multiplier is determined, provided that if only two of those bid prices are available, then the cash value of those warrants or rights will equal the average of those bids and if only one of those bids is available, then the cash value of those warrants or rights will equal that bid.

## Reorganization Events

If after the pricing date and on or prior to the final calculation day during the Maturity Valuation Period, as to any Underlying Stock:

- (a) there occurs any reclassification or change of the Underlying Stock, including, without limitation, as a result of the issuance of tracking stock by the Underlying Company;
- (b) the Underlying Company, or any surviving entity or subsequent surviving entity of the Underlying Company (a "**Successor Entity**"), has been subject to a merger, combination, or consolidation and is not the surviving entity;
- (c) any statutory exchange of securities of the Underlying Company or any Successor Entity with another corporation occurs, other than under clause (b) above;
- (d) the Underlying Company is liquidated or is subject to a proceeding under any applicable bankruptcy, insolvency, or other similar law;
- (e) the Underlying Company issues to all of its shareholders securities of an issuer other than the Underlying Company, including equity securities of an affiliate of the Underlying Company, other than in a transaction described in clauses (b), (c), or (d) above;

- (f) a tender or exchange offer or going-private transaction is consummated for all the outstanding shares of the Underlying Company;
- (g) there occurs any reclassification or change of the Underlying Stock that results in a transfer or an irrevocable commitment to transfer all such outstanding shares of the Underlying Stock to another entity or person;
- (h) the Underlying Company or any Successor Entity is the surviving entity of a merger, combination, or consolidation, that results in the outstanding Underlying Stock (other than Underlying Stock owned or controlled by the other party to such transaction) immediately prior to such event collectively representing less than 50% of the outstanding Underlying Stock immediately following such event; or
- (i) the Underlying Company ceases to file the financial and other information with the SEC in accordance with Section 13(a) of the Exchange Act

(an event in clauses (a) through (i), a "Reorganization Event"), then, on or after the date of the occurrence of a Reorganization Event, the calculation agent shall, in its sole discretion, make an adjustment to the Price Multiplier or any other terms of the notes as the calculation agent, in its sole discretion, determines appropriate to account for the economic effect on the notes of that Reorganization Event (including adjustments to account for changes in volatility, expected dividends, stock loan rate, or liquidity relevant to the Underlying Stock or to the notes), which may, but need not, be determined by reference to the adjustment(s) made in respect of such Reorganization Event by an options exchange to options on the relevant Underlying Stock traded on that options exchange, and determine the effective date of that adjustment. For the avoidance of doubt, any adjustment will be made on or after the effective date of the Reorganization Event and not on the date of the announcement of a plan or intention to effect such an event.

# Anti-Dilution Adjustments to Underlying Stocks that Are ADRs

For purposes of the anti-dilution adjustments set forth above, if an Underlying Stock is an ADR (an "**Underlying ADR**"), the calculation agent will consider the effect of any of the relevant events on the Underlying ADR, and adjustments will be made, as if the Underlying ADR was the Underlying Stock described above. For example, if the stock represented by the Underlying ADR is subject to a two-for-one stock split, and assuming an initial Price Multiplier of 1, the Price Multiplier for the Underlying ADR would be adjusted so that it equals two. Unless otherwise specified in the applicable term sheet, with respect to the notes linked to an Underlying ADR (or an Underlying Stock issued by a non-U.S. Underlying Company), the term "dividend" means the dividends paid to holders of the Underlying ADR (or the Underlying Stock issued by the non-U.S. Underlying Company), and such dividends may reflect the netting of any applicable foreign withholding or similar taxes that may be due on dividends paid to a U.S. person.

The calculation agent may determine not to make an adjustment if:

- (A) holders of the Underlying ADR are not eligible to participate in any of the events that would otherwise require anti-dilution adjustments as set forth above if the notes had been linked directly to the equity securities of the Underlying Company represented by the Underlying ADR; or
- (B) to the extent that the calculation agent determines that the Underlying Company or the depositary for the ADRs has adjusted the number of equity securities of the

Underlying Company represented by each share of the Underlying ADR, so that the market price of the Underlying ADR would not be affected by the corporate event.

If the Underlying Company or the depositary for the ADRs, in the absence of any of the events described above, elects to adjust the number of equity securities of the Underlying Company represented by each share of the Underlying ADR, then the calculation agent may make the appropriate anti-dilution adjustments to reflect such change. The depositary for the ADRs may also make adjustments in respect of the ADRs for share distributions, rights distributions, cash distributions and distributions other than shares, rights, and cash. Upon any such adjustment by the depositary, the calculation agent may adjust the Price Multiplier or other terms of the notes as the calculation agent determines commercially reasonable to account for that event.

#### Alternative Anti-Dilution and Reorganization Adjustments

The calculation agent may elect at its discretion to not make any of the adjustments to the Price Multiplier for any Underlying Stock or to the other terms of the notes, including the method of determining the Redemption Amount, described in this section, but may instead make adjustments, in its discretion, to the Price Multiplier for any Underlying Stock or any other terms of the notes that will reflect the adjustments to the extent practicable made by the Options Clearing Corporation on options contracts on an Underlying Stock or any successor underlying stock. For example, if an Underlying Stock is subject to a two-for-one stock split, and the Options Clearing Corporation adjusts the strike prices of the options contract on that Underlying Stock by dividing the strike price by two, then the calculation agent may also elect to divide the Starting Value by two. In this case, the Price Multiplier will remain one. This adjustment would have the same economic effect on holders of the notes as if the Price Multiplier had been adjusted.

# Delisting of ADRs or Termination of ADR Facility

If an Underlying ADR is no longer listed or admitted to trading on a U.S. securities exchange registered under the Exchange Act or included in the OTC Bulletin Board Service operated by FINRA, or if the ADR facility between the Underlying Company and the ADR depositary is terminated for any reason, then, on and after the date that the Underlying ADR is no longer so listed or admitted to trading or the date of such termination, as applicable (the "termination date"), the Underlying Stock will be deemed to be the Underlying Company's equity securities rather than the Underlying ADR. The calculation agent will determine the price of the Underlying Stock by reference to those equity securities. Under such circumstances, the calculation agent may modify any terms of the notes as it deems necessary, in its sole discretion, to ensure an equitable result. On and after the termination date, for all purposes, the Closing Market Price of the Underlying Company's equity securities on their primary exchange will be converted to U.S. dollars using such exchange rate as the calculation agent, in its sole discretion, determines to be commercially reasonable.

