

JPMORGAN CHASE & CO.

Interest Rate Linked Notes

Interest Rate and Equity Index Linked Notes

General

- JPMorgan Chase & Co. may offer and sell interest rate linked notes and interest rate and equity index linked notes from time to time. This product supplement no. 1-V describes terms that will apply generally to the notes, and supplements the terms described in the accompanying prospectus supplement and prospectus. A separate term sheet or pricing supplement, as the case may be, will describe terms that apply to specific issuances of the notes, including any changes to the terms specified below. We refer to such term sheets and pricing supplements generally as terms supplements. A separate underlying supplement or the relevant terms supplement will describe any interest rate or equity index to which the notes are linked but not described in this product supplement. If the terms described in the relevant terms supplement are inconsistent with those described herein or in any related underlying supplement or in the accompanying prospectus supplement or prospectus, the terms described in the relevant terms supplement will control.
- The notes are unsecured and unsubordinated obligations of JPMorgan Chase & Co. Any payment on the notes is subject to the credit risk of JPMorgan Chase & Co.
- The interest we will pay on the notes is a fixed rate and/or a floating rate linked to one or more of the U.S. Dollar Constant Maturity Swap ("USD CMS") Rate, the Euro Constant Maturity Swap ("EUR CMS") Rate, the London Interbank Offered Rate ("LIBOR"), the U.S. Consumer Price Index, the Constant Maturity U.S. Treasury ("CMT") Rate, the SIFMA Municipal Swap Index or one or more equity indices or such other rate or rates as specified in the relevant terms supplement. The interest rate on the notes may be fixed for an initial period and then become a floating rate. The interest rate on the notes may also be linked to a spread between the interest rates, multiplied by a leverage factor or increased or decreased by a spread or may be subject to an Accrual Provision.
- If so specified in the relevant terms supplement, at our option, we may redeem the notes, in whole or in part, on any of the specified Redemption Dates.
- For important information about tax consequences, see "Material U.S. Federal Income Tax Consequences" beginning on page PS-40.
- Minimum denominations of \$1,000 and integral multiples thereof, unless otherwise specified in the relevant terms supplement.
- The notes will not be listed on any securities exchange, unless otherwise specified in the relevant terms supplement.

Key Terms

Components:	In this product supplement, we refer to each interest rate or equity index to which the notes are linked as a "Component" (collectively, the "Components"). In addition, we refer to any equity index to which the notes are linked as an "Equity Index."
Maturity Date:	As specified in the relevant terms supplement; <i>provided</i> that the maturity date will not be less than one year and one day (counting for this purpose the issue date but not the maturity date) after the issue date. The maturity date of the notes is subject to adjustment in the event of certain market disruption events and in accordance with the Business Day Convention and the Interest Accrual Convention as described under "Description of Notes — Payment on the Notes."
Payment at Maturity:	Your payment at maturity per \$1,000 principal amount note will be as specified in the relevant terms supplement and may be linked to the performance of an Equity Index or the least performing of two or more Equity Indices. Unless otherwise specified in the relevant terms supplement, if your notes are not linked to the performance of an Equity Index or the least performing of two or more Equity Indices and if the notes have not been redeemed (if applicable), at maturity you will receive a cash payment for each \$1,000 principal amount note equal to \$1,000 <i>plus</i> any accrued and unpaid interest.
Payment upon Redemption (if applicable):	If so specified in the relevant terms supplement, at our option, we may redeem the notes, in whole or in part, on any of the specified Redemption Dates. Unless otherwise specified in the relevant terms supplement, if the notes are redeemed, you will receive, on the applicable Redemption Date, a cash payment equal to \$1,000 for each \$1,000 principal amount note redeemed, in accordance with the Business Day Convention and the Interest Accrual Convention as described under "Description of Notes — Payment on the Notes." Any accrued and unpaid interest on notes redeemed will be paid to the person who is the holder of record of such notes at the close of business on the date one (1) business day prior to the applicable Redemption Date.
Redemption Date(s) (if applicable):	As specified in the relevant terms supplement. Any Redemption Date is subject to adjustment in accordance with the Business Day Convention and the Interest Accrual Convention as described under "Description of Notes — Payment on the Notes."
Interest:	Unless otherwise specified in the relevant terms supplement, with respect to each Interest Period, for each \$1,000 principal amount note, the interest payment will be calculated as follows: $\$1,000 \times \text{Interest Rate} \times \text{Day-Count Fraction}$
Interest Rate (if an Accrual Provision is not applicable):	With respect to any Interest Period, a rate per annum as specified in the relevant terms supplement, which may be a fixed rate or a floating rate linked to a rate or rates specified in the relevant terms supplement and, if so specified in the relevant terms supplement, linked to a spread between the interest rates, multiplied by a Leverage Factor and/or plus or minus a spread. If the Interest Rate for any Interest Period is specified as a fixed rate in the relevant terms supplement, such Interest Rate may increase or decrease on one or more Interest Payment Dates at the beginning of the applicable Interest Period(s). If the Interest Rate for any Interest Period is determined by reference to a floating rate, for purposes of the determination of the Interest Rate for an Interest Period, that floating rate will be reset on each Interest Reset Date, as specified in the relevant terms supplement. For example, the relevant terms supplement may specify that the Interest Rate on the notes will be (1) 5.00% per annum from and including the issue date to but excluding the first Interest Payment Date, (2) 5.25% per annum from and including the first Interest Payment Date to but excluding the second Interest Payment Date and (3) 6.00% per

annum from and including the second Interest Payment Date to but excluding the Interest Payment Date for the final Interest Period. Alternatively, for example, the relevant terms supplement may specify that the Interest Rate for each Interest Period will be equal to the sum of (1) the LIBOR Rate with a Designated Maturity of three months which is determined on the applicable Interest Reset Date plus (2) a spread of 4.00%. For the avoidance of doubt, the Interest Rate may be one or more rates per annum that can be fixed or floating (linked to a spread between the interest rates, multiplied by a Leverage Factor and/or plus or minus a spread, if applicable), and each such rate per annum may be specified with respect to an Interest Period. In addition, an Interest Rate may change from one Interest Period to another from one fixed or floating rate to another fixed or floating rate (in each case, linked to a spread between the interest rates, multiplied by a Leverage Factor and/or plus or minus a spread, if applicable).

Interest Rate (if an Accrual Provision is applicable): If the relevant terms supplement specifies an Accrual Provision, the Interest Rate for each Interest Period (other than an Interest Period(s) to which a fixed rate applies, as applicable) will be calculated as follows:

$$\text{Interest Factor} \times \frac{\text{Variable Days}}{\text{Actual Days}}, \text{ where}$$

“Variable Days” is the number of calendar days during the relevant Interest Period on which the Accrual Provision is satisfied.

Interest Factor: With respect to any Interest Period, a rate per annum as specified in the relevant terms supplement, which may be a fixed rate or a floating rate linked to a rate specified in the relevant terms supplement and, if so specified in the relevant terms supplement, linked to a spread between the interest rates, multiplied by a Leverage Factor and/or plus or minus a spread. If the Interest Factor for any Interest Period is specified as a fixed rate in the relevant terms supplement, such Interest Factor may increase or decrease from one Interest Period to another. If the Interest Factor for any Interest Period is determined by reference to a floating rate, for purposes of the determination of the Interest Factor for an Interest Period, that floating rate will be reset on each Interest Reset Date, as specified in the relevant terms supplement. For example, the relevant terms supplement may specify that the Interest Factor on the notes will be (1) 5.00% from and including the issue date to but excluding the first Interest Payment Date, (2) 5.25% from and including the first Interest Payment Date to but excluding the second Interest Payment Date and (3) 6.00% from and including the second Interest Payment Date to but excluding the Interest Payment Date for the final Interest Period. Alternatively, for example, the relevant terms supplement may specify that the Interest Factor for each Interest Period will be equal to the sum of (1) the LIBOR Rate with a Designated Maturity of three months which is determined on the applicable Interest Reset Date plus (2) a spread of 4.00%. For the avoidance of doubt, the Interest Factor may be one or more rates per annum that can be fixed or floating (linked to a spread between the interest rates, multiplied by a Leverage Factor and/or plus or minus a spread, if applicable), and each such rate per annum may be specified with respect to an Interest Period. In addition, an Interest Factor may change from one Interest Period to another from one fixed or floating rate to another fixed or floating rate (in each case, linked to a spread between the interest rates, multiplied by a Leverage Factor and/or plus or minus a spread, if applicable).

Index Return: Unless otherwise specified in the relevant terms supplement, with respect to an Equity Index:
Ending Index Level – Initial Index Level (or Index Strike Level, if applicable)
Initial Index Level (or Index Strike Level, if applicable)

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

Ending Index Level: Unless otherwise specified in the relevant terms supplement, with respect to an Equity Index, the Equity Index Level of that Equity Index on the Observation Date or such other date as specified in the relevant terms supplement.

Least Performing Index: Unless otherwise specified in the relevant terms supplement, if your notes are linked to the least performing of two or more Equity Indices, the Least Performing Index, which may be referred to as the “Lesser Performing Index” if the notes are linked to only two Equity Indices, will be the Equity Index with the Least Performing Index Return.

Least Performing Index Return: Unless otherwise specified in the relevant terms supplement, if your notes are linked to the least performing of two or more Equity Indices, the Least Performing Index Return, which may be referred to as the “Lesser Performing Index Return” if the notes are linked to only two Equity Indices, is the lowest of the Index Returns of such Equity Indices.

Business Day Convention: As specified in the relevant terms supplement and as described under “Description of Notes — Payment on the Notes.”

Interest Accrual Convention: As specified in the relevant terms supplement and as described under “Description of Notes — Payment on the Notes.”

Day-Count Fraction: As specified in the relevant terms supplement and as described under “Description of Notes — Interest.”

Minimum Rate (if applicable): Unless otherwise specified in the relevant terms supplement, 0.00%.

Maximum Rate (if applicable): For each Interest Period, a rate specified in the relevant terms supplement, which may be a fixed rate or a floating rate, which may be linked to a spread between the interest rates, multiplied by a Leverage Factor and/or plus or minus a spread. For example, the relevant terms supplement may specify that the Maximum Rate for each Interest Period will be equal to the lesser of (1) 9.00% and (2) the product of (a) 2.0 and (b) the sum of (i) the LIBOR Rate with a Designated Maturity of three months which is determined on the applicable Interest Reset Date and (ii) 0.25%. If the Maximum Rate is determined in whole or in part by reference to a floating rate (if applicable), for purposes of the determination of the Maximum Rate for an Interest Period, that floating rate will be reset on each Interest Reset Date.

Leverage Factor (if applicable): As specified in the relevant terms supplement.

Interest Reset As specified in the relevant terms supplement. The relevant terms supplement may specify specific Interest Periods in which

Date(s) (if applicable):	the Interest Reset Dates are applicable. For example, the notes may bear a fixed rate of interest for one year, and a floating rate of interest for years two through five, in which case the Interest Reset Dates will be applicable for such subsequent period.
Accrual Provision:	If applicable to the notes, as specified in the relevant terms supplement, the Accrual Provision will be deemed satisfied on each calendar day during an Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) on which one or a combination of the following (as specified in the relevant terms supplement) occurs: (i) the USD CMS Provision is satisfied; (ii) the EUR CMS Provision is satisfied; (iii) the LIBOR Provision is satisfied; (iv) the CMT Provision is satisfied or (v) the Equity Index Provision is satisfied.
USD CMS Provision:	Unless otherwise specified in the relevant terms supplement, the USD CMS Provision will be deemed satisfied on each calendar day during an Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) on which, as specified in the relevant terms supplement, the applicable USD CMS Rate of a Designated Maturity or the difference between two USD CMS Rates with different Designated Maturities (which we refer to as the "USD CMS Spread") is equal to or greater than the low end of a range and equal to or less than the high end of such range (which we refer to as the "USD CMS Range"), or equal to, less than or greater than a specified percentage (which we refer to as the "USD CMS Strike"), which may be equal to, less than or greater than (as specified in the relevant terms supplement) 0%, in each case, as determined on the applicable USD CMS Determination Date.
EUR CMS Provision:	Unless otherwise specified in the relevant terms supplement, the EUR CMS Provision will be deemed satisfied on each calendar day during an Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) on which, as specified in the relevant terms supplement, the applicable EUR CMS Rate of a Designated Maturity or the difference between two EUR CMS Rates with different Designated Maturities (which we refer to as the "EUR CMS Spread") is equal to or greater than the low end of a range and equal to or less than the high end of such range (which we refer to as the "EUR CMS Range"), or equal to, less than or greater than a specified percentage (which we refer to as the "EUR CMS Strike"), which may be equal to, less than or greater than (as specified in the relevant terms supplement) 0%, in each case, as determined on the applicable EUR CMS Determination Date.
LIBOR Provision:	Unless otherwise specified in the relevant terms supplement, the LIBOR Provision will be deemed satisfied on each calendar day during an Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) on which, as specified in the relevant terms supplement, the applicable LIBOR Rate of a Designated Maturity or the difference between two LIBOR Rates with different Designated Maturities (which we refer to as the "LIBOR Spread") is equal to or greater than the low end of a range and equal to or less than the high end of such range (which we refer to as the "LIBOR Range"), or equal to, less than or greater than a specified percentage (which we refer to as the "LIBOR Strike"), which may be equal to, less than or greater than (as specified in the relevant terms supplement) 0%, in each case, on the applicable LIBOR Determination Date.
CMT Provision:	Unless otherwise specified in the relevant terms supplement, the CMT Provision will be deemed satisfied on each calendar day during an Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) on which, as specified in the relevant terms supplement, the applicable CMT Rate of a Designated Maturity or the difference between two CMT Rates with different Designated Maturities (which we refer to as the "CMT Spread") is equal to or greater than the low end of a range and equal to or less than the high end of such range (which we refer to as the "CMT Range"), or equal to, less than or greater than a specified percentage (which we refer to as the "CMT Strike"), which may be equal to, less than or greater than (as specified in the relevant terms supplement) 0%, in each case, on the applicable CMT Determination Date.
Equity Index Provision:	Unless otherwise specified in the relevant terms supplement, the Equity Index Provision will be deemed satisfied on each calendar day during an Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) on which, as specified in the relevant terms supplement, the Equity Index Level of each Equity Index to which your notes are linked is equal to or greater than the low end of a range and equal to or less than the high end of such range (which we refer to as the "Equity Index Range") or equal to, less than or greater than a specified level of such Equity Index (which we refer to as the "Equity Index Strike"), which may be equal to, less than or greater than (as specified in the relevant terms supplement) 0, in each case, on the applicable Equity Index Determination Date.
Interest Period:	Unless otherwise specified in the relevant terms supplement, the period beginning on and including the issue date of the notes and ending on but excluding the first Interest Payment Date and each successive period beginning on and including an Interest Payment Date and ending on but excluding the next succeeding Interest Payment Date or, if the notes are subject to redemption and have been redeemed prior to such next succeeding Interest Payment Date, ending on but excluding the Redemption Date.
Interest Payment Dates:	As specified in the relevant terms supplement. Any Interest Payment Date is subject to adjustment in accordance with the Business Day Convention and the Interest Accrual Convention as described under "Description of Notes — Payment on the Notes."
USD CMS Rate:	Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date or USD CMS Determination Date, as applicable, the USD CMS Rate refers to the rate for U.S. Dollar swaps with the Designated Maturities specified in the relevant terms supplement that appears on Reuters page "ISDAFIX1" (or any successor page) at approximately 11:00 a.m., New York City time, on such Interest Reset Date or USD CMS Determination Date, as applicable, as determined by the calculation agent. If, on such Interest Reset Date or USD CMS Determination Date, as applicable, the applicable USD CMS Rate cannot be determined by reference to Reuters page "ISDAFIX1" (or any successor page), then the calculation agent will determine the applicable USD CMS Rate in accordance with the procedures set forth below under "Description of Notes — Interest — The Underlying Rates — USD CMS Rate."
EUR CMS Rate:	Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date or EUR CMS Determination Date, as applicable, the EUR CMS Rate refers to the annual swap rate for euro swap transactions with the Designated Maturities, specified in the relevant terms supplement that appears on Reuters page "ISDAFIX2" (or any successor page) under the heading "EURIBOR BASIS—EUR" and above the caption "11:00 AM Frankfurt" at approximately 11:00 a.m., Frankfurt time, on such Interest Reset Date or EUR CMS Determination Date, as applicable, as determined by the calculation agent. If, on such Interest Reset Date or EUR CMS Determination Date, as applicable, the applicable EUR CMS Rate cannot be determined by reference to Reuters page "ISDAFIX2" (or any successor page), then the calculation agent will determine the applicable EUR CMS Rate in accordance with the procedures set forth below under "Description of Notes — Interest — The Underlying Rates — EUR CMS Rate."
USD CMS Determination Date:	Unless otherwise specified in the relevant terms supplement, for each calendar day in an Interest Period to which the applicable USD CMS Provision applies, the second U.S. Government Securities Business Day prior to such calendar day; <i>provided, however</i> , that if such calendar day is not a U.S. Government Securities Business Day, the USD CMS Determination

Date will be the third U.S. Government Securities Business Day immediately preceding such calendar day. For example, if the applicable calendar day was a Saturday or Sunday, the USD CMS Determination Date would be the Wednesday preceding such calendar day (i.e., the third U.S. Government Securities Business Day immediately preceding such calendar day), assuming Wednesday, Thursday and Friday were each a U.S. Government Securities Business Day. Notwithstanding the foregoing, if the relevant terms supplement specifies that an Exclusion Period applies, for each calendar day in the Exclusion Period, the USD CMS Determination Date will be the U.S. Government Securities Business Day immediately preceding the first day of the Exclusion Period, unless otherwise specified in the relevant terms supplement.