## Delisting of an Underlying Stock or Nationalization of an Underlying Company

If a non-U.S. equity security serving as an Underlying Stock with a relevant exchange located outside the United States (an "Original Foreign Underlying Stock") is no longer listed or admitted to trading on a securities exchange (a "Delisting Event"), or if the issuer of an Original Foreign Underlying Stock is nationalized (a "Nationalization Event"), the calculation agent, in its sole discretion, may either:

- (a) select a Successor Foreign Underlying Stock (as defined below) to that non-U.S. equity security after the close of the principal trading session on the Market Measure Business Day immediately prior to the effective date of the Delisting Event or Nationalization Event, as applicable (the effective date of the Delisting Event or Nationalization Event, as applicable, the "Change Date"), in accordance with the provisions of this section (each successor stock as so selected, a "Successor Foreign Underlying Stock" and each issuer of that Successor Foreign Underlying Stock, a "Successor Foreign Underlying Stock Issuer"); or
- (b) on and after the Change Date, (i) deem the closing price and, if applicable, the trading price of that Original Foreign Underlying Stock on each day to be the closing price of that Original Foreign Underlying Stock on the Market Measure Business Day immediately prior to the Change Date and (ii) deem the Price Multiplier of that Original Foreign Underlying Stock on each day to be the Price Multiplier of that Original Foreign Underlying Stock on the Market Measure Business Day immediately prior to the Change Date.

Upon the selection of any Successor Foreign Underlying Stock by the calculation agent as described above, then on and after the Change Date:

- (a) references in this product supplement or the applicable term sheet to the applicable "Underlying Stock" will no longer refer to the Original Foreign Underlying Stock and will be deemed instead to refer to that Successor Foreign Underlying Stock for all purposes;
- (b) references in this product supplement or the applicable term sheet to "issuer" (the Underlying Company) of the Original Foreign Underlying Stock will be deemed to be to the applicable Successor Foreign Underlying Stock Issuer for all purposes;
- (c) the relevant Starting Value or similar price for that Successor Foreign Underlying Stock will be determined by the calculation agent in a manner that it determines to be commercially reasonable; and
- (d) the Price Multiplier for that Successor Foreign Underlying Stock will be an amount as determined by the calculation in good faith as of the Change Date, taking into account, among other things, the closing price of the Original Foreign Underlying Stock on the Market Measure Business Day immediately preceding the Change Date, subject to adjustment for certain corporate events related to that Successor Foreign Underlying Stock described in "—Anti-Dilution Adjustments."

The "Successor Foreign Underlying Stock" with respect to the Underlying Stock will be the common stock of a company organized in, or with its principal executive office located in, the country in which the issuer of the Original Foreign Underlying Stock is organized or has its principal executive office, selected by the calculation agent from among the common stocks of three companies then listed on a non-U.S. securities exchange that are not the Original Foreign Underlying Stock, with the three largest market capitalizations within the same industry as the issuer of the Original Foreign Underlying Stock that also have an equity security that is listed and traded on a national securities exchange in the United States or the primary non-U.S. securities exchange or market for the Original Foreign Underlying Stock that, in the sole discretion of the calculation agent, is the most comparable to the Original Foreign Underlying Stock (prior to the Change Date), taking into account factors such as the

calculation agent deems relevant, including, without limitation, dividend history and stock price volatility; provided, however, that a Successor Foreign Underlying Stock will not be any stock that is subject to a trading restriction under the trading restriction policies of the Issuer, the Guarantor or any of their affiliates that would materially limit the ability of the Issuer or any of its affiliates to hedge the notes with respect to that stock.

The calculation agent will provide information as to any Successor Foreign Underlying Stock upon written request by any holder of the notes.

#### **Baskets**

If the Market Measure to which your notes are linked includes a Basket, the Basket Components and if necessary, the definition of Market Measure Business Day will be set forth in the applicable term sheet. We will assign each Basket Component a weighting (the "Initial Component Weight") so that each Basket Component represents a percentage of the value of the Basket on the pricing date. The Basket Components may or may not have equal Initial Component Weights, as set forth in the applicable term sheet.

# **Determination of the Component Ratio for Each Basket Component**

The value of the Basket on the pricing date will be equal to 100. We will set a fixed factor (the "**Component Ratio**") for each Basket Component on the applicable pricing date, based on the weighting of that Basket Component. The Component Ratio for each Basket Component will equal:

- the Initial Component Weight (expressed as a percentage) for that Basket Component, multiplied by 100; *divided by*
- the closing level or the Closing Market Price, as applicable, of that Basket Component on the applicable pricing date.

Each Component Ratio will be rounded to eight decimal places.

The Component Ratios will be calculated in this way so that the value of the Basket will equal 100 on the applicable pricing date. The Component Ratios will not be revised subsequent to their determination on the applicable pricing date, except that the calculation agent may in its good faith judgment adjust the Component Ratio of any Basket Component in the event that Basket Component is materially changed or modified in a manner that does not, in the opinion of the calculation agent, fairly represent the value of that Basket Component had those material changes or modifications not been made.

The following table is for illustration purposes only, and does not reflect the actual composition, Initial Component Weights, or Component Ratios of a Basket, all of which will be set forth in the applicable term sheet.

Example: The **hypothetical** Basket Components are Underlying Fund ABC, Index XYZ, and Index RST, with their Initial Component Weights being 50.00%, 25.00% and 25.00%, respectively, on a **hypothetical** pricing date:

	Hypothetical Closing			
Basket Component	Initial Component Weight	Level or Closing Market Price(1)	Hypothetical Component Ratio <sup>(2)</sup>	Initial Basket Value Contribution
Underlying Fund ABC	50.00%	500.00	0.10000000	50.00
Index XYZ	25.00%	2,420.00	0.01033058	25.00
Index RST	25.00%	1,014.00	0.02465483	25.00
Value of the Basket on the pricing date				100.00

<sup>(1)</sup> This column sets forth the **hypothetical** closing level or Closing Market Price, as applicable, of each Basket Component on the **hypothetical** pricing date.

Unless otherwise stated in the applicable term sheet, if a Market Disruption Event occurs on the applicable pricing date as to any Basket Component or the pricing date is determined by the calculation agent not to be a Market Measure Business Day for any Basket Component by reason of an extraordinary event, occurrence, declaration or otherwise, the calculation agent will establish the closing level or the Closing Market Price, as applicable, of that Basket Component (the "Basket Component Closing Level"), and thus its Component Ratio, based on the closing level or the Closing Market Price, as applicable, of that Basket Component on the first Market Measure Business Day following the pricing date on which no Market Disruption Event occurs for that Basket Component. In the event that a Market Disruption Event or non-Market Measure Business Day occurs for that Basket Component on the pricing date and on each scheduled Market Measure Business Day thereafter to and including the second scheduled Market Measure Business Day following the pricing date, the calculation agent (not later than the close of business in New York, New York on the second scheduled Market Measure Business Day following the pricing date) will estimate the Basket Component Closing Level, and thus the applicable Component Ratio, in a manner that the calculation agent considers commercially reasonable. The final term sheet will provide the Basket Component Closing Level, a brief statement of the facts relating to the establishment of the Basket Component Closing Level (including the applicable Market Disruption Event(s)), and the applicable Component Ratio.