EUR CMS Determination Date: Unless otherwise specified in the relevant terms supplement, for each calendar day in an Interest Period to which the applicable EUR CMS Provision applies, the second TARGET Settlement Day prior to such calendar day; *provided, however*, that if such calendar day is not a TARGET Settlement Day, the EUR CMS Determination Date will be the third TARGET Settlement Day immediately preceding such calendar day. For example, if the applicable calendar day was a Saturday or Sunday, the EUR CMS Determination Date would be the Wednesday preceding such calendar day (i.e., the third TARGET Settlement Day immediately preceding such calendar day), assuming Wednesday, Thursday and Friday were each a TARGET Settlement Day. Notwithstanding the foregoing, if the relevant terms supplement specifies that an Exclusion Period applies, for each calendar day in the Exclusion Period, the EUR CMS Determination Date will be the TARGET Settlement Day immediately preceding the first day of the Exclusion Period, unless otherwise specified in the relevant terms supplement.

TARGET Settlement Day: Any day, unless otherwise specified in the relevant terms supplement, on which the Trans-European Automated Real-time Gross settlement Express Transfer system ("TARGET2") is open.

LIBOR Rate: Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date or LIBOR Determination Date, as applicable (or for notes linked to the Average SIFMA/Average LIBOR Ratio, the applicable SIFMA/LIBOR Determination Date), the LIBOR Rate refers to the London Interbank Offered Rate for deposits in U.S. dollars with the Designated Maturity specified in the relevant terms supplement that appears on Reuters page "LIBOR01" (or any successor page) at approximately 11:00 a.m., London time, on such Interest Reset Date, LIBOR Determination Date or SIFMA/LIBOR Determination Date, as determined by the calculation agent. If, on such Interest Reset Date, LIBOR Determination Date or SIFMA/LIBOR Determination Date, the applicable LIBOR Rate cannot be determined by reference to Reuters page "LIBOR01" (or any successor page), then the calculation agent will determine the applicable LIBOR Rate in accordance with the procedures set forth below under "Description of Notes — Interest — The Underlying Rates — LIBOR Rate."

LIBOR Determination Date: Unless otherwise specified in the relevant terms supplement, for each calendar day in an Interest Period to which the applicable LIBOR Provision applies, the second London Business Day prior to such calendar day; *provided, however*, that if such calendar day is not a London Business Day, the LIBOR Determination Date will be the third London Business Day immediately preceding such calendar day. For example, if the applicable calendar day was a Saturday or Sunday, the LIBOR Determination Date would be the Wednesday preceding such calendar day (i.e., the third London Business Day immediately preceding such calendar day), assuming Wednesday, Thursday and Friday were each a London Business Day. Notwithstanding the foregoing, if the relevant terms supplement specifies that an Exclusion Period applies, for each calendar day in the Exclusion Period, the LIBOR Determination Date will be the London Business Day immediately preceding the first day of the Exclusion Period, unless otherwise specified in the relevant terms supplement.

Consumer Price Index, or CPI: The non-seasonally adjusted U.S. City Average All Items Consumer Price Index for All Urban Consumers, as published on Bloomberg page "CPURNSA" (or any successor page) or any successor index as described below.

CPI Rate: Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date, the CPI Rate refers to the change in the CPI calculated as follows:

$$\frac{CPI_t - CPI_{t-x}}{CPI_{t-x}}$$

where:

"CPI_t" is the level of the CPI for the calendar month prior to the calendar month of such Interest Reset Date, which we refer to as the "reference month"; and
 "CPI_{t-x}" is the level of the CPI for the "x"th calendar month prior to the reference month, where "x" will be a number specified in the relevant terms supplement. For example, if "x" is twelve, "CPI_{t-x}" will be the level of the CPI for the twelfth calendar month prior to the reference month.

If, on such Interest Reset Date, the applicable CPI Rate cannot be determined by reference to the levels of the CPI for the relevant months as published on Bloomberg CPURNSA or any successor source, then the calculation agent will determine the applicable CPI Rate in accordance with the procedures set forth below under "Description of Notes — Interest — The Underlying Rates — CPI Rate."

CMT Rate: Unless otherwise specified in the relevant terms supplement, if with respect to the applicable Interest Reset Date or CMT Determination Date, as applicable, the CMT Rate refers to the yield for United States Treasury securities at "constant maturity" with the Designated Maturity specified in the relevant terms supplement as set forth in H.15(519) under the caption "Treasury constant maturities," as such yield is displayed on the Reuters page "FRBCMT" (or any successor page) on such Interest Reset Date or CMT Determination Date, as applicable, as determined by the calculation agent. If, on such Interest Reset Date or CMT Determination Date, as applicable, the applicable CMT Rate cannot be determined by reference to Reuters page "FRBCMT" (or any successor page), then the calculation agent will determine the applicable CMT Rate in accordance with the procedures set forth below under "Description of Notes — Interest — The Underlying Rates — CMT Rate."

CMT Determination Date: Unless otherwise specified in the relevant terms supplement, for each calendar day in an Interest Period to which the applicable CMT Provision applies, the second U.S. Government Securities Business Day prior to such calendar day; *provided, however*, that if such calendar day is not a U.S. Government Securities Business Day, the CMT Determination Date will be the third U.S. Government Securities Business Day immediately preceding such calendar day. For example, if the applicable calendar day was a Saturday or Sunday, the CMT Determination Date would be the Wednesday preceding such calendar day (i.e., the third U.S. Government Securities Business Day immediately preceding such calendar day), assuming Wednesday, Thursday and Friday were each a U.S. Government Securities Business Day. Notwithstanding the foregoing, if the relevant terms supplement specifies that an Exclusion Period applies, for each calendar day in the Exclusion Period, the CMT Determination Date will be the U.S. Government Securities Business Day immediately preceding the first day of the Exclusion Period, unless otherwise specified in the relevant terms supplement.

USD CMS Range (if applicable):	As specified in the relevant terms supplement.
USD CMS Spread (if applicable):	As specified in the relevant terms supplement.
USD CMS Strike (if applicable):	As specified in the relevant terms supplement.
EUR CMS Range (if applicable):	As specified in the relevant terms supplement.
EUR CMS Spread (if applicable):	As specified in the relevant terms supplement.
EUR CMS Strike (if applicable):	As specified in the relevant terms supplement.
LIBOR Range (if applicable):	As specified in the relevant terms supplement.
LIBOR Spread (if applicable):	As specified in the relevant terms supplement.
LIBOR Strike (if applicable):	As specified in the relevant terms supplement.
CMT Range (if applicable):	As specified in the relevant terms supplement.
CMT Spread (if applicable):	As specified in the relevant terms supplement.
CMT Strike (if applicable):	As specified in the relevant terms supplement.
Equity Index Range (if applicable):	As specified in the relevant terms supplement.
Equity Index Strike (if applicable):	As specified in the relevant terms supplement.
Exclusion Period (if applicable):	As specified in the relevant terms supplement. For example, the relevant terms supplement may specify that the Exclusion Period will be the period commencing on the sixth business day prior to each Interest Payment Date and ending on the business day prior to such Interest Payment Date.
Average SIFMA/Average LIBOR Ratio:	Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date, the ratio of the Average SIFMA Level to Average LIBOR, expressed as a percentage, on such Interest Reset Date, as determined by the calculation agent.
Average SIFMA Level:	Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date, the daily weighted average of the index levels of the SIFMA Municipal Swap Index for each calendar day in the SIFMA/LIBOR Averaging Period. For the purposes of calculating the Average SIFMA Level, the index level of the SIFMA Municipal Swap Index for each calendar day in the SIFMA/LIBOR Averaging Period will be based on the index level of the SIFMA Municipal Swap Index on the applicable SIFMA/LIBOR Determination Date, or, if such SIFMA/LIBOR Determination Date is not a U.S. Government Securities Business Day, based on the index level of the SIFMA Municipal Swap Index on the U.S. Government Business Day immediately preceding such SIFMA/LIBOR Determination Date. The index level of the SIFMA Municipal Swap Index is reset weekly on each SIFMA/LIBOR Determination Date; however, the average calculation is measured daily for each calendar day in the SIFMA/LIBOR Averaging Period. If, on such SIFMA/LIBOR Determination Date, the applicable Average SIFMA Level cannot be determined by reference to the SIFMA Municipal Swap Index (or any successor thereto), then the calculation agent will determine the applicable Average SIFMA Level in accordance with the procedures set forth below under "SIFMA Municipal Swap Index."
U.S. Government Securities Business Day:	Any day, unless otherwise specified in the relevant terms supplement, other than a Saturday, Sunday or a day on which the Securities Industry and Financial Markets Association ("SIFMA") recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in U.S. government securities.
Average LIBOR:	Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date, the daily weighted average of the applicable LIBOR Rates for each calendar day in the SIFMA/LIBOR Averaging Period. For the purposes of calculating the Average LIBOR, the determination of the applicable LIBOR Rate for each calendar day in the SIFMA/LIBOR Averaging Period will be based on such LIBOR Rate on the applicable SIFMA/LIBOR Determination Date, or, if such SIFMA/LIBOR Determination Date is not a London Business Day, based on the LIBOR Rate on the London Business Day immediately preceding such SIFMA/LIBOR Determination Date. The applicable LIBOR Rate will be reset weekly on each SIFMA/LIBOR Determination Date; however, the average calculation is measured daily for each calendar day in the SIFMA/LIBOR Averaging Period.
London Business Day:	Any day, unless otherwise specified in the relevant terms supplement, other than a day on which banking institutions in London are authorized or required by law, regulation or executive order to close.
SIFMA Municipal Swap Index:	The Securities Industry and Financial Markets Association Municipal Swap Index, or the SIFMA Municipal Swap Index, was created by the SIFMA and produced by Municipal Market Data, or MMD, a Thomson Financial Services company. The SIFMA Municipal Swap Index is a seven-day high-grade market index composed of tax-exempt variable-rate demand

obligations, or VRDOs, from MMD's database of VRDO issues. The index level of the SIFMA Municipal Swap Index is calculated on a weekly basis, and released to subscribers on Thursday. See "SIFMA Municipal Swap Index" below.

SIFMA/LIBOR Determination Date:	Unless otherwise specified in the relevant terms supplement, for each calendar day in a SIFMA/LIBOR Averaging Period, the immediately preceding Thursday.
SIFMA/LIBOR Averaging Period:	As specified in the relevant terms supplement.
Designated Maturity:	The applicable maturity, as specified in the relevant terms supplement, to be used in determining the USD CMS Rate, EUR CMS Rate, LIBOR Rate or CMT Rate, as applicable. For example, the relevant terms supplement may specify that the applicable USD CMS Rates will be the 30-Year USD CMS Rate and the 10-Year USD CMS Rate, or that the applicable EUR CMS Rates will be the 30-Year EUR CMS Rate and the 10-Year EUR CMS Rate, or that the applicable LIBOR Rate will be three-month LIBOR, or that the applicable CMT Rate will be the 10-Year CMT Rate.
Equity Index or Equity Indices:	As specified in the relevant terms supplement.
Equity Index Level:	Unless otherwise specified in the relevant terms supplement, with respect to an Equity Index, the "Equity Index Level" on any trading day will equal the official closing level of such Equity Index or any successor equity index thereto (as described under "General Terms of Notes — Discontinuation of an Equity Index; Alteration of Method of Calculation") published following the regular official weekday close of trading on that trading day. Unless otherwise specified in the relevant terms supplement, if a market disruption event exists with respect to an Equity Index on any Equity Index Determination Date, the Equity Index Level on the immediately preceding Equity Index Determination Date for which no market disruption event occurs or is continuing will be the Equity Index Level for such disrupted Equity Index Determination Date (and will also be the Equity Index Level for the originally scheduled Equity Index Determination Date). In certain circumstances, the "Equity Index Level" for an Equity Index will be based on the alternative calculation of such Equity Index described under "General Terms of Notes — Discontinuation of an Equity Index; Alteration of Method of Calculation."
Equity Index Determination Date:	Unless otherwise specified in the relevant terms supplement, for each calendar day in an Interest Period to which the applicable Equity Index Provision applies, the second trading day prior to such calendar day; provided, however, that if such calendar day is not a trading day, the Equity Index Determination Date will be the third trading day immediately preceding such calendar day. For example, if the applicable calendar day was a Saturday or Sunday, the Equity Index Determination Date would be the Wednesday preceding such calendar day (<i>i.e.</i> , the third trading day immediately preceding such calendar day), assuming Wednesday, Thursday and Friday were each a trading day. Notwithstanding the foregoing, if the relevant terms supplement specifies that an Exclusion Period applies, for each calendar day in the Exclusion Period, the Equity Index Determination Date will be the trading day immediately preceding the first day of the Exclusion Period, unless otherwise specified in the relevant terms supplement.
Observation Date:	As specified in the relevant terms supplement. Unless otherwise specified in the relevant terms supplement, the Observation Date is subject to postponement in the event of certain market disruption events and as described under "Description of Notes — Payment on the Notes — Postponement of an Observation Date."
Trading day:	Unless otherwise specified in the relevant terms supplement, with respect to an Equity Index, a day, as determined by the calculation agent, on which trading is generally conducted on (i) the relevant exchanges (as defined below) for the Equity Index or the relevant successor equity index, and (ii) the exchanges on which futures or options contracts related to the Equity Index or the relevant successor equity index are traded, other than a day on which trading on such relevant exchange or exchange on which such futures or options contracts are traded is scheduled to close prior to its regular weekday closing time.

Investing in the notes involves a number of risks. See "Risk Factors" beginning on page PS-15.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the notes or passed upon the accuracy or the adequacy of this product supplement no. 1-V, the accompanying prospectus supplement and prospectus, or any related terms supplement. Any representation to the contrary is a criminal offense.

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

J.P.Morgan

March 21, 2014

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We have not authorized anyone to provide any information other than that contained or incorporated by reference in the relevant terms supplement, any related underlying supplement, this product supplement no. 1-V and the accompanying prospectus supplement and prospectus with respect to the notes offered by the relevant terms supplement, any related underlying supplement, and this product supplement no. 1-V and with respect to JPMorgan Chase & Co. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This product supplement no. 1-V, together with the relevant terms supplement and the accompanying prospectus and prospectus supplement, contains the terms of the notes and supersedes all other prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, fact sheets, brochures or other educational materials of ours. The information in the relevant terms supplement, any related underlying supplement, this product supplement no. 1-V and the accompanying prospectus supplement and prospectus may only be accurate as of the dates of each of these documents, respectively.

The notes described in the relevant terms supplement and this product supplement no. 1-V are not appropriate for all investors, and involve important legal and tax consequences and investment risks, which should be discussed with your professional advisers. You should be aware that the regulations of the Financial Industry Regulatory Authority, or FINRA, and the laws of certain jurisdictions (including regulations and laws that require brokers to ensure that investments are suitable for their customers) may limit the availability of the notes. The relevant terms supplement, any related underlying supplement, this product supplement no. 1-V and the accompanying prospectus supplement and prospectus do not constitute an offer to sell or a solicitation of an offer to buy the notes in any circumstances in which such offer or solicitation is unlawful.

In this product supplement no. 1-V, the relevant terms supplement, any related underlying supplement, and the accompanying prospectus supplement and prospectus, “we,” “us” and “our” refer to JPMorgan Chase & Co., unless the context requires otherwise.

DESCRIPTION OF NOTES

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

General

The Interest Rate Linked Notes are unsecured and unsubordinated obligations of JPMorgan Chase & Co. that pay interest at a fixed and/or floating rate linked to one or more of the U.S. Dollar Constant Maturity Swap (which we refer to as "USD CMS") Rate, the Euro Constant Maturity Swap (which we refer to as "EUR CMS") Rate, the London Interbank Offered Rate (which we refer to as "LIBOR" or the "LIBOR Rate"), the U.S. Consumer Price Index, the Constant Maturity U.S. Treasury (which we refer to as "CMT") Rate, the Securities Industry and Financial Markets Association Municipal Swap Index (which we refer to as the "SIFMA Municipal Swap Index") or one or more Equity Indices or such other rate or rates as specified in the relevant terms supplement. For example, the interest rate on the notes may be fixed for an initial period and then become a floating rate. The interest rate on the notes may also be linked to a spread between the interest rates, multiplied by a leverage factor or increased or decreased by a spread or may be subject to an Accrual Provision as described below.

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

Any payment on the notes is subject to the credit risk of JPMorgan Chase & Co.

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

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

The notes will be issued in denominations of \$1,000 and integral multiples thereof, unless otherwise specified in the relevant terms supplement. The principal amount and issue price of each note are \$1,000, unless otherwise specified in the relevant terms supplement. The notes will be represented by one or more permanent global notes registered in the name of The Depository Trust Company, or DTC, or its nominee, as described under "Description of Notes — Forms of Notes" in the accompanying prospectus supplement and "Forms of Securities — "Book-Entry System" in the accompanying prospectus. The terms of specific issuances of the notes will be described in the relevant terms supplement accompanying this product supplement no. 1-V and any related underlying supplement. The terms described in that document supplement those described herein and in any related underlying supplement and in the accompanying prospectus and prospectus supplement. If the terms described in the relevant terms supplement are inconsistent with those described herein or any related underlying supplement or in the accompanying prospectus or prospectus supplement, the terms described in the relevant terms supplement will control.

Payment on the Notes

Any payment on the notes, including interest and principal, will be subject to a "Business Day Convention" that will be specified in the relevant terms supplement. "Business Day Convention" means the convention for adjusting

any relevant date if it would otherwise fall on a day that is not a business day. The following terms, when used in conjunction with the term “Business Day Convention” and a date, shall mean that an adjustment will be made if that date would otherwise fall on a day that is not a business day so that: (a) if the relevant terms supplement specifies that the Business Day Convention is “Following”, then that date (e.g., an interest payment date, call date or maturity date) will be the first following day that is a business day; (b) if the relevant terms supplement specifies that the Business Day Convention is “Modified Following”, then that date will be the first following day that is a business day unless that day falls in the next calendar month, in which case that date will be the first preceding day that is a business day; and (c) if the relevant terms supplement specifies that the Business Day Convention is “Preceding”, then that date will be the first preceding day that is a business day.

Any interest payment on the notes will be subject to an “Interest Accrual Convention” that will be specified in the relevant terms supplement. “Interest Accrual Convention” means the convention related to whether or not an interest payment is adjusted in terms of the number of days in an interest period if the payment date is moved forward or postponed so that: (a) if the relevant terms supplement specifies that the Interest Accrual Convention is “Unadjusted”, then the amount of interest payable on any interest payment date will not change as a result of that payment date being moved forward or being postponed; and (b) If the relevant terms supplement specifies that the Interest Accrual Convention is “Adjusted”, then the amount of interest payable on any interest payment date will be adjusted, subject to the provisions under “Day Count Fraction”, to reflect the amount of interest accrued during the applicable interest period based on the number of days in such interest period.

Payment at Maturity

The maturity date for the notes will be set forth in the relevant terms supplement; *provided* that the maturity date will not be less than one year and one day (counting, for this purpose, either the issue date or the last possible date that the notes could be outstanding, but not both) after the issue date.

Your payment at maturity per \$1,000 principal amount note will be as specified in the relevant terms supplement and may be linked to the performance of one or more Equity Indices or the least performing of two or more Equity Indices. Unless otherwise specified in the relevant terms supplement, if your notes are not linked to the performance of one or more Equity Indices and if the notes have not been redeemed (if applicable), at maturity you will receive a cash payment for each \$1,000 principal amount note of \$1,000 *plus* any accrued and unpaid interest up to but excluding the maturity date. Any payment at maturity, including interest and principal, is subject to the Business Day Convention and Interest Accrual Convention as described above. In addition, the maturity date is subject to postponement as provided under “— Postponement of an Observation Date” below.

Payment upon Redemption

If so specified in the relevant terms supplement, at our option, we may redeem the notes, in whole but not in part, on any of the specified Redemption Dates. Unless otherwise specified in the relevant terms supplement, if the notes are redeemed, you will receive on the applicable Redemption Date a cash payment equal to \$1,000 for each \$1,000 principal amount note redeemed. The Redemption Date(s), if applicable, will be specified in the relevant terms supplement, and any such date is subject to the Business Day Convention and Interest Accrual Convention as described above. Any accrued and unpaid interest on notes redeemed will be paid to the person who is the holder of record of such notes at the close of business one (1) business day prior to the applicable Redemption Date.

Unless otherwise specified in the relevant terms supplement, to redeem the notes, we will mail a notice of redemption to DTC, as holder of the global notes, by first-class mail, postage prepaid, at least 5 business days and not more than 15 business days prior to the applicable Redemption Date. In case the notes are to be redeemed in part, the notice of redemption will state the portion of the principal amount of the notes to be redeemed. If less than all of the notes are to be redeemed, the trustee will select, in such manner as it deems appropriate and fair, the notes to be redeemed. Notes may be redeemed in part only in multiples equal to the authorized denomination for the notes, which, unless otherwise specified in the relevant terms supplement, will be \$1,000.

If notice of redemption has been given as provided above, the notes that are subject to redemption will become due and payable on the Redemption Date at the applicable redemption price *plus* accrued and unpaid interest, and

interest on such notes will cease to accrue from and after the Redemption Date, and holders of such notes will have no rights in respect of such notes except the right to receive the redemption price and accrued and unpaid interest on the Redemption Date.

The Index Return

If the payment at maturity is based on the performance of an Equity Index or the least performing of two or more Equity Indices, such performance will be based on the Index Return of the Equity Index or Equity Indices, as applicable. Unless otherwise specified in the relevant terms supplement, with respect to an Equity Index, the “Index Return,” as calculated by the calculation agent, is the percentage change in the Equity Index Level of that Equity Index, calculated by comparing the Ending Index Level of that Equity Index to the Initial Index Level (or Initial Strike Level, if applicable) of that Equity Index. The relevant terms supplement will specify the manner in which the Initial Index Level (or Initial Strike Level, if applicable) will be determined. The Index Return of an Equity Index, unless otherwise specified in the relevant terms supplement, is calculated as follows:

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

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

Unless otherwise specified in the relevant terms supplement, with respect to an Equity Index, the “Ending Index Level” means the Equity Index Level of that Equity Index on the Observation Date or such other date as specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, if the notes are linked to the least performing of two or more Equity Indices and the notes have not been previously called, your return on the notes will be based on the performance of the Least Performing Index, which will be the Equity Index with the Least Performing Index Return. The Least Performing Index Return will be the lowest of the Index Returns of such Equity Indices.

Postponement of an Observation Date

Notes Linked to a Single Equity Index: If an Observation Date is not a trading day or if there is a market disruption event on an Observation Date (any such day, a “Disrupted Day”), the applicable Observation Date will be postponed to the immediately succeeding business day that is not a Disrupted Day. In no event, however, will any Observation Date be postponed to a date that is after the Final Disrupted Observation Date (as defined below).

If an Observation Date is or has been postponed to the Final Disrupted Observation Date and the Final Disrupted Observation Date is a Disrupted Day, the calculation agent will determine the Ending Index Level for that Observation Date on the Final Disrupted Observation Date, unless otherwise specified in the relevant terms supplement or any relevant underlying supplement, in accordance with the formula for and method of calculating the Equity Index Level of that Equity Index last in effect prior to the commencement of the market disruption event (or prior to the non-trading day), using the closing price (or, if trading in the relevant securities has been materially suspended or materially limited, the calculation agent's good faith estimate of the closing price that would have prevailed but for that suspension or limitation or non-trading day) on the Final Disrupted Observation Date of each security most recently constituting the Equity Index.

Notes Linked to the Least Performing of Two or More Equity Indices: If the Observation Date is not a trading day for any Equity Index or if there is a market disruption event for any Equity Index on an Observation Date (any such day, a “Disrupted Day” and any Equity Index affected by a Disrupted Day, a “Disrupted Equity Index”), the applicable Observation Date will be postponed to the earliest day on which the Ending Index Level of each Equity

Index has been established, as described below:

- (a) for each Equity Index that is not a Disrupted Equity Index (an “Unaffected Equity Index”), the Ending Index Level on the postponed Observation Date will be deemed to be the Equity Index Level on the originally scheduled Observation Date; and
- (b) for each Disrupted Equity Index, the Ending Index Level on the postponed Observation Date will be deemed to be the Equity Index Level on the first business day immediately following the originally scheduled Observation Date that is not a Disrupted Day for that Disrupted Equity Index.

Accordingly, if an Observation Date is postponed as described above, the calculation agent may reference the Equity Index Levels of the Equity Indices from different business days when making any determinations with respect to that Observation Date, as postponed.

For example, assume that the notes are linked to the least performing of three Equity Indices, Index A, Index B and Index C, and that:

- (x) business day 1, the scheduled Observation Date, is not a Disrupted Day for Index A but is a Disrupted Day for Index B and Index C;
- (y) business day 2 is not a Disrupted Day for Index B but is a Disrupted Day for Index C; and
- (z) business day 3 is not a Disrupted Day for Index C.

Under these circumstances, the Observation Date originally scheduled to occur on business day 1 would be postponed to business day 3 and, with respect to the Observation Date, as postponed, the Ending Index Levels would be deemed to be (1) for Index A, the Equity Index Level on business day 1; (2) for Index B, the Equity Index Level on business day 2 and (3) for Index C, the Equity Index Level on business day 3.

In no event, however, will the Observation Date be postponed to a date that is after the Final Disrupted Observation Date. If the Observation Date is or has been postponed to the Final Disrupted Observation Date and on that day, the Ending Index Level for any Disrupted Equity Index has not been established in accordance with clause (a) or (b) of the first paragraph of this subsection (a “Final Disrupted Equity Index”), the Ending Index Level for that 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 Equity Index, the Equity Index Level on the originally scheduled Observation Date;
- (ii) for each Disrupted Equity Index that is not a Final Disrupted Equity Index, the Equity Index Level determined in the manner described in clause (b) of the first paragraph of this subsection; or
- (iii) for each Final Disrupted Equity Index, unless otherwise specified in the relevant terms supplement or any relevant underlying supplement, the closing level of that Equity Index determined by the calculation agent in accordance with the formula for and method of calculating the Equity Index Level of that Equity Index last in effect prior to the commencement of the market disruption event (or prior to the non-trading day), using the closing price (or, if trading in the relevant securities has been materially suspended or materially limited, the calculation agent’s good faith estimate of the closing price that would have prevailed but for that suspension or limitation or non-trading day) on the Final Disrupted Observation Date of each security most recently constituting the Equity Index.

If your notes are linked to a single Equity Index or the least performing of two or more Equity Indices, in each case, with respect to an Observation Date, unless otherwise specified in the relevant terms supplement or any relevant underlying supplement, the “Final Disrupted Observation Date” means the tenth business day after that Observation Date, as originally scheduled. If, due to a market disruption event or otherwise, the Observation Date is

postponed so that it falls less than three business days prior to the scheduled maturity date, the maturity date will be the third business day following the Observation Date, as postponed.

Interest

General Terms Relating to Interest

The notes will bear interest at a fixed and/or floating rate from the issue date of the notes to but excluding the maturity date. For example, the interest rate on the notes may be fixed for an initial period and then become a floating rate. The interest rate on the notes may be linked to a spread between the interest rates, multiplied by a leverage factor or increased or decreased by a spread. The interest rate on the notes may also be subject to an Accrual Provision. The amount of interest payable on the notes with respect to each Interest Period during which a floating rate applies will be linked to the USD CMS Rate, the EUR CMS Rate, LIBOR, the CPI Rate, the CMT, the Average SIFMA/Average LIBOR Ratio or an Equity Index Level, as described below.

Unless otherwise specified in the relevant terms supplement, for each \$1,000 principal amount note, interest payable on any interest payment date will be equal to:

$$\$1,000 \times \text{Interest Rate} \times \text{Day Count Fraction}$$

Any interest payment on the notes will be subject to a "Day Count Fraction" that will be specified in the relevant terms supplement. "Day Count Fraction" means:

- If the relevant terms supplement specifies that the Day Count Fraction is "Actual/Actual", "Actual/Actual (ISDA)", "Act/Act" or "Act/Act (ISDA)", the actual number of days in the interest period in respect of which payment is being made divided by 365 (or, if any of the interest period falls in a leap year, the sum of (i) the actual number of days in the portion of the interest period falling in a leap year divided by 366 and (ii) the actual number of days in that portion of the interest period falling in a non-leap year divided by 365);
- If the relevant terms supplement specifies that the Day Count Fraction is "Actual/365", "Actual/365 (Fixed)", "Act/365 (Fixed)", "A/365 (Fixed)" or "A/365F", the actual number of days in the interest period in respect of which payment is being made divided by 365; and
- If the relevant terms supplement specifies that the Day Count Fraction is "30/360", "360/360" or "Bond Basis", the number of the days in the interest period in respect of which payment is being made divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y_2 - Y_1)] + [30 \times (M_2 - M_1)] + (D_2 - D_1)}{360}$$

where:

"Y₁" is the year, expressed as a number, in which the first day of the interest period falls;

"Y₂" is the year, expressed as a number, in which the day immediately following the last day included in the interest period falls;

"M₁" is the calendar month, expressed as a number, in which the first day of the interest period falls;

"M₂" is the calendar month, expressed as number, in which the day immediately following the last day included in the interest period falls;

"D₁" is the first calendar day, expressed as a number, of the interest period, unless such number would be 31, in which case D₁ will be 30; and

"D₂" is the calendar day, expressed as a number, immediately following the last day included in the interest period, unless such number would be 31 and D₁ is greater than 29, in which case D₂ will be 30.

Unless otherwise specified in the relevant terms supplement, with respect to each Interest Period, the notes will bear interest at a rate per annum, which we refer to as the “Interest Rate.”

If the relevant terms supplement does not specify an Accrual Provision, the “Interest Rate” means, with respect to any Interest Period, a rate per annum as specified in the relevant terms supplement, which may be a fixed rate or a floating rate linked to a rate or rates specified in the relevant terms supplement and, if so specified in the relevant terms supplement, linked to a spread between the interest rates, multiplied by a Leverage Factor and/or plus or minus a spread. If the Interest Rate for any Interest Period is specified as a fixed rate in the relevant terms supplement, such Interest Rate may increase or decrease on one or more Interest Payment Dates at the beginning of the applicable Interest Period(s). If the Interest Rate for any Interest Period is determined by reference to a floating rate, for purposes of the determination of the Interest Rate for an Interest Period, that floating rate will be reset on each Interest Reset Date, as specified in the relevant terms supplement. For example, the relevant terms supplement may specify that the Interest Rate on the notes will be (1) 5.00% per annum from and including the issue date to but excluding the first Interest Payment Date, (2) 5.25% per annum from and including the first Interest Payment Date to but excluding the second Interest Payment Date and (3) 6.00% per annum from and including the second Interest Payment Date to but excluding the Interest Payment Date for the final Interest Period. Alternatively, for example, the relevant terms supplement may specify that the Interest Rate for each Interest Period will be equal to the sum of (1) the LIBOR Rate with a Designated Maturity of three months which is determined on the applicable Interest Reset Date plus (2) a spread of 4.00%. For the avoidance of doubt, the Interest Rate may be one or more rates per annum that can be fixed or floating (linked to a spread between the interest rates, multiplied by a Leverage Factor and/or plus or minus a spread, if applicable), and each such rate per annum may be specified with respect to an Interest Period. In addition, an Interest Rate may change from one Interest Period to another from one fixed or floating rate to another fixed or floating rate (in each case, linked to a spread between the interest rates, multiplied by a Leverage Factor and/or plus or minus a spread, if applicable).

If the relevant terms supplement specifies an Accrual Provision, the Interest Rate for each Interest Period (other than an Interest Period(s) to which a fixed rate applies, as applicable) will be calculated as follows:

$$\text{Interest Factor} \times \frac{\text{Variable Days}}{\text{Actual Days}}, \text{ where}$$

“Variable Days” is the number of calendar days during the relevant Interest Period on which the Accrual Provision is satisfied.

The “Interest Factor” may be a fixed and/or floating rate as specified in the relevant terms supplement and, if so specified in the relevant terms supplement, linked to a spread between the interest rates, multiplied by a Leverage Factor and/or plus or minus a spread. If the Interest Factor for any Interest Period is specified as a fixed rate in the relevant terms supplement, such Interest Factor may increase or decrease on one or more specified Interest Payment Dates at the beginning of the applicable Interest Period(s). If the Interest Factor for any Interest Period is determined by reference to a floating rate, for purposes of the determination of the Interest Factor for an Interest Period, that floating rate will be reset on each Interest Reset Date, as specified in the relevant terms supplement. For example, the relevant terms supplement may specify that the Interest Factor on the notes will be (1) 5.00% from and including the issue date to but excluding the first Interest Payment Date, (2) 5.25% from and including the first Interest Payment Date to but excluding the second Interest Payment Date and (3) 6.00% from and including the second Interest Payment Date to but excluding the Interest Payment Date for the final Interest Period. Alternatively, for example, the relevant terms supplement may specify that the Interest Factor for each Interest Period will be equal to the sum of (1) the LIBOR Rate with a Designated Maturity of three months which is determined on the applicable Interest Reset Date plus (2) a spread of 4.00%. For the avoidance of doubt, the Interest Factor may be one or more rates per annum that can be fixed or floating (linked to a spread between the interest rates, multiplied by a Leverage Factor and/or plus or minus a spread, if applicable), and each such rate per annum may be specified with respect to an Interest Period. In addition, an Interest Factor may change from one Interest Period to another from one fixed or floating rate to another fixed or floating rate (in each case, linked to a spread between the interest rates, multiplied by a Leverage Factor and/or plus or minus a spread, if applicable).

For each Interest Period, if applicable, unless otherwise specified in the relevant terms supplement, the “Maximum Rate” will be a rate specified in the relevant terms supplement, which may be a fixed rate or a floating rate, which may be linked to a spread between the interest rates, multiplied by a Leverage Factor, plus or minus a spread and/or subject to an Accrual Provision. For example, the relevant terms supplement may specify that the Maximum Rate for each Interest Period will be equal to the lesser of (1) 9.00% and (2) the product of (a) 2.0 and (b) the sum of (i) the LIBOR Rate with a Designated Maturity of three months which is determined on the applicable Interest Reset Date and (ii) 0.25%. If the Maximum Rate is determined in whole or in part by reference to a floating rate (if applicable), for purposes of the determination of the Maximum Rate for an Interest Period, that floating rate will be reset on each Interest Reset Date.

The “Minimum Rate” will be 0.00% per annum, unless otherwise specified in the relevant terms supplement.

The “Leverage Factor,” if applicable, will be as specified in the relevant terms supplement.

The “Interest Reset Date(s),” if applicable, will be as specified in the relevant terms supplement. The relevant terms supplement may specify specific Interest Periods in which the Interest Reset Dates are applicable. For example, the notes may bear a fixed rate of interest for one year, and a floating rate of interest for years two through five, in which case the Interest Reset Dates will be applicable for such subsequent period.

If the notes are not subject to redemption by us, or are subject to redemption by us but have not been redeemed, interest will accrue from the issue date of the notes to but excluding the maturity date, subject to the Business Day Convention and Interest Accrual Convention as described above and as specified in the relevant terms supplement. Interest will be paid in arrears on each Interest Payment Date and on the maturity date, to the holders of record at the close of business on the date one (1) business day prior to that Interest Payment Date, unless otherwise specified in the relevant terms supplement.