<sup>(2)</sup> The **hypothetical** Component Ratio for each Basket Component equals its Initial Component Weight (expressed as a percentage) multiplied by 100, and then divided by the **hypothetical** closing level or Closing Market Price, as applicable, of that Basket Component on the **hypothetical** pricing date, with the result rounded to eight decimal places.

For purposes of determining whether a Market Disruption Event has occurred as to any Basket Component, "Market Disruption Event" will have the meaning set forth in "—Market Disruption Events."

## Value of the Basket

The calculation agent will calculate the value of the Basket for an applicable day by summing the products of the closing level or the Closing Market Price, as applicable, of each Basket Component on such day (multiplied by its Price Multiplier on such day, if applicable) multiplied by the Component Ratio for that Basket Component. The value of the Basket will vary based on the increase or decrease in the value of each Basket Component. Any increase in the value of a Basket Component (assuming no change in the value of the other Basket Component or Basket Components) will result in an increase in the value of the Basket. Conversely, any decrease in the value of a Basket Component (assuming no change in the value of the other Basket Component or Basket Components) will result in a decrease in the value of the Basket.

Unless otherwise specified in the applicable term sheet, if, for any Basket Component (an "Affected Basket Component"), (i) a Market Disruption Event occurs on a scheduled Observation Date or calculation day during the Maturity Valuation Period or (ii) any such date is determined by the calculation agent not to be a Market Measure Business Day by reason of an extraordinary event, occurrence, declaration, or otherwise (any such day in either (i) or (ii) being a "non-calculation day"), the calculation agent will determine the closing levels or the Closing Market Prices, as applicable, of the Basket Components for such non-calculation day, as follows:

- The closing level or the Closing Market Price, as applicable, of each Basket Component that is not an Affected Basket Component will be its closing level or the Closing Market Price, as applicable, on such non-calculation day.
- The closing level or the Closing Market Price, as applicable, of each Basket Component that is an Affected Basket Component for the applicable non-calculation day will be determined in the same manner as described in "—Certain Terms of the Notes—Events Relating to Observation Dates" and "—Certain Terms of the Notes—Events Relating to Calculation Days" as applicable, provided that references to "closing level" or "Closing Market Price" will be deemed to be references to the closing level or Closing Market Price of the applicable Basket Component.

For purposes of determining whether a Market Disruption Event has occurred as to any Basket Component, "Market Disruption Event" will have the meaning stated above in "— Market Disruption Events."

#### Role of the Calculation Agent

The calculation agent has the sole discretion to make all determinations regarding the notes as described in this product supplement, including determinations regarding payments on the notes, the Price Multiplier, the Market Measure, any Market Disruption Events, a successor index, successor underlying fund or successor underlying stock, Market Measure Business Days, business days, calculation days, non-calculation days, any anti-dilution adjustments, and determinations related to any adjustments to, or discontinuance of, any Index or Underlying Fund. Absent manifest error, all determinations of the calculation agent

will be conclusive for all purposes and final and binding on you and us, without any liability on the part of the calculation agent.

Unless otherwise specified in the relevant term sheet, JPMS or one of its affiliates will act as the calculation agent for each issue of the notes. However, we may change the calculation agent at any time without notifying you. The identity of the calculation agent will be set forth in the applicable term sheet.

#### **Events of Default**

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

#### Payment upon an Event of Default

Unless otherwise specified in the relevant term sheet, in case an event of default with respect to the notes shall have occurred and be continuing, if the notes do not include an automatic redemption feature, the amount declared due and payable per note upon any acceleration of the notes will be determined by the calculation agent and will be an amount in cash equal to the amount payable at maturity per note (which, for the avoidance of doubt, shall also include any final coupon payment which would also be payable on the maturity date) calculated in the manner described in the relevant term sheet and calculated as if the date of acceleration were:

- (a) the "Final Observation Date," meaning the final Observation Date or the final calculation day as originally scheduled, as applicable, provided (i) if the note is linked to a Market Measure that is an Index, Underlying Fund or Underlying Stock and the final Observation Date or the final calculation day, as applicable, is a Disrupted Day (as defined below), the Final Observation Date will be the immediately succeeding scheduled trading day that is not a Disrupted Day, and (ii) if the note is linked to a Market Measure that consists of a Basket or is a Worst-Performing Market Measure or Best-Performing Market Measure and the final scheduled Observation Date or the final scheduled calculation day, as applicable, for any component Index, Underlying Fund or Underlying Stock, as applicable, is a Disrupted Day, the Final Observation Date will be the earliest day on which the value of each component Index, Underlying Fund or Underlying Stock, as applicable, is established, as described below:
  - for each component Index, Underlying Fund or Underlying Stock, as applicable, that is not affected by a Disrupted Day (an "Unaffected Component"), the Final Observation Date shall be the final scheduled Observation Date or the final scheduled calculation day, as applicable; and
  - for each component Index, Underlying Fund or Underlying Stock, as applicable, that is affected by a Disrupted Day (a "**Disrupted Component**"), the Final Observation Date will be the immediately succeeding scheduled trading day that is not a Disrupted Day,

provided further that, in no event will the Final Observation Date be postponed to a date that is after the Final Disrupted Observation Date (as defined below); and

(b) the "Final Disrupted Observation Date," meaning (i) for notes linked to a Market Measure that is an Index, Underlying Fund or Underlying Stock, the tenth scheduled trading day after the final Observation Date or the final calculation day, as applicable, as originally scheduled (if the date of acceleration is a Disrupted Day), and (ii) for notes linked to a Market Measure that consists of a Basket or is a Worst-Performing Market Measure or Best-Performing Market Measure, the tenth scheduled trading day after the final Observation Date or the final calculation day, as applicable, as originally scheduled, for each component Index, Underlying Fund or Underlying Stock, as applicable (or if that tenth scheduled trading day is not the same day for each such Index, Underlying Fund or Underlying Stock, as applicable, the latest of those tenth scheduled trading days) (if the date of acceleration is a Disrupted Day).

For notes linked to an Index, the relevant term sheet or an accompanying underlying supplement may provide a formulation of the postponement provisions that will apply to the notes in the event of an event of default. instead of the relevant provisions set forth above.