If the notes are subject to redemption and have been redeemed, interest will accrue from the issue date of the notes to but excluding the applicable Redemption Date, subject to the Business Day Convention and Interest Accrual Convention as described above and as specified in the relevant terms supplement. Interest will be paid in arrears on each Interest Payment Date occurring before the Redemption Date and on such Redemption Date to the holders of record at the close of business one (1) business day prior to that Interest Payment Date or the Redemption Date, as applicable, unless otherwise specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, an “Interest Period” is the period beginning on and including the issue date of the notes and ending on but excluding the first Interest Payment Date, and each successive period beginning on and including an Interest Payment Date and ending on but excluding the next succeeding Interest Payment Date or, if the notes are subject to redemption by us and have been redeemed prior to such next succeeding Interest Payment Date, ending on but excluding the applicable Redemption Date.

An “Interest Payment Date” as specified in the relevant terms supplement, and any such date will be subject to the Business Day Convention and Interest Accrual Convention as described above and as specified in the relevant terms supplement.

The Accrual Provisions

If applicable to the notes, as specified in the relevant terms supplement, the Accrual Provision will be deemed satisfied on each calendar day during an Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) on which one or a combination of the following (as specified in the relevant terms supplement) occurs: (i) the USD CMS Provision is satisfied; (ii) the EUR CMS Provision is satisfied; (iii) the LIBOR Provision is satisfied; (iv) the CMT Provision is satisfied or (v) the Equity Index Provision is satisfied.

The USD CMS Provision will be deemed satisfied on each calendar day during an Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) on which, as specified in the relevant terms supplement, the applicable USD CMS Rate of a Designated Maturity or the difference between two USD CMS Rates with different Designated Maturities (which we refer to as the “USD CMS Spread”) is equal to or greater than the low end of a range and equal to or less than the high end of such range (which we refer to as the “USD CMS Range”), or equal to, less than or greater than a specified percentage (which we refer to as the “USD CMS Strike”), which

may be equal to, less than or greater than (as specified in the relevant terms supplement) 0%, in each case, as determined on the applicable USD CMS Determination Date.

The EUR CMS Provision will be deemed satisfied on each calendar day during an Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) on which, as specified in the relevant terms supplement, the applicable EUR CMS Rate of a Designated Maturity or the difference between two EUR CMS Rates with different Designated Maturities (which we refer to as the “EUR CMS Spread”) is equal to or greater than the low end of a range and equal to or less than the high end of such range (which we refer to as the “EUR CMS Range”), or equal to, less than or greater than a specified percentage (which we refer to as the “EUR CMS Strike”), which may be equal to, less than or greater than (as specified in the relevant terms supplement) 0%, in each case, as determined on the applicable EUR CMS Determination Date.

The LIBOR Provision will be deemed satisfied on each calendar day during an Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) on which, as specified in the relevant terms supplement, the applicable LIBOR Rate of a Designated Maturity or the difference between two LIBOR Rates with different Designated Maturities (which we refer to as the “LIBOR Spread”) is equal to or greater than the low end of a range and equal to or less than the high end of such range (which we refer to as the “LIBOR Range”), or equal to, less than or greater than a specified percentage (which we refer to as the “LIBOR Strike”), which may be equal to, less than or greater than (as specified in the relevant terms supplement) 0%, in each case, on the applicable LIBOR Determination Date.

The CMT Provision will be deemed satisfied on each calendar day during an Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) on which, as specified in the relevant terms supplement, the applicable CMT Rate of a Designated Maturity or the difference between two CMT Rates with different Designated Maturities (which we refer to as the “CMT Spread”) is equal to or greater than the low end of a range and equal to or less than the high end of such range (which we refer to as the “CMT Range”), or equal to, less than or greater than a specified percentage (which we refer to as the “CMT Strike”), which may be equal to, less than or greater than (as specified in the relevant terms supplement) 0%, in each case, on the applicable CMT Determination Date.

The Equity Index Provision will be deemed satisfied on each calendar day during an Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) on which, as specified in the relevant terms supplement, the Equity Index Level of each Equity Index to which the notes are linked is equal to or greater than the low end of a range and equal to or less than the high end of such range (which we refer to as the “Equity Index Range”) or equal to, less than or greater than a specified level of such Equity Index (which we refer to as the “Equity Index Strike”), which may be equal to, less than or greater than (as specified in the relevant terms supplement) 0, in each case, on the applicable Equity Index Determination Date.

The “USD CMS Range,” if applicable, will be a range of per annum rates within which the applicable USD CMS Rate may satisfy the USD CMS Provision, as specified in the relevant terms supplement.

The “USD CMS Spread,” if applicable, will be a spread between USD CMS Rates, as specified in the relevant terms supplement.

The “USD CMS Strike,” if applicable, will be a specified percentage, as specified in the relevant terms supplement.

The “EUR CMS Range,” if applicable, will be a range of per annum rates within which the applicable EUR CMS Rate may satisfy the EUR CMS Provision, as specified in the relevant terms supplement.

The “EUR CMS Spread,” if applicable, will be a spread between EUR CMS Rates, as specified in the relevant terms supplement.

The “EUR CMS Strike,” if applicable, will be a specified percentage, as specified in the relevant terms supplement.

The “LIBOR Range,” if applicable, will be a range of per annum rates within which the applicable LIBOR Rate may satisfy the LIBOR Provision, as specified in the relevant terms supplement.

The “LIBOR Spread,” if applicable, will be a spread between LIBOR Rates, as specified in the relevant terms supplement.

The “LIBOR Strike,” if applicable, will be a specified percentage, as specified in the relevant terms supplement.

The “CMT Range,” if applicable, will be a range of per annum rates within which the applicable CMT Rate may satisfy the CMT Provision, as specified in the relevant terms supplement.

The “CMT Spread,” if applicable, will be a spread between CMT Rates, as specified in the relevant terms supplement.

The “CMT Strike,” if applicable, will be a specified percentage, as specified in the relevant terms supplement.

The “Equity Index Range,” if applicable, will be, with respect to each Equity Index to which the notes are linked, a range of Equity Index Levels within which the applicable Equity Index Level may satisfy the Equity Index Provision, as specified in the relevant terms supplement.

The “Equity Index Strike,” if applicable, will be, with respect to each Equity Index to which the notes are linked, a specified Equity Index Level, as specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, the “USD CMS Determination Date,” if applicable, will be, for each calendar day in an Interest Period to which the applicable USD CMS Provision applies, the second U.S. Government Securities Business Day prior to such calendar day; *provided, however*, that if such calendar day is not a U.S. Government Securities Business Day, the USD CMS Determination Date will be the third U.S. Government Securities Business Day immediately preceding such calendar day. For example, if the applicable calendar day was a Saturday or Sunday, the USD CMS Determination Date would be the Wednesday preceding such calendar day (*i.e.*, the third U.S. Government Securities Business Day immediately preceding such calendar day), assuming Wednesday, Thursday and Friday were each a U.S. Government Securities Business Day. Notwithstanding the foregoing, if the relevant terms supplement specifies that an Exclusion Period applies, for each calendar day in the Exclusion Period, the USD CMS Determination Date will be the U.S. Government Securities Business Day immediately preceding the first day of the Exclusion Period, unless otherwise specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, the “EUR CMS Determination Date,” if applicable, will be, for each calendar day in an Interest Period to which the applicable EUR CMS Provision applies, the second TARGET Settlement Day prior to such calendar day; *provided, however*, that if such calendar day is not a TARGET Settlement Day, the EUR CMS Determination Date will be the third TARGET Settlement Day immediately preceding such calendar day. For example, if the applicable calendar day was a Saturday or Sunday, the EUR CMS Determination Date would be the Wednesday preceding such calendar day (*i.e.*, the third TARGET Settlement Day immediately preceding such calendar day), assuming Wednesday, Thursday and Friday were each a TARGET Settlement Day. Notwithstanding the foregoing, if the relevant terms supplement specifies that an Exclusion Period applies, for each calendar day in the Exclusion Period, the EUR CMS Determination Date will be the TARGET Settlement Day immediately preceding the first day of the Exclusion Period, unless otherwise specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, the “LIBOR Determination Date,” if applicable, will be, for each calendar day in an Interest Period to which the applicable LIBOR Provision applies, the second London Business Day prior to such calendar day; *provided, however*, that if such calendar day is not a London Business Day, the LIBOR Determination Date will be the third London Business Day immediately preceding such calendar day. For example, if the applicable calendar day was a Saturday or Sunday, the LIBOR Determination Date would be the Wednesday preceding such calendar day (*i.e.*, the third London Business Day immediately preceding such calendar day), assuming Wednesday, Thursday and Friday were each a London Business Day. Notwithstanding the foregoing, if the relevant terms supplement specifies that an Exclusion Period applies, for each calendar day in the Exclusion Period, the LIBOR Determination Date will be the London Business Day immediately preceding the first day of the Exclusion Period, unless otherwise specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, the “CMT Determination Date,” if applicable, will be, for each calendar day in an Interest Period to which the applicable CMT Provision applies, the second U.S. Government Securities Business Day prior to such calendar day; *provided, however*, that if such calendar day is not a U.S. Government Securities Business Day, the CMT Determination Date will be the third U.S. Government Securities Business Day immediately preceding such calendar day. For example, if the applicable calendar day was a Saturday or Sunday, the CMT Determination Date would be the Wednesday preceding such calendar day (*i.e.*, the third U.S. Government Securities Business Day immediately preceding such calendar day), assuming Wednesday, Thursday and Friday were each a U.S. Government Securities Business Day. Notwithstanding the foregoing, if the

relevant terms supplement specifies that an Exclusion Period applies, for each calendar day in the Exclusion Period, the CMT Determination Date will be the U.S. Government Securities Business Day immediately preceding the first day of the Exclusion Period, unless otherwise specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, the “Equity Index Determination Date” will be, for each calendar day in an Interest Period to which the applicable Equity Index Provision applies, the second trading day prior to such calendar day; provided, however, that if such calendar day is not a trading day, the Equity Index Determination Date will be the third trading day immediately preceding such calendar day. For example, if the applicable calendar day was a Saturday or Sunday, the Equity Index Determination Date would be the Wednesday preceding such calendar day (*i.e.*, the third trading day immediately preceding such calendar day), assuming Wednesday, Thursday and Friday were each a trading day. Notwithstanding the foregoing, if the relevant terms supplement specifies that an Exclusion Period applies, for each calendar day in the Exclusion Period, the Equity Index Determination Date will be the trading day immediately preceding the first day of the Exclusion Period, unless otherwise specified in the relevant terms supplement.

The “Exclusion Period,” if applicable, will be as specified in the relevant terms supplement. For example, the relevant terms supplement may specify that the Exclusion Period will be the period commencing on the sixth business day prior to each Interest Payment Date and ending on the business day prior to such Interest Payment Date.

The Underlying Rates

USD CMS Rate

Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date or USD CMS Determination Date, as applicable, the USD CMS Rate refers to the rate for U.S. Dollar swaps with the Designated Maturities specified in the relevant terms supplement that appears on Reuters page “ISDAFIX1” (or any successor page) at approximately 11:00 a.m., New York City time, on such Interest Reset Date or USD CMS Determination Date, as applicable, as determined by the calculation agent. If, on such Interest Reset Date or USD CMS Determination Date, as applicable, the applicable USD CMS Rate cannot be determined by reference to the applicable Reuters page (or any successor page), then the calculation agent will request from five leading swap dealers in the New York City interbank market, selected by the calculation agent, mid-market semi-annual swap rate quotations in a Representative Amount and with terms equal to the Designated Maturities, at approximately 11:00 a.m., New York City time, on such Interest Reset Date or USD CMS Determination Date, as applicable. The “semi-annual swap rate” means the mean of the bid and offered rates for the semi-annual fixed leg, calculated on a 30/360 day count basis, of a fixed-for-floating U.S. Dollar interest rate swap transaction with a term equal to the applicable Designated Maturity commencing on the relevant Interest Reset Date or USD CMS Determination Date, as applicable, and in the Representative Amount with an acknowledged dealer of good credit in the swap market, where the floating leg, calculated on an Actual/360 day count basis, is equivalent to the LIBOR Rate with a Designated Maturity of 3 months. If at least three quotations are provided as requested, the calculation agent will calculate the applicable USD CMS Rate by eliminating the highest quotation (or, in the event of equality, one of the highest) and the lowest quotation (or, in the event of equality, one of the lowest) and taking the arithmetic mean of the remaining rates. If fewer than three quotations are provided, the USD CMS Rate will be determined by the calculation agent, acting in a commercially reasonable manner.

EUR CMS Rate

Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date or EUR CMS Determination Date, as applicable, the EUR CMS Rate refers to the annual swap rate for Euro swap transactions with the Designated Maturities specified in the relevant terms supplement, that appears on Reuters page “ISDAFIX2” (or any successor page) under the heading “EURIBOR BASIS—EUR” and above the caption “11:00 AM Frankfurt” at approximately 11:00 a.m., Frankfurt time, on such Interest Reset Date or EUR CMS Determination Date, as applicable, as determined by the calculation agent. If, on such Interest Reset Date or EUR CMS Determination Date, as applicable, the applicable EUR CMS Rate cannot be determined by reference to the applicable Reuters page (or any successor page), then the calculation agent will request from five leading swap dealers in the Frankfurt interbank market, selected by the calculation agent, mid-market annual swap rate quotations in a Representative Amount and with terms equal to the Designated Maturities, at approximately 11:00 a.m., Frankfurt time, on such Interest Reset Date or EUR CMS Determination Date, as applicable. The “annual swap rate” means the mean of the bid and offered rates for the annual fixed leg, calculated on a 30/360 day count basis, of a fixed-for-floating Euro interest rate swap transaction with a term equal to the applicable Designated Maturity

commencing on the relevant Interest Reset Date or EUR CMS Determination Date, as applicable, and in the Representative Amount with an acknowledged dealer of good credit in the swap market, where the floating leg, calculated on an Actual/360 day count basis, is equivalent to the Euro Interbank Offered Rate, or the EURIBOR, with a Designated Maturity of six months. If five quotations are provided as requested, the calculation agent will calculate the applicable EUR CMS Rate by eliminating the highest and lowest rates and taking the arithmetic mean of the remaining rates. If at least three, but fewer than five, quotations are provided, the EUR CMS Rate will be the arithmetic mean of the quotations. If fewer than three quotations are provided, the EUR CMS Rate will be determined by the calculation agent, acting in a commercially reasonable manner.

LIBOR Rate

Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date or LIBOR Determination Date, as applicable (or for notes linked to the Average SIFMA/Average LIBOR Ratio, the applicable SIFMA/LIBOR Determination Date), the “LIBOR Rate” refers to the London Interbank Offered Rate for deposits in U.S. dollars with the Designated Maturity specified in the relevant terms supplement that appears on Reuters page “LIBOR01” (or any successor page) at approximately 11:00 a.m., London time, on such Interest Reset Date, LIBOR Determination Date or SIFMA/LIBOR Determination Date, as applicable. If, on such Interest Reset Date, LIBOR Determination Date or SIFMA/LIBOR Determination Date, the applicable LIBOR Rate cannot be determined by reference to the applicable Reuters page (or any successor page), then the calculation agent will request the principal London office of four major banks in the London interbank market, selected by the calculation agent, for deposits in U.S. dollars in a Representative Amount and for a term equal to the Designated Maturity, at approximately 11:00 a.m., London time, on such Interest Reset Date, LIBOR Determination Date or SIFMA/LIBOR Determination Date. If at least two such quotations are provided, the applicable LIBOR Rate for such Interest Reset Date, LIBOR Determination Date or SIFMA/LIBOR Determination Date will be the arithmetic average of such quotations. If fewer than two such quotations are provided, the calculation agent, *provided* that the applicable Interest Reset Date, LIBOR Determination Date or SIFMA/LIBOR Determination Date is also a business day, will request each of three major banks in The City of New York to provide such bank’s rate to leading European banks for loans in U.S. dollars in a Representative Amount and for a term equal to the Designated Maturity, at approximately 11:00 a.m., New York City time, on such business day. If at least two such rates are provided, then the applicable LIBOR Rate for such business day will be the arithmetic average of such rates. If fewer than two such rates are provided, or if the applicable Interest Reset Date is not also a business day, then the applicable LIBOR Rate for such Interest Reset Date or SIFMA/LIBOR Determination Date will be the applicable LIBOR Rate for the immediately preceding London Business Day.

CPI Rate

Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date, the “CPI Rate” refers to the change in the CPI calculated as follows:

$$CPI\ Rate = \frac{CPI_t - CPI_{t-x}}{CPI_{t-x}}$$

where:

- CPI_t = the level of the CPI for the calendar month prior to the calendar month of such Interest Reset Date, which we refer to as the “reference month”; and
- CPI_{t-x} = the level of the CPI for the “x”th calendar month prior to the reference month, where “x” will be a number specified in the relevant terms supplement. For example, if “x” is twelve, “CPI_{t-x}” will be the level of the CPI for the twelfth calendar month prior to the reference month.

“CPI” is the non-seasonally adjusted U.S. City Average All Items Consumer Price Index for All Urban Consumers, as published on Bloomberg page “CPURNSA” (or any successor page) or any successor index.

If by 3:00 p.m. New York City time on any Interest Reset Date, the CPI is not published on Bloomberg CPURNSA for any relevant month, but has otherwise been reported by the Bureau of Labor Statistics of the U.S. Department of Labor (the “BLS”), then the calculation agent will determine the CPI as reported by the BLS for such month using such other source as on its face, after consultation with us, appears to accurately set forth the CPI as reported by the BLS.

In calculating CPI_t and CPI_{t-x} , the calculation agent will use the most recently available value of the CPI determined as described above and in the relevant terms supplement on the applicable Interest Reset Date, even if such value has been adjusted from a previously reported value for the relevant month. However, if a value of CPI_t or CPI_{t-x} used by the calculation agent on any Interest Reset Date to determine the Interest Rate for the applicable Interest Period is subsequently revised by the BLS, the interest rate determined on such Interest Reset Date will not be revised.