For notes linked to a Market Measure that is an Index, Underlying Fund or Underlying Stock, if the Final Observation Date has been postponed to the Final Disrupted Observation Date and that day is a Disrupted Day, the calculation agent will determine the closing price or closing level, as applicable, of such Index, Underlying Fund or Underlying Stock, (the "Underlying Value"), for the Final Observation Date on the Final Disrupted Observation Date: (i) for notes linked to an Underlying Stock or an Underlying Fund, in good faith based on the calculation agent's assessment of the market value of one share of that Underlying Stock or Underlying Fund, as applicable, on that Final Disrupted Observation Date, and (ii) for notes linked to an Index, unless otherwise specified in the relevant term sheet or any accompanying underlying supplement, in accordance with the formula for and method of calculating the closing level of that 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 that Final Disrupted Observation Date of each security most recently constituting that Index.

For notes linked to a Market Measure that consists of a Basket or is a Worst-Performing Market Measure or Best-Performing Market Measure, if the Final Observation Date has been postponed to the Final Disrupted Observation Date and on that day, the Final Observation Date has not occurred for at least one Disrupted Component (each, a "Final Disrupted Component"), the Underlying Value for the Final Observation Date will be determined by the calculation agent on the Final Disrupted Observation Date and will be deemed to be: (i) for each Unaffected Component, the Underlying Value on the originally scheduled Observation Date or calculation day, as applicable, (ii) for each Disrupted Component that is not a Final Disrupted Component, the Underlying Value on the Final Observation Date, (iii) for each Final Disrupted Component that is an Underlying Stock or an Underlying Fund, the closing price of one share of that Underlying Stock or Underlying Fund, as applicable, determined by the calculation agent in good faith based on the calculation agent's assessment of the market value of one share of that Underlying Stock or Underlying Fund, as applicable, on the Final Disrupted Observation Date, and (iv) for each Final Disrupted Component that is an Index, unless otherwise specified in the relevant term sheet or any accompanying underlying supplement, the closing level of that Index determined by the calculation agent in accordance with the formula for and method of calculating the closing level of that 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 that Final Disrupted Observation Date of each security most recently constituting that Index.

Unless otherwise specified in the relevant term sheet, in case an event of default with respect to the notes shall have occurred and be continuing, if the notes include an automatic redemption feature, the amount declared due and payable per note upon any acceleration of the notes will be determined by the calculation agent and will be (1) if (a) the date of acceleration is an Observation Date for the automatic redemption feature and the conditions for an automatic redemption would have been satisfied on the date of acceleration or (b) the date of acceleration is not an Observation Date for the automatic redemption feature, but the conditions for an automatic redemption would have been satisfied on the date of acceleration if the date of acceleration were the next succeeding Observation Date for the automatic redemption feature, an amount in cash equal to the amount payable upon an automatic redemption per note calculated in the manner described in the relevant term sheet and calculated as if the date of acceleration were (i) that Observation Date and (ii) the Final Disrupted Observation Date for that Observation Date, or (2) in all other circumstances, an amount in cash equal to the amount payable at maturity per note (which, for the avoidance of doubt, shall also include any final coupon payment which would also be payable on the maturity date) calculated in the manner described in the relevant term sheet and calculated as if the date of acceleration were (a) the Final Observation Date and (b) the Final Disrupted Observation Date (if the date of acceleration is a Disrupted Day).

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

If the final value of a Market Measure is determined on more than one Observation Date or calculation day, as applicable, then, for each Observation Date or calculation day, as applicable, 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 Observation Dates or calculation days, as applicable, in excess of one) will be the corresponding Observation Dates or calculation days, as applicable, provided that, should any such Observation Date or calculation day be a Disrupted Day, the applicable Observation Date or calculation day will be determined in the same manner as the Final Observation Date as set out in clause (a) of this section, unless otherwise specified in the relevant term sheet.

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

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

## Additional Terms Related to Payment upon an Event of Default Only

A "**Disrupted Day**" means, unless otherwise specified in the relevant term sheet or any accompanying underlying supplement, with respect to an Index, Underlying Fund or Underlying Stock, a day that is not a trading day with respect to that Index, Underlying Fund or Underlying Stock or a day on which a market disruption event occurs or is continuing with respect to that Index, Underlying Fund or Underlying Stock.

A "**scheduled trading day**" means, unless otherwise specified in the relevant term sheet or any accompanying underlying supplement:

- (a) with respect to an Underlying Stock, an Underlying Fund or any successor fund, a day, as determined by the calculation agent, on which each of the following exchanges is scheduled to be open for trading for their respective regular trading sessions: (i) the relevant exchange for that Underlying Stock, Underlying Fund or successor fund, as applicable, and (ii) the exchanges on which futures or options contracts related to that Underlying Stock, Underlying Fund or successor fund, as applicable, are traded; or, with respect to a security issued by a foreign issuer that is not listed or admitted to trading on a U.S. securities exchange or market, a day, as determined by the calculation agent, on the primary non-U.S. securities exchange or market on which that security is listed or admitted to trading is scheduled to be open for trading for its regular trading session; and
- (b) with respect to an Index or any relevant successor index, a day, as determined by the calculation agent, on which each of the following exchanges is scheduled to be open for trading for their respective regular trading sessions: (i) the relevant exchanges 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, as applicable, are traded.

A "**trading day**" means, unless otherwise specified in the relevant term sheet or any accompanying underlying supplement:

- (a) with respect to an Underlying Stock, an Underlying Fund or any successor fund, a day, as determined by the calculation agent, on which trading is generally conducted on (i) the relevant exchange for that Underlying Stock, Underlying Fund or successor fund, as applicable, and (ii) the exchanges on which futures or options contracts related to that Underlying Stock, Underlying Fund or successor fund, as applicable, are traded; or, with respect to a security issued by a foreign issuer that is not listed or admitted to trading on a U.S. securities exchange or market, a day, as determined by the calculation agent, on which trading is generally conducted on the primary non-U.S. securities exchange or market on which that security is listed or admitted to trading; and
- (b) 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 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, as applicable, are traded.

#### Modification

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

#### **Defeasance**

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

## Listing

Unless otherwise specified in the applicable term sheet, the notes will not be listed on a securities exchange or quotation 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 for the notes and may designate additional paying agents.

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

#### Governing Law

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

# Reopening Issuances

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

The Issuer has no obligation to take your interests into account when deciding whether to issue additional notes. In addition, the Issuer is under no obligation to reopen any series of notes or to issue any additional notes.