If the CPI is rebased to a different year or period and the 1982-1984 CPI is no longer used, the base reference period for the notes will continue to be the 1982-1984 reference period as long as the 1982-1984 CPI continues to be published.

If, while the notes are outstanding, the CPI is discontinued or is substantially altered, as determined in the sole discretion of the calculation agent, the calculation agent will select a successor index, which will be that chosen by the Secretary of the Treasury for the Department of the Treasury's Inflation-Linked Treasuries as described at 62 Federal Register 846-874 (January 6, 1997) or, if no such securities are outstanding, the successor index will be determined by the calculation agent acting in a commercially reasonable manner.

CMT Rate

Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date or CMT Determination Date, as applicable, the CMT Rate refers to the yield for United States Treasury securities at "constant maturity" with the Designated Maturity specified in the relevant terms supplement as set forth in H.15(519) under the caption "Treasury constant maturities," as such yield is displayed on the Reuters page "FRBCMT" (or any successor page) on such Interest Reset Date or CMT Determination Date, as applicable, as determined by the calculation agent.

"H.15(519)" means the weekly statistical release designated as such, or any successor publication, published by the Board of Governors of the Federal Reserve System, available through the Web site of the Board of Governors of the Federal Reserve System at <http://www.federalreserve.gov/releases/H15/> or any successor site or publication. We make no representation or warranty as to the accuracy or completeness of the information displayed on such Web site, and such information is not incorporated by reference herein and should not be considered a part of this product supplement no. 1-V.

If, on any Interest Reset Date or CMT Determination Date, as applicable, the applicable CMT Rate cannot be determined by reference to the applicable Reuters page (or any successor page), then the following procedures will be used:

- If the CMT Rate is not displayed on the applicable Reuters page by 3:30 p.m., New York City time on such Interest Reset Date or CMT Determination Date, as applicable, then the CMT Rate for such Interest Reset Date or CMT Determination Date, as applicable, will be a percentage equal to the yield for United States Treasury securities at constant maturity for a period of the Designated Maturity as set forth in H.15(519) under the caption "Treasury constant maturities" (expressed as a number and not a percentage).
- If the applicable CMT Rate or CMT Determination Date, as applicable, does not appear in H.15(519), the CMT Rate for such Interest Reset Date or CMT Determination Date, as applicable, will be the rate for a period of the Designated Maturity as may then be published by either the Federal Reserve System Board of Governors or the United States Department of the Treasury that the calculation agent determines to be comparable to the rate which would otherwise have been published in H.15-519 (expressed as a number and not a percentage).
- If, on any Interest Reset Date or CMT Determination Date, as applicable, neither the Board of Governors of the Federal Reserve System nor the United States Department of the Treasury publishes a yield on United States Treasury securities at a constant maturity for the maturity of the relevant CMT Rate, the CMT Rate on the relevant Interest Reset Date or CMT Determination Date,

as applicable, will be calculated by the calculation agent based on the arithmetic mean of the secondary market bid prices at approximately 3:30 p.m., New York City time, on the relevant Interest Reset Date or CMT Determination Date, as applicable, received from three leading primary United States government securities dealers in The City of New York (expressed as a number and not a percentage). The calculation agent will select five such securities dealers, and will eliminate the highest quotation (or, in the event of equality, one of the highest) and the lowest quotation (or, in the event of equality, one of the lowest), for United States Treasury securities with an original maturity equal to the maturity of the relevant CMT Rate, a remaining term to maturity of no more than one year shorter than the maturity of the relevant CMT Rate and in a principal amount equal to the Representative Amount. If two bid prices with an original maturity as described above have remaining terms to maturity equally close to the maturity of the relevant CMT Rate, the quotes for the United States Treasury security with the shorter remaining term to maturity will be used.

- If fewer than five but more than two such prices are provided as requested, the CMT Rate for the relevant Interest Reset Date or CMT Determination Date, as applicable, will be based on the arithmetic mean of the bid prices obtained and neither the highest nor the lowest of such quotations will be eliminated.
- If the calculation agent cannot obtain three United States Treasury securities quotations of the kind requested in the prior two bullet points, the calculation agent will determine the CMT Rate for the relevant Interest Reset Date or CMT Determination Date, as applicable, to be an amount equal to the yield to maturity based on the arithmetic mean of the secondary market bid prices for United States Treasury securities, at approximately 3:30 p.m., New York City time, on the relevant Interest Reset Date or CMT Determination Date, as applicable, of three leading primary United States government securities dealers in The City of New York (expressed as a number and not a percentage). In selecting these bid prices, the calculation agent will request quotations from at least five such securities dealers and will disregard the highest quotation (or if there is equality, one of the highest) and the lowest quotation (or if there is equality, one of the lowest) for United States Treasury securities with an original maturity greater than the maturity of the relevant CMT Rate, a remaining term to maturity closest to the maturity of the relevant CMT Rate and in a Representative Amount. If two United States Treasury securities with an original maturity longer than the maturity of the relevant CMT Rate have remaining terms to maturity that are equally close to the maturity of the relevant CMT Rate, the calculation agent will obtain quotations for the United States Treasury security with the shorter remaining term to maturity.
- If fewer than five but more than two of the leading primary United States government securities dealers provide quotes as described in the prior paragraph, then the CMT Rate for the relevant Interest Reset Date or CMT Determination Date, as applicable, will be based on the arithmetic mean of the bid prices obtained, and neither the highest nor the lowest of those quotations will be eliminated.
- If fewer than three leading primary United States government securities reference dealers selected by the calculation agent provide quotes as described above, the CMT Rate for the relevant Interest Reset Date or CMT Determination Date, as applicable, will be determined by the calculation agent acting in a commercially reasonable manner.

The Average SIFMA/Average LIBOR Ratio

Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date, the Average SIFMA/LIBOR Ratio is the ratio of the Average SIFMA Level to Average LIBOR, expressed as a percentage, on such Interest Reset Date, as determined by the calculation agent.

Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date, the "Average SIFMA Level" will be equal to the daily weighted average of the SIFMA Index Levels for each calendar

day in the SIFMA/LIBOR Averaging Period. For the purposes of calculating the Average SIFMA Level, the SIFMA Index Level for each calendar day in the SIFMA/LIBOR Averaging Period will be based on the SIFMA Index Level on the applicable SIFMA/LIBOR Determination Date, or, if such SIFMA/LIBOR Determination Date is not a U.S. Government Securities Business Day, based on the SIFMA Index Level on the U.S. Government Business Day immediately preceding such SIFMA/LIBOR Determination Date. The index level of the SIFMA Municipal Swap Index is reset weekly on each SIFMA/LIBOR Determination Date; however, the average calculation is measured daily for each calendar day in the SIFMA/LIBOR Averaging Period.

Unless otherwise specified in the relevant terms supplement, with respect to the applicable Interest Reset Date, the “Average LIBOR” will be equal to the daily weighted average of the applicable LIBOR Rates for each calendar day in the SIFMA/LIBOR Averaging Period. For the purposes of calculating the Average LIBOR, the determination of the applicable LIBOR Rate for each calendar day in the SIFMA/LIBOR Averaging Period will be based on such LIBOR Rate on the applicable SIFMA/LIBOR Determination Date, or, if such SIFMA/LIBOR Determination Date is not a London Business Day, based on the LIBOR Rate on the London Business Day immediately preceding such SIFMA/LIBOR Determination Date. The applicable LIBOR Rate will be reset weekly on each SIFMA/LIBOR Determination Date; however, the average calculation is measured daily for each calendar day in the SIFMA/LIBOR Averaging Period.

The “SIFMA Index Level” on any SIFMA/LIBOR Determination Date will equal the official published level of the SIFMA Municipal Swap Index or any successor index on such date. Under some circumstances, the SIFMA Index Level may be determined based on the alternative calculation described under “SIFMA Municipal Swap Index — Discontinuation of the SIFMA Municipal Swap Index; Alteration of Method of Calculation.”

The “SIFMA/LIBOR Averaging Period,” if applicable, will be as specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, for each calendar day in a SIFMA/LIBOR Averaging Period, the “SIFMA/LIBOR Determination Date,” is the immediately preceding Thursday.

The Equity Index Level

Unless otherwise specified in the relevant terms supplement, with respect to an Equity Index, the “Equity Index Level” on any trading day will equal the official closing level of such Equity Index or any successor equity index thereto (as described under “General Terms of Notes — Discontinuation of an Equity Index; Alteration of Method of Calculation”) published following the regular official weekday close of trading on that trading day. Unless otherwise specified in the relevant terms supplement, if a market disruption event exists with respect to an Equity Index on any Equity Index Determination Date, the Equity Index Level on the immediately preceding Equity Index Determination Date for which no market disruption event occurs or is continuing will be the Equity Index Level for such disrupted Equity Index Determination Date (and will also be the Equity Index Level for the originally scheduled Equity Index Determination Date). If a market disruption event exists with respect to an Equity Index on any Observation Date, the Ending Index Level will be determined as provided above under “—Payment on the Notes — Postponement of an Observation Date.” In certain circumstances, the “Equity Index Level” for an Equity Index will be based on the alternative calculation of such Equity Index described under “General Terms of Notes — Discontinuation of an Equity Index; Alteration of Method of Calculation.”

General Terms

The “Representative Amount” means an amount equal to the outstanding principal amount of the notes, as set forth in the relevant terms supplement, as of the relevant date of determination.

A “U.S. Government Securities Business Day” is, unless otherwise specified in the relevant terms supplement, any day other than a Saturday, Sunday or a day on which the Securities Industry and Financial Markets Association recommends that the fixed income departments of its members be closed for the entire day for purposes of trading U.S. government securities.

A “London Business Day” is, unless otherwise specified in the relevant terms supplement, any day other than a day on which banking institutions in London are authorized or required by law, regulation or executive order to close.

The relevant terms supplement will specify the applicable maturity to be used to determine the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate or CMT Rate, which, in each instance, we refer to as the “Designated

Maturity.” For example, the relevant terms supplement may specify that the applicable USD CMS Rates will be 30-Year USD CMS Rate and the 10-Year USD CMS Rate, or that the applicable EUR CMS Rates will be 10-Year EUR CMS Rate and the 2-Year EUR CMS Rate, or that the applicable LIBOR Rate will be the three-month LIBOR Rate, or that the applicable CMT Rate will be the 10-Year CMT Rate.

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

A “TARGET Settlement Day” is any business day, unless otherwise specified in the relevant terms supplement, on which the Trans-European Automated Real-time Gross settlement Express Transfer system (“TARGET2”) is open.

A “trading day” is, with respect to an Equity Index, unless otherwise specified in the relevant terms supplement, a day, as determined by the calculation agent, on which trading is generally conducted on (i) the relevant exchanges (as defined below) for the securities underlying the Equity Index or the relevant successor equity index, as applicable, and (ii) the exchanges on which futures or options contracts related to the Equity Index or the relevant successor index, if applicable, are traded, other than a day on which trading on such relevant exchange or exchange on which those futures or options contracts are traded is scheduled to close prior to its regular weekday closing time.

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

Unless otherwise specified in the relevant terms supplement, the “calculation agent,” which is the agent appointed by us to make certain calculations for the notes, will be J.P. Morgan Securities LLC (“JPMS”). See “General Terms of Notes — Calculation Agent” below. JPMS is our affiliate and may have interests adverse to yours. Please see “Risk Factors — Risks Relating to the Notes Generally — We or our affiliates may have economic interests that are adverse to those of the holders of the notes.”

Subject to the foregoing and to applicable law (including, without limitation, U.S. federal laws), we or our affiliates may, at any time and from time to time, purchase outstanding notes by tender, in the open market or by private agreement. Please see “Plan of Distribution (Conflicts of Interest)” below.

Other Terms

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

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

RISK FACTORS

Your investment in the notes will involve certain risks not associated with an investment in conventional debt securities. You should consider carefully the following discussion of risks before you decide that an investment in the notes is suitable for you.

For notes with a floating rate, floating rate notes present different investment considerations than fixed rate notes or similar floating rate securities.

For notes with only floating rates, the rate of interest paid by us on the notes for each Interest Period is not fixed, but will vary depending on the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate, CMT Rate, the Average SIFMA/Average LIBOR Ratio or the applicable Equity Index Level plus/or minus a spread, if applicable, the Leverage Factor, if applicable and the number of days during any such Interest Period on which the applicable Accrual Provision is satisfied, if applicable. If an Accrual Provision is applicable, whether such Accrual Provision is satisfied will depend on the daily fluctuations in the applicable USD CMS Rate (or USD CMS Spread), EUR CMS Rate (or EUR CMS Spread), LIBOR Rate (or LIBOR Spread) CMS Rate (or CMS Spread) or the Equity Index Level of each Equity Index to which your notes are linked. Additionally, the notes may step up or switch from floating to fixed rate or from a fixed to a floating rate during the term of the notes. Consequently, the return on the notes may be less than returns otherwise payable on debt securities issued by us with similar maturities. The variable interest rate on the notes, while determined, in part, by reference to one or more of the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate, CMT Rate, the Average SIFMA/Average LIBOR Ratio or the applicable Equity Index Level, may not actually pay at such rates. You should consider, among other things, the overall annual percentage rate of interest to maturity as compared to other equivalent investment alternatives. We have no control over any fluctuations in the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate, CMT Rate, the Average SIFMA/Average LIBOR Ratio or any Equity Index Level.

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

The notes differ from conventional securities and may not return any of your investment if your payment at maturity is linked to the performance of an Equity Index. If your notes are linked to the performance of an Equity Index, the amount payable at maturity or, if applicable, upon automatic call will be determined pursuant to the terms described in the relevant terms supplement. The relevant terms supplement will specify the circumstances in which you may lose some or all of your investment at maturity or, if applicable, upon automatic call.

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

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

The Interest Rate on the notes for any Interest Period will be limited by a Maximum Rate, if applicable.

If the relevant terms supplement specifies a Maximum Rate, the Interest Rate for any Interest Period will be limited by the Maximum Rate. The Maximum Rate will limit the amount of interest you may receive for each such Interest Period, even if the fixed or floating rate component, as adjusted by any Leverage Factor, if applicable, and/or a spread, if applicable, would have otherwise resulted in an Interest Rate greater than the Maximum Rate. As a result, if the Interest Rate for any Interest Period without taking into consideration the Maximum Rate would have been greater than the Maximum Rate, the notes will provide you less interest income than an investment in a similar instrument that is not subject to a maximum interest rate.

If an Accrual Provision is applicable to the notes, the Interest Rate on the notes is linked to the applicable USD CMS Rate (or USD CMS Spread), EUR CMS Rate (or EUR CMS Spread), LIBOR Rate (or LIBOR Spread), CMT Rate (or CMT Spread) or the Equity Index Level(s) and may be equal to zero.

Although the Maximum Interest Rate for any Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) is equal to the Interest Factor specified in the relevant terms supplement, for every day during such Interest Period on which the applicable Accrual Provision is not satisfied, the Interest Rate for that Interest Period will be reduced. We cannot predict the factors that may cause the applicable Accrual Provision to be satisfied, or not, on any calendar day. The amount of interest you accrue on the notes in any Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable) may decrease even if the relevant USD CMS Rate, EUR CMS Rate, LIBOR Rate, CMT Rate or the Equity Index Level with respect to each Equity Index to which your notes are linked increases. If the applicable Accrual Provision is not satisfied for an entire Interest Period (other than an Interest Period(s) to which a fixed rate applies, if applicable), the Interest Rate for such period would be zero or the Minimum Rate, if applicable. In that event, you will not be compensated for any loss in value due to inflation and other factors relating to the value of money over time during such period.

If the notes are subject to redemption and are redeemed by us, the aggregate amount of interest paid to you will be less than the aggregate amount of interest payable over the term of the notes if held to maturity.

If the relevant terms supplement specifies that the notes are subject to redemption by us, and if we redeem all or part of your notes, for the notes that are redeemed, you will receive the principal amount of such notes and, assuming you are the record holder of the notes at the close of business on the date one (1) business date prior to the Redemption Date, accrued and unpaid interest to but excluding the Redemption Date. The aggregate amount of interest payable to you will be less than the aggregate amount of interest payable over the term of the notes if held to maturity. We may choose to redeem the notes early or choose not to redeem the notes early on any Redemption Date, in our sole discretion. We may choose to redeem the notes early, for example, if (1) the prevailing interest rate has declined, resulting in an amount of interest payable on the notes greater than that for instruments of a comparable maturity, or (2) the applicable USD CMS Rate, USD CMS Spread, EUR CMS Rate, EUR CMS Spread, LIBOR Rate, LIBOR Spread, CMT Rate, CMT Spread or the Equity Index Level of each Equity Index to which your notes are linked is within the specified range or is equal to, less than or greater than the specified percentage of the applicable Accrual Provision. If we redeem the notes early, your return may be less than the yield that the notes would have earned if they had been held to maturity and you may not be able to reinvest your funds at the same rate as provided by the notes.

For floating rate notes, the manner in which floating rates are calculated may change in the future.

There can be no assurance that the method by which the USD CMS Rate, EUR CMS Rate, LIBOR Rate, the CPI, CMT Rate, the SIFMA Municipal Swap Index or any Equity Index are calculated will not change. Such changes in the method of calculation could reduce the corresponding Interest Rate. Accordingly, the value of the notes may be significantly reduced. If the USD CMS Rate, EUR CMS Rate, LIBOR Rate, CMT Rate, the CPI, the SIFMA Municipal Swap Index or any Equity Index are substantially altered, or are not quoted on the applicable Reuters or Bloomberg page, or any substitute page thereto, on the applicable Interest Reset Date(s), USD CMS Determination Date(s), EUR CMS Determination Date(s), LIBOR Determination Date(s), CMT Determination Date(s), SIFMA/LIBOR Determination Date or Equity Index Determination Date(s), as applicable, a substitute rate or equity index may be employed by the calculation agent to determine the Reference Rates and that substitution may adversely affect the value of the notes.