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

#### The Estimated Value of the Notes

Unless otherwise specified in the relevant term sheet, the estimated value of the notes when the terms of the notes are set, which is referred to as the estimated value of the notes, will be set forth on the cover of the relevant term sheet and will be equal to the sum of the values of the following hypothetical components: (1) a fixed-income debt component with the same maturity as the notes, valued using the internal funding rate described below, and (2) the derivative or derivatives underlying the economic terms of the notes. The estimated value of the notes will not represent a minimum price at which JPMS would be willing to buy your notes in any secondary market (if any exists) at any time.

For notes issued by JPMorgan Financial, the internal funding rate used in the determination of the estimated value of the notes will be the Issuer's internal funding rate for structured debt, which will generally represent a discount from the credit spreads for JPMorgan Chase & Co.'s conventional fixed-rate debt. This internal funding rate may differ from the market-implied funding rate for vanilla fixed income instruments of a similar maturity issued by JPMorgan Chase & Co. or its affiliates. Any difference may be based on, among other things, the Issuer's and its affiliates' view of the funding value of the notes as well as the higher issuance, operational and ongoing liability management costs of the notes in comparison to those costs for the conventional fixed income instruments of JPMorgan Chase & Co. This internal funding rate is based on certain market inputs and assumptions, which may prove to be incorrect, and is intended to approximate the prevailing market replacement funding rate for the notes. The use of an internal funding rate and any potential changes to that rate may have an adverse effect on the terms of the notes and any secondary market prices of the notes. For additional information, see "Risk Factors-Valuation- and Market-related Risks -The estimated value of the notes will be derived by reference to an internal funding rate and will not be determined by reference to credit spreads for JPMorgan Chase & Co.'s conventional fixed income instruments" above in this product supplement.

The value of the derivative or derivatives underlying the economic terms of the notes will be derived from internal pricing models of the Issuer's affiliates. These models are dependent on inputs such as the traded market prices of comparable derivative instruments and on various other inputs, some of which are market-observable, and which can include volatility, correlation, dividend rates, interest rates and other factors, as well as assumptions about future market events and/or environments. Accordingly, the estimated value of the notes will be determined when the terms of the notes are set based on market conditions and other relevant factors and assumptions existing at that time. See "Risk Factors—Valuation- and Market-related Risks—The estimated value of the notes will not represent future values of the notes and may differ from others' estimates" above in this product supplement.

Unless otherwise specified in the relevant term sheet, the estimated value of the notes will be lower than the original issue price of the notes because costs associated with selling, structuring and hedging the notes will be included in the original issue price of the notes. These costs include the selling commissions, referral fees, if any, and structuring fees, if any, paid to JPMS and/or other affiliated or unaffiliated dealers, the projected profits, if any, that the Issuer's affiliates expect to realize for assuming risks inherent in hedging its obligations under the notes and the estimated cost of hedging its obligations under the notes. Because

hedging the Issuer's obligations entails risk and may be influenced by market forces beyond its control, this hedging may result in a profit that is more or less than expected, or it may result in a loss. The Issuer or one or more of its affiliates will retain any profits realized in hedging the Issuer's obligations under the notes unless a portion of the hedging profits is allowed to other affiliated or unaffiliated dealers. Under those circumstances, the Issuer or one or more of its affiliates will retain any remaining hedging profits. See "Risk Factors—Valuation- and Market-related Risks—The estimated value of the notes will be lower than the original issue price (price to public) of the notes" above in this product supplement.

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

For information about factors that will impact any secondary market prices of the notes, see "Risk Factors—Valuation- and Market-related Risks—The notes are not designed to be short-term trading instruments, and if you attempt to sell the notes prior to maturity, their market value, if any, will be affected by various factors that interrelate in complex ways, and their market value may be less than the principal amount" above in this product supplement. In addition, the relevant term sheet may specify that the Issuer will generally expect some of the costs included in the original issue price of the notes to be partially paid back to you in connection with any repurchases of your notes by JPMS in an amount that will decline to zero over an initial predetermined period that will be specified in the relevant term sheet. The length of any such initial period will reflect the structure of the notes, whether the Issuer's affiliates expect to earn a profit in connection with the Issuer's hedging activities, the estimated costs of hedging the notes and when these costs are incurred, all as determined by JPMS. See "Risk Factors—Valuation- and Market-related Risks—The value of the notes as published by JPMS (and which may be reflected on customer account statements) may be higher than the thencurrent estimated value of the notes for a limited time period" above in this product supplement.

#### PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

Under the terms and subject to the conditions contained in the Master Agency Agreement entered into among JPMorgan Financial, as issuer, JPMorgan Chase & Co., as guarantor, and J.P. Morgan Securities LLC, as agent (an "Agent" or "JPMS"), and certain other agents that are or may become party to that 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 term sheet.

The Issuer 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. The Issuer will pay an Agent, in connection with sales of these notes resulting from a solicitation that Agent made or an offer to purchase that Agent received, a commission as set forth in the relevant term sheet. An Agent will allow a concession to other dealers, or the Issuer may pay other fees, in the amount set forth on the cover page of the relevant term sheet.

The Issuer 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 term sheet. 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 the Issuer will specify in the relevant term sheet. 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 term sheet, the discount allowed to any dealer will not be in excess of the discount that Agent will receive from the Issuer. 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.

The Issuer's and the Guarantor's affiliates, including JPMS, may use this product supplement, any accompanying underlying supplement and the prospectus supplement, Annex A to the accompanying prospectus supplement, prospectus or term sheet in connection with offers and sales of the notes in the secondary market. JPMS or another Agent may act as principal or agent in connection with offers and sales of the notes in the secondary market. Secondary market offers and sales will be made at prices related to market prices at the time of that offer or sale; accordingly, the Agents or a dealer may change the public offering price, concession and discount after the offering has been completed.

Unless otherwise specified in the relevant term sheet, there is currently no public trading market for the notes. In addition, unless otherwise specified in the relevant term sheet, the Issuer has not applied and does 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, there are no assurances 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.

Certain of the Agents engage in transactions with and perform services for the Issuer, the Guarantor and their affiliates in the ordinary course of business.

No action has been or will be taken by the Issuer, the Guarantor, JPMS or any dealer that would permit a public offering of the notes or possession or distribution of this product supplement, any accompanying underlying supplement or the prospectus supplement, Annex A to the accompanying prospectus supplement, prospectus or term sheet, other than in the

United States, where action for that purpose is required. No offers, sales or deliveries of the notes, or distribution of the relevant term sheet, this product supplement, any underlying supplement, the prospectus supplement, Annex A to the accompanying prospectus supplement or the prospectus or any other offering material relating to the notes, may be made in or from any jurisdiction except in circumstances which will result in compliance with any applicable laws and regulations and will not impose any obligations on the Issuer, the Guarantor, 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 the Issuer's or the Guarantor's behalf, unless the consent, approval or permission has been previously obtained. The Issuer and the Guarantor 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.

Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in one business day, unless the parties to that trade expressly agree otherwise. The Issuer expects that delivery of the notes will be made against payment for the notes on the settlement date specified in the relevant term sheet, which may be more than one business day following the pricing date specified in the relevant term sheet. Accordingly, if the initial settlement of the notes occurs more than one business day after the pricing date, purchasers who wish to trade the notes on any date prior to one business day before delivery will be required to specify an alternate settlement cycle at the time of any such trade to prevent a failed settlement and should consult their own advisors.

#### **Conflicts of Interest**

JPMS has a "conflict of interest" within the meaning of FINRA Rule 5121 in any offering of the notes in which it participates because JPMorgan Chase & Co. owns, directly or indirectly, all of the outstanding equity securities of JPMS, because JPMS and JPMorgan Financial are under common control by JPMorgan Chase & Co. and because the net proceeds received from the sale of the notes will be used, in part, by JPMS or its affiliates in connection with hedging the Issuer's obligations under the notes. The offer and sale of the notes by JPMS will comply with the requirements of FINRA Rule 5121 regarding a FINRA member firm's participation in a public offering of notes of an affiliate. In accordance with FINRA Rule 5121, neither JPMS nor any other affiliated underwriter, agent or dealer of the Issuer may sell the notes to any of its discretionary accounts without the specific written approval of the customer.

## MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES

The following is a discussion of the material U.S. federal income and certain estate tax consequences of owning and disposing of notes. It applies to you only if you are an initial investor who purchases a note at its issue price for cash and holds it as a capital asset within the meaning of Section 1221 of the Internal Revenue Code of 1986, as amended (the "Code"). Throughout this discussion, "Underlying Equity" refers to any share of Underlying Stock, any share or other ownership interest in an Underlying Fund and any share or other ownership interest underlying an Index, including as part of a basket of the foregoing or the worst-performing of any of the foregoing.

This discussion does not address all aspects of U.S. federal income and estate taxation that may be relevant to you in light of your particular circumstances, including any alternative minimum tax consequences, the consequences to taxpayers subject to special tax accounting rules under Section 451(b) of the Code, the potential application of the provision of the Code known as the Medicare contribution tax and the different consequences that may apply if you are an investor subject to special treatment under the U.S. federal income tax laws, such as:

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

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

The Issuer will not attempt to ascertain whether any issuer of Underlying Equity (each, an "**Underlying Issuer**") should be treated as a "United States real property holding corporation" (a "**USRPHC**") within the meaning of Section 897 of the Code or a "passive foreign investment company" (a "**PFIC**") within the meaning of Section 1297 of the Code. If any Underlying Issuer were so treated, certain adverse U.S. federal income tax consequences might apply to you, in the case of a USRPHC if you are a Non-U.S. Holder (as defined below), and in the case of a PFIC if you are a U.S. Holder, upon a sale, exchange or other disposition of your notes.

This discussion is based on the Code, administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations as of the date of this product

supplement, changes to any of which, subsequent to the date hereof, may affect the tax consequences described herein. The effects of any applicable state, local or non-U.S. tax laws are not discussed.

You should consult your tax adviser concerning the application of U.S. federal income and estate tax laws to your particular situation (including the possibility of alternative treatments of the notes), as well as any tax consequences arising under the laws of any state, local or non-U.S. jurisdiction.

#### Tax Treatment of the Notes

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

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

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

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

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

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

The following describes the material U.S. federal income tax consequences of the ownership and disposition of notes that the Issuer treats as "open transactions" that are not debt instruments for U.S. federal income tax purposes. The relevant term sheet will indicate whether the Issuer intends to treat the notes as open transactions that are not debt instruments for U.S. federal income tax purposes.

Tax Treatment as Open Transactions That Are Not Debt Instruments. Under this treatment, you should not recognize taxable income or loss other than pursuant to a sale or exchange (including acceleration, early redemption or repurchase, "deemed" taxable exchange, as described below, or maturity). Upon a sale or exchange of a note, you should recognize gain or loss equal to the difference between the amount realized on the sale or exchange and your

tax basis in the note, which should equal the amount you paid to acquire it. Subject to the discussion below concerning the potential application of the "constructive ownership" rules under Section 1260 of the Code, this gain or loss should be long-term capital gain or loss if you have held the note for more than one year at that time. The deductibility of capital losses is subject to limitations. Depending on the nature of the Underlying Equity, the IRS might assert that a "deemed" taxable exchange has occurred under certain circumstances during the term of the note. The relevant term sheet may contain additional disclosure regarding this risk.

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

Uncertainties Regarding Tax Treatment as Open Transactions That Are Not Debt Instruments. If the notes are treated as open transactions that are not debt instruments, due to the lack of controlling authority there remain significant additional uncertainties regarding the tax consequences of owning and disposing of them. For instance, you might be required to include amounts in income during the term of your notes and/or to treat all or a portion of the gain or loss on the sale or exchange of your notes as ordinary income or loss or as short-term capital gain or loss, without regard to how long you have held them. In addition, in 2007 Treasury and the IRS released a notice requesting comments on the U.S. federal income tax treatment of "prepaid forward contracts" and similar instruments. The notice focuses in particular on whether to require investors in these instruments to accrue income over the term of their investment. It also asks for comments on a number of related topics, including the

character of income or loss with respect to these instruments; the relevance of factors such as the nature of the underlying property to which the instruments are linked; and whether these instruments are or should be subject to the "constructive ownership" regime described above. While the notice requests comments on appropriate transition rules and effective dates, any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the notes, possibly with retroactive effect.

Tax Consequences if Treated as Debt Instruments. If the notes are treated as debt instruments, your tax consequences are expected to be governed by Treasury regulations relating to the taxation of "contingent payment debt instruments" if the term of the notes from issue to maturity (excluding the issue date, but including the last possible date that the notes could be outstanding) is more than one year. In this event, regardless of whether you are an accrual-method or cash-method taxpayer, (i) in each year that you hold your notes, you will be required to accrue into income original issue discount ("OID") on your notes at the Issuer's "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.

#### Possible Taxable Event

It is possible that a material change to the terms of a series of notes (which might include a reorganization event, a change in the components of an Index, the designation of a successor equity index, successor fund, successor stock or replacement stock, or other similar circumstances) could result in the notes being treated as terminated and reissued for U.S. federal income tax purposes (a "taxable event"). In that event, you might be required to recognize gain or loss (subject to the possible application of the wash sale rules) with respect to your notes, and your holding period for your notes could be affected. Moreover, depending on the facts at the time of the taxable event, the reissued notes could be characterized for U.S. federal income tax purposes in a manner different from their original treatment, which could have material and potentially adverse consequences with respect to the timing and character of income that you recognize with respect to your notes following the taxable event. You should consult your tax adviser regarding the consequences of a taxable event with respect to the notes.