For notes to which the USD CMS Provision, EUR CMS Provision, LIBOR Provision or CMT Provision relates, the applicable USD CMS Rates (or USD CMS Spread), EUR CMS Rates (or EUR CMS Spread), LIBOR Rates (or LIBOR Spread) or CMT Rates (or CMT Spread) and the manner in which they are calculated may change in the future.

For notes to which a USD CMS Provision, EUR CMS Provision, LIBOR Provision or CMT Provision relates, there can be no assurance that the method by which the USD CMS Rates, EUR CMS Rates, LIBOR Rates or CMT Rates, as applicable, are calculated will not change. Such changes in the method of calculation could reduce the level of the individual USD CMS Rates, EUR CMS Rates, LIBOR Rates or CMT Rates, as applicable, and any

corresponding USD CMS Spread, EUR CMS Spread, LIBOR Spread or CMT Spread. Accordingly, the value of the notes may be significantly reduced. If the applicable USD CMS Rates, EUR CMS Rates, LIBOR Rates or CMT Rates are substantially altered, or are not quoted on the applicable Reuters page, or any substitute page thereto, on the USD CMS Determination Date(s), EUR CMS Determination Date(s), LIBOR Determination Date(s) or CMT Determination Date(s), as applicable, or any Initial Interest Reset Date, Interest Factor Reset Date or Substitute Interest Reset Date, if applicable, a substitute rate may be employed by the calculation agent to determine the relevant USD CMS Rates, EUR CMS Rates, LIBOR Rates or CMT Rates and that substitution may adversely affect the value of the notes.

If your notes are linked to the least performing of two or more Equity Indices, you will be exposed to the risk of decline in the value of each Equity Index.

If your notes are linked to the least performing of two or more Equity Indices, your return on the notes and your payment at maturity, if any, will not be linked to a basket consisting of the Equity Indices. Rather, you will receive interest payments as specified by the relevant terms supplement and, assuming your notes have not been called, your payment at maturity will be contingent upon the performance of each individual Equity Index. Unlike an instrument with a return linked to a basket of underlying assets, in which risk is mitigated and diversified among all the components of the basket, you will be exposed equally to the risks related to all of the Equity Indices. Poor performance by any one of the Equity Indices over the term of the notes may negatively affect your payment at maturity and will not be offset or mitigated by a positive performance by any or all of the other Equity Indices. Accordingly, your investment is subject to the risk of each Equity Index.

Secondary trading may be limited.

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

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

The notes are designed to be held to maturity.

The notes are not designed to be short-term trading instruments. The price at which you will be able to sell your notes to us or our affiliates prior to maturity, if at all, may be at a substantial discount from the principal amount of the notes, even in cases where the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate, CMT Rate, the SIFMA Municipal Swap Index or the applicable Equity Index has appreciated since the pricing date. The potential returns described in the relevant terms supplement assume that your notes, which are not designed to be short-term trading instruments, are held to maturity unless redeemed by us prior to maturity.

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

Many economic and market factors will influence the value of the notes. We expect that, generally, the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate, CMT Rate or the level of the SIFMA Municipal Swap Index or any Equity Index to which your notes are linked on any day will affect the value of the notes more than any other single factor. However, you should not expect the value of the notes in the secondary market to vary in proportion to changes in the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate, CMT Rate or the level of the SIFMA Municipal Swap Index or any Equity Index. The value of the notes will be affected by a number of other factors that may either offset or magnify each other, including:

- volatility of, or the perception of expected volatility of, the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate, CMT Rate or the level of the CPI, the SIFMA Municipal Swap Index or any Equity Index to which your notes are linked;

- for notes linked to the USD CMS Spread, EUR CMS Spread, LIBOR Spread or CMT Spread, the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate or CMT Rate yield curves;
- for notes linked to the Average SIFMA/Average LIBOR Ratio, the volatility of the index level of the SIFMA Municipal Swap Index and the applicable LIBOR Rate (and the correlation between those volatilities);
- the time to maturity of the notes;
- interest and yield rates in the market generally, as well as the volatility of those rates;
- if the notes are subject to redemption by us, the likelihood, or expectation, that the notes will be redeemed by us, based on prevailing market interest rates or otherwise;
- for notes linked to the CPI Rate:
 - general economic, financial, political or regulatory conditions in the United States;
 - fluctuations in the prices of various consumer goods and energy resources in the United States; and
 - inflation and expectations concerning inflation in the United States;
- economic, financial, political, regulatory and judicial events that affect the debt markets generally; and
- our creditworthiness, including actual or anticipated downgrades in our credit ratings.

You cannot predict the future performance of the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate, CMT Rate, the CPI, the SIFMA Municipal Swap Index or any Equity Index based on its historical performance. The USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate, CMT Rate, the CPI, the SIFMA Municipal Swap Index or any Equity Index to which your notes are linked may fluctuate and may reduce the Interest Rate such that you may not receive any return or receive a low return on your initial investment.

For notes to which the USD CMS Provision, EUR CMS Provision, LIBOR Provision or CMT Provision relates, the applicable USD CMS Rate (or USD CMS Spread), EUR CMS Rate (or EUR CMS Spread), LIBOR Rate (or LIBOR Spread) or CMT Rate (or CMT Spread) will be affected by a number of factors.

The amount of interest, if any, payable on notes to which the USD CMS Provision, EUR CMS Provision, LIBOR Provision or CMT Provision applies (other than interest payable with respect to an Interest Period(s) to which a fixed rate applies, if applicable) will depend on the a number of factors that can affect the levels of the USD CMS Rate (or USD CMS Spread), EUR CMS Rate (or EUR CMS Spread), LIBOR Rate (or LIBOR Spread) or CMT Rate (or CMT Spread), as applicable, as well as the yield curve between USD CMS Rates, EUR CMS Rates, LIBOR Rates, CMT Rates of different Designated Maturities, including, but not limited to:

- *changes in, or perceptions about, future rates:* generally, fluctuations in, or a perception that there will be fluctuations in, the levels of the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate or CMT Rate will affect the probability that the applicable Accrual Provision will be satisfied on any given date of determination, since as volatility of any underlying rate increases, the chance of the applicable Accrual Provision being satisfied decreases; in addition, increased interest rate volatility is historically associated with an increased spread between long and short-term interest rates and, conversely, decreased volatility is historically associated with tighter spreads;

- *general economic conditions*: the economic, financial, political, regulatory or judicial events that affect financial markets generally will affect the interest payable on the notes as well, since the interest payable is a function of fluctuations in underlying rates that will generally be affected by such events;
- *prevailing interest rates*: the USD CMS Rate, EUR CMS Rate, LIBOR Rate and CMT Rate are subject to daily fluctuations depending on the levels of prevailing interest rates in the market generally; in addition, lower overall interest rates are historically associated with an increased spread between long and short-term interest rates and, conversely, higher overall interest rates are historically associated with tighter spreads; and
- *policy of the Federal Reserve Board regarding interest rates*: an easing of monetary policy is historically associated with an increased spread between long and short-term interest rates and, conversely, a tightening of monetary policy is historically associated with tighter spreads.

These and other factors may have a negative impact on the payment of interest on the notes. In addition, these and other factors may have a negative impact on the value of your notes in the secondary market.

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

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

If the relevant terms supplement specifies that the notes will be offered for resale at varying prices, the price you pay for the notes may be higher than the prices paid by other investors.

If the relevant terms supplement specifies that the notes will be offered for resale at varying prices, each agent proposes to offer the notes from time to time for sale to investors in one or more negotiated transactions, or otherwise, at market prices prevailing at the time of sale, at prices related to then-prevailing prices, at negotiated prices, or otherwise. Accordingly, there is a risk that the price you pay for the notes will be higher than the prices paid by other investors based on the date and time you make your purchase, from whom you purchase the notes (e.g., directly from an agent or through a broker or dealer), any related transaction cost (e.g., any brokerage commission), whether you hold your notes in a brokerage account, a fiduciary or fee-based account or another type of account and other market factors beyond our control.

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

JPMS and other affiliates of ours trade U.S. Treasury securities and other instruments the value of which is derived from U.S. Treasury securities, financial instruments related to one or more of the USD CMS Rates, the EUR CMS Rates, the LIBOR Rates, the CPI Rates, the CMT Rates, the CPI, any Equity Index to which your notes are linked and/or the SIFMA Municipal Swap Index, and some or all of the VRDOs included in the SIFMA Municipal Swap Index and listed or over-the-counter options on such VRDOs, or enter into interest rate swap and option transactions, for their accounts and for other accounts under their management. JPMS and these affiliates may also issue or underwrite or assist unaffiliated entities in the issuance or underwriting of other securities or financial instruments with returns linked, as applicable, to the USD CMS Rate, the EUR CMS Rate, the LIBOR Rate, the CPI Rate, the CMT Rate, the CPI and/or the SIFMA Municipal Swap Index or some or all of the VRDOs included in the SIFMA Municipal Swap Index and/or any Equity Index to which your notes are linked. To the extent that we or one of our affiliates serves as issuer, agent or underwriter for such securities or financial instruments, our or their

interests with respect to such products may be adverse to those of the holders of the notes. Any of these trading activities could potentially affect one or more of the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, the CPI Rate, the CMT Rate, the CPI, the SIFMA Municipal Swap Index or the Equity Index or Equity Indices to which you notes are linked and, accordingly, could affect the value of the notes and the amount of interest, if any, payable on each Interest Payment Date.

We or one or more of our affiliates may publish research reports, or otherwise express views about the debt market, interest rates, including USD CMS Rates, EUR CMS Rates, LIBOR Rates, CPI Rates, CMT Rates, the CPI and VRDOs included in the SIFMA Municipal Swap Index and any Equity Index. Any prospective purchaser of notes should undertake an independent investigation of the debt market, interest rates and VRDOs included in the SIFMA Municipal Swap Index and any Equity Index to which your notes are linked, as applicable, as in its judgment is appropriate to make an informed decision with respect to any investment in the notes.

Furthermore, we or one of our affiliates may serve as issuer, agent or underwriter for additional issuances of notes with returns linked to (or related to spreads between) USD CMS Rates, EUR CMS Rates, LIBOR Rates, CPI Rates, CMT Rates, the CPI and the SIFMA Municipal Swap Index and any Equity Index. By introducing competing products into the marketplace in this manner, we or one or more of our affiliates could adversely affect the value of the notes.

We may have hedged our obligations under the notes through certain affiliates or unaffiliated counterparties, who would expect to make a profit on such hedge. Because hedging our obligations entails risk and may be influenced by market forces beyond our control, such hedging may result in a profit that is more or less than expected, or it may result in a loss.

JPMS, one of our affiliates, will act as the calculation agent. The calculation agent will determine, among other things: the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate and CMT Rate, the Average LIBOR, the SIFMA Index Level, the Average SIFMA Level, each Equity Index Level, the Initial Index Level (or Initial Strike Level, if applicable) and Ending Index Level of each Equity Index to which your notes are linked, the applicable Interest and Interest Rate and Interest Factor for each Interest Period, whether, if applicable, the applicable Accrual Provision is satisfied, on each calendar day of any Interest Period, the amount of interest payable on each Interest Payment Date and the amount of cash that we are required to pay to you at maturity or upon redemption, if applicable. In addition, the calculation agent will determine whether a day is a business day, TARGET Settlement Day, London Business Day, U.S. Government Securities Business Day or trading day, whether there has been a discontinuation of the SIFMA Municipal Swap Index or any Equity Index, whether there has been a market disruption event with respect to an Equity Index and whether there has been a material change in the method of calculating the level of the SIFMA Municipal Swap Index. 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.

Market disruptions may adversely affect your return.

The calculation agent may, in its sole discretion, determine that the markets have been affected in a manner that prevents it from properly determining any Equity Index Level, or calculating the amount, if any, that we will pay you at maturity or, if applicable, upon automatic call or on any Interest Payment Date. These events may include disruptions or suspensions of trading in the markets as a whole. If the calculation agent, in its sole discretion, determines that any market disruption event prevents us or any of our affiliates from properly hedging our obligations under the notes, it is possible that the Observation Date and the maturity date will be postponed and your return will be adversely affected. See “General Terms of Notes — Market Disruption Events.” Moreover, if the Observation Date is postponed to the last possible day and an Equity Index Level is not available on that day because of a market disruption event or if such day is not a trading day, the calculation agent will nevertheless determine the Equity Index Level of that Equity Index such last possible day. See “Description of Notes — Payment at Maturity — Postponement of the Observation Date” for more information.

The tax consequences of an investment in certain of the notes are unclear.

There is no direct legal authority as to the proper U.S. federal income tax treatment of certain of the notes, and we do not intend to request a ruling from the Internal Revenue Service (the “IRS”) regarding such notes. If so indicated in the relevant terms supplement, insofar as we have tax reporting responsibilities with respect to your notes, we will treat them for U.S. federal income tax purposes as income-bearing pre-paid derivative contracts, as specified in the relevant terms supplement. The IRS might not accept, and a court might not uphold, this treatment. If the IRS were successful in asserting an alternative treatment for those notes, the timing and character of income on the notes could differ materially and adversely from our description herein. In addition, in 2007, the Treasury Department and the IRS released a notice requesting comments on the U.S. federal income tax treatment of “prepaid forward contracts” and similar instruments. While it is not clear whether those 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 those notes, possibly with retroactive effect. The notice focuses on a number of issues, the most relevant of which for holders of those notes are the timing and character of income or loss and the degree, if any, to which income realized by Non-U.S. Holders should be subject to withholding tax. Both U.S. and Non-U.S. Holders should review carefully the section entitled “Material U.S. Federal Income Tax Consequences” in this product supplement no. 1-V and consult their tax advisers regarding the U.S. federal income tax consequences of an investment in the notes, including possible alternative treatments and the issues presented by this notice.

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

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

The USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate and CMT Rate may be volatile.

The USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate and CMT Rate are each subject to volatility due to a variety of factors affecting interest rates generally and the rates of U.S. Treasury securities specifically, including:

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

Increases or decreases in the floating rates could result in a decrease in the corresponding Interest Rate or, if applicable, result in the corresponding USD CMS Provision, EUR CMS Provision, LIBOR Provision or CMT Provision not being satisfied, and thus result in the reduction of interest payable on notes, if any.

For notes linked to the CPI Rate, the CPI itself and the way the BLS calculates the CPI may change in the future.

There can be no assurance that the BLS will not change the method by which it calculates the CPI. In addition, changes in the way the CPI is calculated could reduce the level of the CPI and lower the interest paid with respect to

the notes. Accordingly, the amount of interest payable on the notes, and therefore the value of the notes, may be significantly reduced. If the CPI is discontinued or substantially altered, a successor index may be employed to calculate the interest payable on the notes, as described herein, and that substitution may adversely affect the value of the notes.

Owning notes linked to CMT Rates, if applicable, is not the same as owning a U.S. Treasury security directly.

The return on notes linked to CMT Rates, if applicable, will not reflect the return you would realize if you actually purchased U.S. Treasury securities. The Constant Maturity U.S. Treasury Rates are calculated by extrapolating between bid rates for a combination of Treasury securities and does not necessarily reflect the price, or even the existence, of a security with exactly the same rate and maturity reflected in the relevant CMT Rate on a trading day or at maturity. The return on your notes will likely vary significantly from the return that you would realize if you invested in U.S. Treasury obligations directly.

For notes linked to the Average SIFMA/Average LIBOR ratio, the interest rate on the notes is based on the ratio of the Average SIFMA Level to Average LIBOR, which may result in an interest rate of zero.

For notes linked to the Average SIFMA/Average LIBOR ratio, the applicable LIBOR Rate and the Average SIFMA Level may be influenced by a number of factors, including (but not limited to) monetary policies, fiscal policies, inflation, general economic conditions and public expectations with respect to such factors. The effect that any single factor may have on the applicable LIBOR Rate and the SIFMA Municipal Swap Index may be partially offset by other factors. We cannot predict the factors that may cause the ratio of Average SIFMA Level to Average LIBOR to increase or decrease. Interest during any Interest Period may be equal to zero even if either or both of the applicable LIBOR Rate and the level of the SIFMA Municipal Swap Index increases, and you will not be compensated for any loss in value due to inflation and other factors relating to the value of money over time during such period.

For notes linked to the Average SIFMA/Average LIBOR ratio, the Average SIFMA/Average LIBOR Ratio will be affected by a number of factors.

A number of factors can affect the Average SIFMA/Average LIBOR Ratio by causing changes in the relative values of the level of the SIFMA Municipal Swap Index and the applicable LIBOR Rate including, but not limited to:

- *changes in, or perceptions about, future marginal tax rates:* generally, decreases in, or a perception that there will be decreases in, marginal tax rates are expected to affect the Average SIFMA/Average LIBOR Ratio, since variable-rate demand obligations, or VRDOs, that compose the SIFMA Municipal Swap Index are exempt from U.S. federal taxation;
- *changes or uncertainty with respect to the tax-exempt nature of municipal securities:* generally, changes in the tax laws that have an adverse effect on the tax-exempt nature of municipal securities are expected to affect the Average SIFMA/Average LIBOR Ratio;
- *changes in the tax treatment of comparable securities:* changes in the tax laws that grant securities other than municipal securities favorable tax treatment to investors may adversely impact market demand for, and pricing of, municipal securities generally; such a development is expected to affect the Average SIFMA/Average LIBOR Ratio; and
- *relative supply and demand for tax-exempt and taxable debt in their respective marketplaces and other factors affecting pricing of tax-exempt debt:* a relative increase in demand for or a decrease in supply of tax-exempt debt caused by factors other than tax rates or other factors negatively impacting pricing of tax-exempt debt could cause an increase in the Average SIFMA/Average LIBOR Ratio to the extent that the Index level of the SIFMA Municipal Swap Index increases relative to the applicable LIBOR Rate as a result of these developments; such other factors include fragmentation in the municipal securities market that can lead to aberrational pricing as well as

periods of illiquidity and the possibility of uncertainty with respect to the rights of investors holding these securities.