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

The following describes the material U.S. federal income tax consequences of the ownership and disposition of notes that are treated as units comprising a put option and a deposit for U.S. federal income tax purposes. The relevant term sheet will indicate whether the Issuer intends to treat the notes as units each comprising a put option and a deposit for U.S. federal income tax purposes. Unless otherwise indicated in the relevant term sheet, insofar as the Issuer has tax reporting responsibilities with respect to these notes, the Issuer expects (in the absence of an administrative determination or judicial ruling to the contrary) to treat them for U.S. federal income tax purposes as units each comprising (i) a cash-settled put option written by you (a "**Put Option**") that is terminated if an early redemption occurs and that, if not terminated, requires you to receive the cash value determined by the Underlying Equity from the Issuer at maturity for an amount equal to the Deposit (as defined below) and (ii) a deposit of \$1,000 per \$1,000 principal amount note to secure your potential obligation under the Put Option (the "**Deposit**"). Under this approach, a portion of each interest payment (including at maturity) made with respect to the notes will be treated as interest on the Deposit, and the

remainder as premium paid to you in consideration of your entry into the Put Option (a "**Put Premium**"). The Issuer will specify in the relevant term sheet the portion of each interest payment that the Issuer will allocate to interest on the Deposit and to Put Premium, respectively.

# Notes with a Term of Not More than One Year

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

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

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

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

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

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

Alternatively, the notice described above in "— Notes Treated as Open Transactions That Are Not Debt Instruments—Uncertainties Regarding Tax Treatment as Open Transactions That Are Not Debt Instruments" may apply to your notes. While it is not entirely clear whether the notes would be viewed as similar to the typical prepaid forward contract described in the notice, or whether the scope of the notice extends to short-term instruments such as the notes, it is possible that any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the notes, possibly with retroactive effect. The notice focuses on a number of issues, the most relevant of which for U.S. Holders of short-term notes are the timing and character of income or loss (including whether the Put Premium might be currently included as ordinary income). You should consult your tax adviser regarding the U.S. federal income tax consequences of an investment in the notes, including possible alternative treatments and the issues presented by this notice.

**Possible Taxable Event.** It is possible that a material change to the terms of a series of notes could result in a taxable event, as defined and described above in "— Notes Treated as Open Transactions That Are Not Debt Instruments—Possible Taxable Event."

## Notes with a Term of More than One Year

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

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

Put Premium will be taken into account as described below.

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

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

If the value of the Deposit on the date of sale or exchange exceeds the amount realized on the sale or exchange of the note, you will be treated as having (i) sold or exchanged the Deposit for an amount equal to its value on that date and (ii) made a payment to the purchaser of the note equal to the amount of this excess, in exchange for the purchaser's assumption of

the Put Option. In this case, you will be required to recognize short-term capital gain or loss in respect of the Put Option equal to the total Put Premium received over the term of the note minus the amount deemed to be paid by you in exchange for the purchaser's assumption of the Put Option.

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

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

Other Possible Tax Treatments. The IRS might treat the notes as "contingent payment debt instruments." In that event, regardless of whether you are an accrual-method or cashmethod 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 the Issuer's "comparable yield" for similar noncontingent debt, determined at the time of the issuance of the notes and (ii) any income recognized at maturity or upon sale or exchange of your notes generally will be treated as interest income. In addition, you could be subject to special reporting requirements if any loss exceeded certain thresholds.

Alternatively, the notice described above in "— Notes Treated as Open Transactions That Are Not Debt Instruments—Uncertainties Regarding Tax Treatment as Open Transactions That Are Not Debt Instruments" may apply to your notes. While it is not entirely clear whether the notes would be viewed as similar to the typical prepaid forward contract described in the notice, it is possible that any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the notes, possibly with retroactive effect. The notice focuses on a number of issues, the most relevant of which for U.S. Holders of the notes are the timing and character of income or loss (including whether the Put Premium might be currently included as ordinary income). You should consult your tax adviser regarding the U.S. federal income tax consequences of an investment in the notes, including possible alternative treatments and the issues presented by this notice.

**Possible Taxable Event.** It is possible that a material change to the terms of a series of notes could result in a taxable event, as defined and described above in "— Notes Treated as Open Transactions That Are Not Debt Instruments—Possible Taxable Event."

# Notes Treated as Prepaid Forward Contracts with Associated Contingent Coupons

The following describes the material U.S. federal income tax consequences of owning and disposing of notes that the Issuer treats as prepaid forward contracts with associated contingent coupons for U.S. federal income tax purposes ("Contingent Interest Notes"). The relevant term sheet will indicate whether the Issuer intends to treat an offering of notes as Contingent Interest Notes. Unless otherwise indicated in the relevant term sheet, insofar as the Issuer has tax reporting responsibilities with respect to these notes, the Issuer intends to treat

them as prepaid forward contracts with associated contingent coupons for U.S. federal income tax purposes.

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

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

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

Alternatively, the notice described above in "— Notes Treated as Open Transactions That Are Not Debt Instruments—Uncertainties Regarding Tax Treatment as Open Transactions That Are Not Debt Instruments" may apply to your notes. While it is not entirely clear whether the notes would be viewed as similar to the typical prepaid forward contract described in the notice, it is possible that any Treasury regulations or other guidance promulgated after consideration of these issues could materially affect the tax consequences of an investment in the notes, possibly with retroactive effect. You should consult your tax adviser regarding the U.S. federal income tax consequences of an investment in the notes, including possible alternative treatments and the issues presented by this notice.

Tax Consequences if Treated as Debt Instruments. If the notes are treated as debt instruments, your tax consequences are expected to be governed by Treasury regulations relating to the taxation of "contingent payment debt instruments" if the term of the notes from issuance to maturity (excluding the issue date, but including the last possible date that the notes could be outstanding) is more than one year. In this event, regardless of whether you are an accrual-method or cash-method taxpayer, in each year that you hold your notes, you will be required to accrue into income original issue discount on your notes at the Issuer's "comparable yield" for similar noncontingent debt, determined at the time of the issuance of the notes, subject to certain adjustments, with the result that your taxable income in any year

could differ significantly from the contingent interest payments (if any) you receive in that year. In addition, any gain recognized upon a sale or exchange of your notes generally will be treated as interest income, and if you recognize a loss above certain thresholds, you might be required to file a disclosure statement with the IRS.

Possible Taxable Event. It is possible that a material change to the terms of a series of notes could result in a taxable event, as defined and described above in "— Notes Treated as Open Transactions That Are Not Debt Instruments—Possible Taxable Event."

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

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

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

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

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

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

The U.S. federal income tax treatment of Contingent Interest Notes is uncertain, and although we believe it is reasonable to take a position that contingent interest payments are not subject to U.S. withholding tax (at least if an applicable Form W-8 is provided), it is expected that withholding agents will (and we, if we are the withholding agent, intend to) withhold on any contingent interest payment paid to a Non-U.S. Holder generally at a rate of 30% or at a reduced rate specified by an applicable income tax treaty under an "other income" or similar provision. We will not be required to pay any additional amounts with respect to amounts withheld. In order to claim an exemption from, or a reduction in, the 30% withholding tax, a Non-U.S. Holder of the notes must comply with certification requirements to establish that it is not a U.S. person and is eligible for such an exemption or reduction under an applicable tax treaty. If you are a Non-U.S. Holder, you should consult your tax adviser

regarding the tax treatment of the notes, including the possibility of obtaining a refund of any withholding tax and the certification requirement described above.

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

Regulations under Section 871(m) impose a 30% withholding tax on certain "dividend equivalents" paid or deemed paid with respect to derivatives linked to U.S. stocks or indices that include U.S. stocks under certain circumstances, even in cases where the derivatives do not provide for payments explicitly linked to dividends. In general, this withholding regime applies to derivatives that substantially replicate the economic performance of one or more underlying U.S. stocks, as determined on the derivatives' issue date, based on one of two tests set forth in the regulations. The regulations provide certain exceptions to the withholding requirements, for example for derivatives linked to certain broad-based indices. Additionally, an IRS notice excludes from the scope of Section 871(m) instruments issued prior to January 1, 2027 that do not have a delta of one with respect to underlying securities that could pay U.S.-source dividends for U.S. federal income tax purposes.

The Issuer will disclose further information regarding the application of Section 871(m) in the relevant term sheet. The Issuer's determination as to whether Section 871(m) applies to a series of notes is binding on Non-U.S. Holders, but it is not binding on the IRS. The Section 871(m) regulations require complex calculations to be made with respect to derivatives linked to U.S. stocks, and their application to a specific series of notes may be uncertain. Accordingly, even if the Issuer determines that Section 871(m) does not apply to a series of notes, the IRS could challenge the Issuer's determination and assert that withholding is required in respect of those notes. Additionally, the application of Section 871(m) may be affected by a Non-U.S. Holder's particular circumstances (for example, where a Non-U.S. Holder enters into two or more transactions that reference the same underlying security and the transactions were entered into in connection with each other). You should consult your tax adviser regarding the potential application of Section 871(m) to a series of notes.

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

#### Federal Estate Tax

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

## **Backup Withholding and Information Reporting**

You may be subject to information reporting. You may also be subject to backup withholding on payments in respect of your notes unless you provide proof of an applicable

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

#### **FATCA**

Legislation commonly referred to as "FATCA," and regulations promulgated thereunder, generally impose a 30% withholding tax on payments to certain non-U.S. entities (including financial intermediaries) unless various U.S. information reporting and due diligence requirements have been satisfied. An intergovernmental agreement between the United States and the non-U.S. entity's jurisdiction may modify these requirements. This regime may apply to amounts properly treated as interest or other "fixed or determinable annual or periodical" income ("FDAP Income") for U.S. federal income tax purposes paid with respect to a note including "dividend equivalents" (as described above). If a note is treated in whole or in part as indebtedness or if it gives rise to "dividend equivalents," withholding could also apply to payments of gross proceeds of a taxable disposition, including early redemption or repurchase, acceleration or redemption at maturity. However, under regulations proposed in 2018 (the preamble to which specifies that taxpayers are permitted to rely on them pending finalization), no withholding will apply to payments of gross proceeds (other than any amount treated as FDAP Income). You should consult your tax adviser regarding the potential application of FATCA to the notes.

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

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

#### BENEFIT PLAN INVESTOR CONSIDERATIONS

A fiduciary of a pension, profit-sharing or other employee benefit plan subject to Title I of 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 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, referred to herein as "**Parties in Interest**") with respect to such Plans. As a result of their businesses, JPMorgan Chase & Co. and its current and future affiliates (including JPMorgan Financial), as well as the other unaffiliated dealers, may be Parties in Interest with respect to many Plans; where any of them is a Party in Interest with respect to a Plan (either directly or by reason of such entity's ownership interests in its 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.

In this regard, 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 or result in 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 or a Plan Asset Entity and its purchase and holding of the notes is not made on behalf of or with "plan assets" of any Plan or a Plan Asset Entity or (b) its purchase, holding

and subsequent disposition of the notes will not constitute or result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code.

In this regard, 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) (collectively, "Non-ERISA Arrangements") are not subject to the fiduciary responsibility or 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 will be required to represent, and be deemed to have represented by its purchase or holding of the notes, that its purchase, holding and subsequent disposition of the notes will not constitute or result in a violation of any 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, Plan Asset Entity or Non-ERISA Arrangement consult with their counsel regarding the relevant provisions of ERISA, the Code or applicable 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 of the notes will not constitute or result in 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 will make all investment decisions for the purchaser or holder and the purchaser or holder has not relied and will not rely in any way upon the Issuer, the Guarantor or any of their 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 the purchaser or holder, or the Issuer, the Guarantor or any of their affiliates, has under or with respect to the notes;
- (ii) the Issuer and its affiliates have acted and will act solely for the Issuer's own accounts in connection with (A) all transactions relating to the notes and (B) all hedging transactions in connection with its or its affiliates' obligations under the notes;
- (iii) any and all assets and positions relating to hedging transactions by the Issuer or its affiliates are assets and positions of those entities and are not assets and positions held for the benefit of the purchaser or holder;
- (iv) the Issuer's and the Guarantor's interests are adverse to the interests of the purchaser or holder; and
- (v) none of the Issuer, the Guarantor and any of their affiliates is a fiduciary or adviser of the purchaser or holder in connection with any such assets, positions or

transactions, and any information that the Issuer, the Guarantor or any of their 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, Plan Asset Entity or Non-ERISA Arrangement is in no respect a representation or advice by the Issuer, the Guarantor or any of their affiliates or representatives as to whether such an investment is appropriate for, or meets all relevant legal requirements with respect to investments by, Plans, Plan Asset Entities or Non-ERISA Arrangements generally or any particular Plan, Plan Asset Entity or Non-ERISA Arrangement. Neither this discussion nor anything in this product supplement is or is intended to be investment advice directed at any potential Plan, Plan Asset Entity or Non-ERISA Arrangement purchaser or at such purchasers generally.