These and other factors may have a negative impact on the payment of interest on the notes. In addition, these and other factors may have a negative impact on the value of your notes in the secondary market.

For notes linked to the Average SIFMA/Average LIBOR ratio, the method of determining the variable interest rate for any Interest Period will not directly correlate with actual levels of the applicable LIBOR Rate and the SIFMA Municipal Swap Index.

The determination of the Interest Rate for any Interest Period on notes linked to the Average SIFMA/Average LIBOR ratio will be based, in part, on the SIFMA Municipal Swap Index and the applicable LIBOR Rate as specified in the relevant terms supplement, but it will not directly correlate with actual levels of the SIFMA Municipal Swap Index and the applicable LIBOR Rate. We will use the index level of the SIFMA Municipal Swap Index and the applicable LIBOR Rate on each SIFMA/LIBOR Determination Date to determine the Average SIFMA/Average LIBOR Ratio on the applicable Interest Reset Date. Moreover, the Average SIFMA Level and Average LIBOR which make up the Average SIFMA/Average LIBOR Ratio will be based, respectively, on daily weighted averages of the index level of the SIFMA Municipal Swap Index and of the applicable LIBOR Rate, reset weekly on the applicable SIFMA/LIBOR Determination Date, as applicable.

For notes linked to the Average SIFMA/Average LIBOR ratio, you will have no rights with respect to any VRDO included in the SIFMA Municipal Swap Index.

As a holder of notes linked to the Average SIFMA/Average LIBOR ratio, you will not own or have any beneficial or other legal interest in, and will not be entitled to any rights with respect to, any VRDO included in the SIFMA Municipal Swap Index. An investment in the notes does not constitute an investment in any VRDO included in the SIFMA Municipal Swap Index. In addition, the interest you earn on the notes, if any, will not be tax-exempt municipal bond interest for U.S. federal income tax purposes. You are urged to review carefully the section entitled “Material U.S. Federal Income Tax Consequences” in this product supplement no. 1-V for a description of the tax consequences of an investment in the notes and to consult your tax adviser regarding your personal circumstances.

SIFMA and/or MMD may discontinue the SIFMA Municipal Swap Index or adjust the SIFMA Municipal Swap Index in a way that affects its level, and neither SIFMA nor MMD has any obligation to consider your interests.

The SIFMA Municipal Swap Index was created by Securities Industry and Financial Markets Association (formerly the Bond Market Association) (“SIFMA”) and produced by Municipal Market Data, a Thomson Financial Services company (“MMD”). SIFMA and/or MMD may make methodological or other changes that could change the index level of the SIFMA Municipal Swap Index, including changes related to the method by which the index level is calculated, the criteria for eligibility in the SIFMA Municipal Swap Index, or the timing with which the index level is published. In addition, SIFMA and/or MMD may alter, discontinue or suspend calculation or dissemination of the SIFMA Municipal Swap Index. SIFMA and MMD have no obligation to consider your interests in calculating, revising or discontinuing the SIFMA Municipal Swap Index. With respect to notes linked to the Average SIFMA/LIBOR Ratio, in the event that the SIFMA Municipal Swap Index is no longer published, the calculation agent may select another comparable index as a successor index or substitute another value for the Index level as described under “SIFMA Municipal Swap Index — Discontinuation of the SIFMA Municipal Swap Index; Alteration of Method of Calculation.” No assurance can be given that the rates used in lieu of the index level of the SIFMA Municipal Swap Index will be accurate assessments of the average tax-exempt VRDO rates that the SIFMA Municipal Swap Index is currently intended to assess. Any of these actions could adversely affect the Average SIFMA Levels used to calculate Average SIFMA/Average LIBOR Ratio, and in turn, the Interest Rate for any Interest Period and, therefore, the value of the notes or the amount of interest payment on any Interest Payment Date relating to such notes.

The historical performance of the USD CMS Rates, the EUR CMS Rates, the LIBOR Rates, the CMT Rates, the CPI, the SIFMA Municipal Swap Index and/or any Equity Index, as applicable, is not an indication of their future performance.

The historical performance of the USD CMS Rates, the EUR CMS Rates, the LIBOR Rates, the CMT Rates, the CPI, the SIFMA Municipal Swap Index and/or any Equity Index, as applicable, is not an indication of their performance during the term of the notes. In the past, the USD CMS Rates, the EUR CMS Rates, the LIBOR Rates, the CMT Rates, the CPI, the SIFMA Municipal Swap Index and the Equity Indices have experienced periods of volatility and such volatility may occur in the future. Fluctuations and trends in the USD CMS Rates, the EUR CMS Rates, the LIBOR Rates, the CMT Rates, the CPI and the SIFMA Municipal Swap Index and the Equity Indices that have occurred in the past are not necessarily indicative, however, of fluctuations that may occur in the future.

Except for those Interest Periods, if any, for which the applicable Interest Rate is a fixed rate, holders of the notes will receive interest payments that will be affected by changes in the USD CMS Rates, the EUR CMS Rates, the LIBOR Rates, the CMT Rates, the CPI, the SIFMA Municipal Swap Index and/or the Equity Index or Equity Indices to which your notes are linked, as applicable. Such changes may be significant. Changes in the USD CMS Rates, the EUR CMS Rates, the LIBOR Rates, the CMT Rates, the CPI, the SIFMA Municipal Swap Index and/or any Equity Index, as applicable, may result from the interaction of many factors over which we have no control.

Risks Relating to an Equity Index

You will have no shareholder rights in issuers of equity securities that are included in an Equity Index.

As a holder of the notes, you will not have voting rights or rights to receive dividends or other distributions or other rights that holders of the equity securities that are included in an Equity Index would have.

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

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

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

For notes linked to an Equity Index, unless otherwise specified in the relevant terms supplement or any related underlying supplement, to our knowledge, we are not currently affiliated with any issuers the equity securities of which are included in an Equity Index. As a result, we will have no ability to control the actions of the issuers of those equity securities, including actions that could affect the value of the equity securities underlying an Equity Index or your notes. Unless otherwise specified in the relevant terms supplement or any relevant underlying supplement, none of the money you pay us will go to any Index Sponsor or any of the issuers of the equity securities included in any Equity Index, and none of those issuers will be involved in the offering of the notes in any way. Neither those issuers nor we will have any obligation to consider your interests as a holder of the notes in taking any corporate actions that might affect the value of your notes. See any related underlying supplement or the relevant terms supplement for additional information about whether we are one of the companies included in an Equity Index.

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

For notes linked to a foreign index, the notes will be subject to risks associated with foreign indices.

For notes linked to a foreign index, the notes will be subject to risks associated with foreign indices. See “— Risks Relating to a Foreign Index” below.

Risks Relating to a Foreign Index

For notes linked to a foreign Index, if the prices of its component non-U.S. securities are not converted into U.S. dollars for purposes of calculating the value of that foreign Index, the amount payable on the notes at maturity will not be adjusted for changes in exchange rates that might affect that foreign index.

Because the prices of the non-U.S. securities underlying the applicable foreign index are not converted into U.S. dollars for purposes of calculating the value of that foreign index and although the non-U.S. securities underlying that foreign index are traded in currencies other than U.S. dollars, and the notes, which are linked to that foreign index, are denominated in U.S. dollars, the amount payable on the notes at maturity will not be adjusted for changes in the exchange rate between the U.S. dollar and each of the currencies in which the non-U.S. securities underlying that foreign index are denominated. Changes in exchange rates, however, may reflect changes in various non-U.S. economies that in turn may affect the payment on the notes. The amount we pay in respect of the notes on the maturity date will be determined solely in accordance with the procedures described in “Description of Notes — Payment at Maturity.”

For notes linked to a foreign index, if the prices of its component non-U.S. securities are converted into U.S. dollars for purposes of calculating the value of that foreign index, the notes may be subject to currency exchange risk.

Because the prices of the non-U.S. securities underlying the applicable foreign index are converted into U.S. dollars for the purposes of calculating the value of that foreign index, the holders of the notes will be exposed to currency exchange rate risk with respect to each of the currencies in which the non-U.S. securities underlying that foreign index trade. An investor’s net exposure will depend on the extent to which such currencies strengthen or weaken against the U.S. dollar and the relative weight of the non-U.S. securities underlying that foreign index denominated in each applicable currency. If, taking into account the weighting, the U.S. dollar strengthens against those currencies, the value of that foreign index will be adversely affected and the payment at maturity of the notes may be reduced.

Of particular importance to potential currency exchange risk are:

- existing and expected rates of inflation;
- existing and expected interest rate levels;
- the balance of payments;
- political, civil or military unrest; and
- the extent of governmental surpluses or deficits in the component 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 various component countries, the United States and other countries important to international trade and finance.

For notes linked to a foreign index, if the prices of its component non-U.S. securities are converted into U.S. dollars for purposes of calculating the value of that foreign index, changes in the volatility of exchange

rates and the correlation between those rates and the values of that foreign index are likely to affect the market value of the notes.

The exchange rate between the U.S. dollar and each of the currencies in which the non-U.S. securities underlying the applicable foreign index are denominated refers to a foreign exchange spot rate that measures the relative values of two currencies — the particular currency in which an equity security composing that foreign index is denominated and the U.S. dollar. This exchange rate reflects the amount of the particular currency in which an equity security composing a foreign index is denominated that can be purchased for one U.S. dollar and thus increases when the U.S. dollar appreciates relative to the particular currency in which that equity security is denominated. The volatility of the exchange rate between the U.S. dollar and each of the currencies in which the non-U.S. securities underlying a foreign index are denominated refers to the size and frequency of changes in that exchange rate.

Because the applicable foreign index is calculated, in part, by converting the closing prices of the non-U.S. securities underlying that foreign index into U.S. dollars, the volatility of the exchange rate between the U.S. dollar and each of the currencies in which those non-U.S. securities are denominated could affect the market value of the notes.

The correlation of the exchange rate between the U.S. dollar and each of the currencies in which the non-U.S. securities underlying a foreign index are denominated and the value of that foreign index refers to the relationship between the percentage changes in that exchange rate and the percentage changes in the value of that foreign index. The direction of the correlation (whether positive or negative) and the extent of the correlation between the percentage changes in the exchange rate between the U.S. dollar and each of the currencies in which the non-U.S. securities underlying a foreign index are denominated and the percentage changes in the value of that foreign index could affect the value of the notes.

For notes linked to a foreign index, an investment in the notes is subject to risks associated with non-U.S. securities markets.

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

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

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

times. The risks of the economies of emerging market countries are relevant for notes linked to a foreign index composed of securities traded in one or more emerging market countries.

Some or all of these factors may influence the Equity Index Level for a foreign index. The impact of any of the factors set forth above may enhance or offset some or all of any change resulting from another factor or factors. You cannot predict the future performance of an Index or a Fund based on its historical performance. The level of an Equity Index may decrease, which may adversely affect the value of the notes.

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

USE OF PROCEEDS AND HEDGING

Unless otherwise specified in the relevant terms supplement, the net proceeds we receive from the sale of the notes will be used for general corporate purposes and, in part, by us or by one or more of our affiliates in connection with hedging our obligations under the notes. The original issue price of the notes includes each agent's commissions (as shown on the cover page of the relevant terms supplement) paid with respect to the notes and the estimated cost of hedging our obligations under the notes. We may have hedged our obligations under the notes through certain affiliates or unaffiliated counterparties.

If so specified in the relevant terms supplement, each agent's commission will include the projected profit that our affiliates expect to realize in consideration for assuming the risks inherent in hedging our obligations under the notes. If the relevant terms supplement does not specify that such projected profit is included in each agent's commission, the original issue price of the notes will include the reimbursement of certain issuance costs and the estimated cost of hedging our obligations under the notes. Under these circumstances, the estimated cost of hedging will include the projected profit, which will not exceed \$60.00 per \$1,000 principal amount note. Because hedging our obligations entails risk and may be influenced by market forces beyond our control, this hedging may result in a profit that is more or less than expected, or could result in a loss. See also "Use of Proceeds" in the accompanying prospectus.

On or prior to the date of the relevant terms supplement, we, through our affiliates or others, expect to hedge some or all of our anticipated exposure in connection with the notes. In addition, from time to time after we issue the notes, we, through our affiliates or others, may enter into additional hedging transactions and close out or unwind those we have entered into, in connection with the notes and possibly in connection with our or our affiliates' exposure to one or more Components or the securities underlying any Equity Index. To accomplish this, we, through our affiliates or others, may take positions in one or more trades on U.S. Treasury securities or take positions in instruments the value of which is derived from U.S. Treasury securities, interest rate swap and option transactions, purchases and sales of VRDOs and listed or over-the-counter options on VRDOs, the Equity Index or Equity Indices to which your notes are linked or securities underlying such Equity Indices or other derivative transactions with returns linked or related to the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate, CMT Rate, the CPI, the SIFMA Municipal Swap Index or the Equity Index or Equity Indices to which your notes are linked or such other applicable rate or rates.

While we cannot predict an outcome, any of these hedging activities or other trading activities of ours could potentially affect the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate, CMT Rate or such other applicable rate or rates, or index level of the CPI, the SIFMA Municipal Swap Index or the Equity Index or Equity Indices to which your notes are linked and any spreads related thereto and, therefore, effectively decrease the interest rate payable on the notes. From time to time, prior to maturity of the notes, we may pursue a dynamic hedging strategy that may involve taking long or short positions in securities or instruments whose value is derived from the applicable USD CMS Rates, EUR CMS Rates, LIBOR Rate, CPI Rate, CMT Rates or index level of the CPI, the SIFMA Municipal Swap Index or the Equity Index or Equity Indices to which your notes are linked. Although we have no reason to believe that any of these activities will have a material impact on the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate, CMT Rate or index level of the SIFMA Municipal Swap Index or the Equity Index or Equity Indices to which your notes are linked, or the value of the notes, we cannot assure you that these activities will not have such an effect. It is possible that these hedging or trading activities could result in substantial returns for us or our affiliates while the value of the notes declines. See "Risk Factors — Risks Relating to the Notes Generally — We or our affiliates may have economic interests that are adverse to those of the holders of the notes" above.

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

U.S. DOLLAR CONSTANT MATURITY SWAP RATES

The U.S. Dollar Constant Maturity Swap Rate is a measurement of the fixed rate leg of a hypothetical fixed rate-for-floating rate swap transaction, which we refer to as a constant maturity swap. In this hypothetical swap transaction, the fixed rate payment stream is reset each period relative to a regularly available fixed maturity market rate (such as the 10-Year or 2-Year U.S. dollar swap rate, payable semi-annually on the basis of a 360-day year consisting of twelve 30-day months) and is exchangeable for a floating 3-month LIBOR-based payment stream, payable quarterly on the basis of the actual number of days elapsed in a 360-day year. LIBOR is the London interbank offered rate, and is a common rate of interest used in the swaps industry. The constant maturity side of the swap, which we refer to as the USD CMS Rate, represents the yield on an instrument with a longer life than the length of the fixed rate reset period. The value of the constant maturity swap is determined based on the comparison of the expected future LIBOR rates versus the fixed constant maturity swap rate, so the parties to a constant maturity swap have exposure to changes in a longer-term market rate.

EURO CONSTANT MATURITY SWAP RATES

The Euro Constant Maturity Swap Rate is a measurement of the fixed rate leg of a hypothetical fixed rate-for-floating rate swap transaction, which we refer to as a constant maturity swap. In this hypothetical swap transaction, the fixed rate payment stream is reset each period relative to a regularly available fixed maturity market rate (such as the 30-year or 10-year Euro swap rate, payable annually on the basis of a 360-day year consisting of twelve 30-day months) and is exchangeable for a floating 6-month EURIBOR-based payment stream, payable semi-annually on the basis of the actual number of days elapsed in a 360-day year. EURIBOR is the Euro Interbank Offered Rate, and is a common rate of interest used in the swaps industry. The constant maturity side of the swap, which we refer to as the EUR CMS Rate, represents the yield on an instrument with a longer life than the length of the fixed rate reset period. The value of the constant maturity swap is determined based on the comparison of the expected future EURIBOR rates versus the fixed constant maturity swap rate, so the parties to a constant maturity swap have exposure to changes in a longer-term market rate.

THE CONSUMER PRICE INDEX

The CPI for purposes of the notes is the non-seasonally adjusted U.S. City Average All Items Consumer Price Index for All Urban Consumers, reported monthly by the Bureau of Labor Statistics of the U.S. Department of Labor (the "BLS") and published on Bloomberg CPURNSA or any successor source. The CPI for a particular month is published during the following month. The CPI is a measure of the average change in consumer prices over time for a fixed market basket of goods and services, including food, clothing, shelter, fuels, transportation, charges for doctors' and dentists' services and drugs. In calculating the CPI, price changes for the various items are averaged together with weights that represent their importance in the spending of urban households in the United States. The contents of the market basket of goods and services and the weights assigned to the various items are updated periodically by the BLS to take into account changes in consumer expenditure patterns. The CPI is expressed in relative terms in relation to a time base reference period for which the level is set at 100.0. The base reference period for these notes is the 1982-1984 average. We have derived all information contained in this product supplement regarding the CPI, including, without limitation, its make-up and method of calculation, from publicly available information. We make no representation or warranty as to the accuracy or completeness of such information.

CONSTANT MATURITY U.S. TREASURY RATES

A set of theoretical securities with artificially constant maturity, all priced at par, is constructed daily by the United States Department of the Treasury based on the rates of existing, marketable securities issued by the U.S. government. Constant Maturity U.S. Treasury Rates are yields interpolated by the United States Department of the Treasury from its daily yield curve. That yield curve, which relates the yield on a U.S. Treasury security to its time to maturity, is based on the closing market bid yields on actively traded U.S. Treasury securities in the over-the-counter market. These market yields are calculated from composites of quotations obtained by the Federal Reserve Bank of New York. The yield values are read from the yield curve at fixed maturities (as of the date of this product supplement, such maturities are 1, 3 and 6 months and 1, 2, 3, 5, 7, 10, 20 and 30 years). This method provides a yield for a 10-year maturity, for example, even if no outstanding U.S. Treasury security has exactly 10 years remaining to maturity. We have derived all information contained in this product supplement regarding Constant Maturity U.S. Treasury Rates from publicly available information, including the United States Department of the Treasury's Web site at <http://www.treas.gov/> as available on the date of this product supplement. We make no representation or warranty as to the accuracy or completeness of the information displayed on such website, and such information is not incorporated by reference herein and should not be considered a part of this product supplement.

SIFMA MUNICIPAL SWAP INDEX

We have derived all information contained in this product supplement no. 1-V regarding the Securities Industry and Financial Markets Association Municipal Swap Index (the “SIFMA Municipal Swap Index” or the “Index”), including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information. Such information reflects the policies of, and is subject to change by, the Securities Industry and Financial Markets Association (formerly the Bond Market Association) (“SIFMA”) and/or Municipal Market Data, a Thomson Financial Services company (“MMD”). We make no representation or warranty as to the accuracy or completeness of such information.

The SIFMA Municipal Swap Index (formerly known as the Bond Market Association (“BMA”) Municipal Swap Index) was created by SIFMA and is produced by MMD. The SIFMA Municipal Swap Index is a seven-day high-grade market index composed of tax-exempt variable-rate demand obligations, or VRDOs, from MMD’s database of VRDO issues. In a swap transaction, two counterparties “swap” fixed-rate interest payments for floating-rate interest payments, or vice versa. One of the most critical elements of a swap transaction is the index on which the floating rate is based. The SIFMA Municipal Swap Index is intended to serve as a benchmark floating rate in a swap transaction.

The SIFMA Municipal Swap Index is calculated on a weekly basis, and released to subscribers on Thursday. The actual number of issues that make up the SIFMA Municipal Swap Index will vary in time as issues mature or are called, converted, or newly issued. In addition, if changes occur that violate the criteria or calculation methods of the SIFMA Municipal Swap Index, an issue will be removed. The qualification criteria for the SIFMA Municipal Swap Index have been established by a subcommittee of SIFMA. Typically, the SIFMA Municipal Swap Index has included 650 issues in any given week.

Computation of the SIFMA Municipal Swap Index

To be eligible for inclusion in the SIFMA Municipal Swap Index, an issue must meet the following criteria:

- be a weekly reset, effective on Wednesday (no lag resets considered);
- not be subject to alternative minimum tax;
- have an outstanding amount of \$10 million or more;
- have the highest short-term rating (VMIG1 by Moody’s or A-1+ by S&P); and
- pay interest on a monthly basis, calculated on an actual/actual basis.

In addition, only one quote per obligor per remarketing agent will be included in the SIFMA Municipal Swap Index. Issues from all states are eligible for inclusion.

The following are part of calculation methods of the SIFMA Municipal Swap Index:

- The standard deviation of the rates is calculated. Any issue falling outside of +/- 1.0 standard deviations is removed.
- Each participating remarketing agent is limited to no more than 15% of the SIFMA Municipal Swap Index by an averaging method.

License Agreement

We expect that one of our affiliates will enter into a non-exclusive license agreement with SIFMA providing the right to use the SIFMA Municipal Swap Index owned by SIFMA and published by MMD in connection with certain securities, including the notes.

The notes are not sponsored, endorsed, sold or promoted by SIFMA or MMD. Neither SIFMA nor MMD makes any representation or warranty, express or implied, to the holder of the notes or to any member of the public regarding the advisability of investing in securities generally or in the notes particularly or the ability of the SIFMA or MMD to track the performance of municipal swaps. SIFMA's only relationship to JP Morgan Chase & Co. and its subsidiaries (other than transactions entered into in the ordinary course of business) is the licensing of certain servicemarks and tradenames of SIFMA and of the SIFMA Municipal Swap Index which is determined, composed and calculated by SIFMA and/or MMD without regard to JP Morgan Chase & Co., its subsidiaries or holders of the notes. Neither SIFMA nor MMD has any obligation to take the needs of JP Morgan Chase & Co., its subsidiaries or the holders of the notes into consideration in determining, composing or calculating the SIFMA Municipal Swap Index. Neither SIFMA nor MMD is responsible for and has participated in the determination of the timing or sale of the notes, prices at which the notes are initially to be sold, or quantities of the notes to be issued or in the determination or calculation of the equation by which interest is payable on the notes. SIFMA and MMD have no obligation or liability in connection with the administration, marketing or trading of the notes.

The SIFMA Municipal Swap Index is calculated using information that SIFMA and/or MMD considers reliable but neither SIFMA nor MMD represents that the SIFMA Municipal Swap Index is accurate or complete and it should not be relied upon as such by JP Morgan Chase & Co., its subsidiaries, the trustee or holders of the notes. In addition, the methodology used to calculate the SIFMA Municipal Swap Index may change from time to time and, although it will endeavor to provide JP Morgan Chase & Co. with reasonable advance notice, SIFMA and MMD reserve the right to discontinue publication of the SIFMA Municipal Swap Index at any time. In no event will SIFMA or MMD have any liability to JP Morgan Chase & Co., its subsidiaries, the trustee, holders of the notes or any other third party for damages of any kind incident to the use of the SIFMA Municipal Swap Index.

Discontinuation of the SIFMA Municipal Swap Index; Alteration of Method of Calculation

If SIFMA and/or MMD discontinues publication of the SIFMA Municipal Swap Index and SIFMA and/or MMD or another entity publishes a successor or substitute index that the calculation agent determines, in its sole discretion, to be comparable to the discontinued SIFMA Municipal Swap Index (such index being referred to herein as a "successor index"), then the SIFMA Index Level for any SIFMA/LIBOR Determination Date or any other relevant date or dates as set forth in the relevant terms supplement will be determined by reference to the official published level of such successor index on such day.

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

If SIFMA and/or MMD discontinues publication of the SIFMA Municipal Swap Index prior to, and such discontinuation is continuing on, a SIFMA/LIBOR Determination Date or other relevant date as set forth in the relevant terms supplement, and the calculation agent determines, in its sole discretion, that no successor index is available at such time, or the calculation agent has previously selected a successor index and publication of such successor index is discontinued prior to, and such discontinuation is continuing on, such SIFMA/LIBOR Determination Date or other relevant date, then the calculation agent will determine the SIFMA Index Level for such date. The SIFMA Index Level will be computed by the calculation agent in accordance with the formula for and method of calculating the SIFMA Municipal Swap Index or successor index, as applicable, last in effect prior to such discontinuation. Notwithstanding these alternative arrangements, discontinuation of the publication of the SIFMA Municipal Swap Index or successor index, as applicable, may adversely affect the value of the notes.

If at any time the method of calculating the SIFMA Municipal Swap Index or a successor index, or the level thereof, is changed in a material respect, or if the SIFMA Municipal Swap Index or a successor index is in any other way modified so that the SIFMA Municipal Swap Index or such successor index does not, in the opinion of the

calculation agent, fairly represent the level of the SIFMA Municipal Swap Index or such successor index had such changes or modifications not been made, then the calculation agent will, at the close of business in The City of New York on each date on which the SIFMA Index Level is to be determined, make such calculations and adjustments as, in the good faith judgment of the calculation agent, may be necessary in order to arrive at a level of an index comparable to the SIFMA Municipal Swap Index or such successor index, as the case may be, as if such changes or modifications had not been made, and the calculation agent will calculate the SIFMA Index Level with reference to the SIFMA Municipal Swap Index or such successor index, as adjusted.

OTHER COMPONENTS

Indices and Funds

If the notes are linked to any rate or rates not described in this product supplement, or an Equity Index, a separate underlying supplement or the relevant terms supplement will provide additional information relating to such rate or rates or Equity Index.

Conflicts of Interest

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

Historical performance of the Components

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

GENERAL TERMS OF NOTES

Calculation Agent

J.P. Morgan Securities LLC, one of our affiliates, will act as the calculation agent. The calculation agent will determine, among other things: the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate and CMT Rate, the Average LIBOR, the SIFMA Index Level, the Average SIFMA Level, any other applicable rate or rates, and each Equity Index Level, the applicable Interest, Interest Rate and Interest Factor for each Interest Period, whether, if applicable, the applicable Accrual Provision is satisfied on each calendar day of any Interest Period, the amount of interest payable on each Interest Payment Date and the amount of cash that we are required to pay to you at maturity or upon redemption, if applicable. In addition, the calculation agent will determine whether a day is a business day, TARGET Settlement Day, London Business Day, U.S. Government Securities Business Day or trading day, whether there has been a discontinuation of the SIFMA Municipal Swap Index or an Equity Index, whether there has been a market disruption event with respect to an Equity Index and whether there has been a material change in the method of calculating the level of the SIFMA Municipal Swap Index or an Equity Index. All determinations made by the calculation agent will be at the sole discretion of the calculation agent and will, in the absence of manifest error, be conclusive for all purposes and binding on you and on us. We may appoint a different calculation agent from time to time after the date of the relevant terms supplement without your consent and without notifying you.

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

All calculations with respect to the applicable USD CMS Rate, EUR CMS Rate, LIBOR Rate, CPI Rate, CMT Rate, SIFMA Index Level, the Average LIBOR, the Average SIFMA Level, any other applicable rate or rates and any Equity Index Level as well as any successor or substitute rate calculation described above, will be rounded to the nearest one hundred-thousandth, with five one-millionths rounded upward (e.g., 0.876545 would be rounded to 0.87655); all dollar amounts related to the determination of the interest payment per \$1,000 principal amount note on each Interest Payment Date, at maturity or on a Redemption Date, if any, will be rounded to the nearest ten-thousandth, with five one hundred-thousandths rounded upward (e.g., 0.76545 would be rounded up to 0.7655); and all dollar amounts paid on the aggregate principal amount of notes per holder will be rounded to the nearest cent, with one-half cent rounded upward.

Market Disruption Events

Certain events may prevent the calculation agent from properly determining the closing level of an Equity Index, and consequently, calculating the amount, if any, due on the notes. These events may include disruptions or suspensions of trading in the markets as a whole.

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

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

equity index) for more than two hours of trading during, or during the one-hour period preceding the close of, the principal trading session on that exchange or market; or

- a decision to permanently discontinue trading in those related futures or options contracts,

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

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

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

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

in each case immediately before that suspension or limitation.

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

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

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

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

“Relevant exchange” means, with respect to an Equity Index or any relevant successor equity index, the primary exchange or market of trading for any security (or any combination thereof) then included in that Index or successor equity index, as applicable.

Discontinuation of an Equity Index; Alteration of Method of Calculation

Unless otherwise specified in the relevant terms supplement or any relevant underlying supplement, if the Index Sponsor discontinues publication of an Equity Index and the Index Sponsor or another entity publishes a successor or substitute index that the calculation agent determines, in its sole discretion, to be comparable to the discontinued Index (such index being referred to herein as a “successor equity index”), then the Equity Index Level of such Equity Index on any trading day on which the Equity Index Level of such Equity Index is to be determined will be determined by reference to the level of such successor equity index at the close of trading on the relevant exchange for such successor equity index on such day.

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

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

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

Events of Default

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

Payment upon an Event of Default

Unless otherwise specified in the relevant terms supplement, in case an event of default with respect to the notes will have occurred and be continuing, the amount declared due and payable per \$1,000 principal amount note upon any acceleration of the notes will be determined by the calculation agent and will be an amount in cash equal to \$1,000 per \$1,000 principal amount note *plus* accrued and unpaid interest, calculated as if the date of acceleration were the maturity date. In such case, interest will be calculated on the basis of a 360-day year and the

actual number of days in such adjusted Interest Period and will be based on the Interest Rate on the Determination Date immediately preceding such adjusted Interest Period.

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

Modification

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

Defeasance

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

Listing

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

Book-Entry Only Issuance — The Depository Trust Company

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

Registrar, Transfer Agent and Paying Agent

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

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

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

Governing Law

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

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES

The following is a discussion of the material U.S. federal income tax consequences of the ownership and disposition of the notes. It applies to you only if you are an initial holder of a note purchasing the note at its issue price for cash and if you hold the note as a capital asset, within the meaning of Section 1221 of the Internal Revenue Code of 1986, as amended (the "Code").

This discussion does not address all aspects of U.S. federal income and estate taxation that may be relevant to you in light of your particular circumstances or if you are a holder subject to special treatment under the U.S. federal income tax laws, such as:

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

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

Tax Consequences to U.S. Holders

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

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

Tax Treatment of Indebtedness

If so indicated in the relevant terms supplement, we will treat your notes as indebtedness for U.S. federal income tax purposes. The following is a discussion of the material U.S. federal income tax consequences of owning and disposing of notes that are treated as indebtedness for U.S. federal income tax purposes.

Payments of Interest. Payments of interest on a note generally will be taxable to a U.S. Holder as ordinary interest income at the time such payments are accrued or received (in accordance with the U.S. Holder's regular method of tax accounting), provided that the interest is "qualified stated interest" (as defined below).

Original Issue Discount. The following summary is a general discussion of the U.S. federal income tax consequences to U.S. Holders of the purchase, ownership and disposition of notes issued with original issue discount. The following is a summary of the principal U.S. federal income tax consequences of the ownership of notes having been issued with original issue discount.

A note will have original issue discount for U.S. federal income tax purposes if the note's "issue price" is less than the note's "stated redemption price at maturity" by more than a *de minimis* amount, as discussed below, and the note has a term of more than one year.

The issue price of a note generally is the first price at which a substantial amount of the "issue" of notes is sold to the public for money (excluding sales to bond houses, brokers or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers), excluding pre-issuance accrued interest (as discussed below under "—Pre-Issuance Accrued Interest").

The "stated redemption price at maturity" of a note generally is the total amount of all payments provided by the note other than "qualified stated interest" payments.

Qualified stated interest generally is stated interest that is "unconditionally payable" in cash or property (other than debt instruments of the issuer) at least annually either at a single fixed rate, or a qualifying variable rate (as described below). Qualified stated interest is taxable to a U.S. Holder when accrued or received in accordance with the U.S. Holder's regular method of tax accounting, as described above under "—Payments of Interest."

Interest is considered unconditionally payable only if reasonable legal remedies exist to compel timely payment or the note otherwise provides terms and conditions that make the likelihood of late payment (other than a late payment within a reasonable grace period) or non-payment a remote contingency. Interest is payable at a single fixed rate only if the rate appropriately takes into account the length of the interval between stated interest payments. Thus, if the interval between payments varies during the term of the instrument, the value of the fixed rate on which payment is based generally must be adjusted to reflect a compounding assumption consistent with the length of the interval preceding the payment.

Notes having "*de minimis* original issue discount" generally will be treated as not having original issue discount unless a U.S. Holder elects to treat all interest on the note as original issue discount. See "—Election to Treat All Interest and Discount as Original Issue Discount (Constant Yield Method)." A note will be considered to have "*de minimis* original issue discount" if the difference between its stated redemption price at maturity and its issue price is less than the product of $\frac{1}{4}$ of 1 percent of the stated redemption price at maturity and the number of complete years from the issue date to maturity (or the weighted average maturity in the case of a note that provides for payment of an amount other than qualified stated interest prior to maturity).

U.S. Holders of notes having original issue discount will be required to include original issue discount in gross income for U.S. federal income tax purposes as it accrues (regardless of the U.S. Holder's regular method of tax accounting), which may be in advance of receipt of the cash attributable to such income. Original issue discount accrues under the constant yield method, based on a compounded yield to maturity, as described below. Accordingly, U.S. Holders of notes having original issue discount will generally be required to include in income increasingly greater amounts of original issue discount in successive accrual periods.

The annual amount of original issue discount includible in income by the initial U.S. Holder of a note having original issue discount will equal the sum of the "daily portions" of the original issue discount with respect to the note for each day on which the U.S. Holder held the note during the taxable year. Generally, the daily portions of original issue discount are determined by allocating to each day in an "accrual period" the ratable portion of original issue discount allocable to the accrual period. The term "accrual period" means an interval of time with respect to which the accrual of original issue discount is measured and which may vary in length over the term of the note *provided*

that each accrual period is no longer than one year and each scheduled payment of principal or interest occurs on either the first or last day of an accrual period.

The amount of original issue discount allocable to an accrual period will be the excess of:

- the product of the “adjusted issue price” of the note at the commencement of the accrual period and its “yield to maturity” over
- the amount of any qualified stated interest payments allocable to the accrual period.

The adjusted issue price of a note at the beginning of the first accrual period is the note's issue price and, on any day thereafter, it is the sum of the issue price and the amount of original issue discount previously includible in the gross income of the U.S. Holder (without regard to any “acquisition premium” as described below), reduced by the amount of any payment other than a payment of qualified stated interest previously made on the note. If an interval between payments of qualified stated interest contains more than one accrual period, the amount of qualified stated interest that is payable at the end of the interval (including any qualified stated interest that is payable on the first day of the accrual period immediately following the interval) is allocated on a pro-rata basis to each accrual period in the interval, and the adjusted issue price at the beginning of each accrual period in the interval is increased by the amount of any qualified stated interest that has accrued prior to the first day of the accrual period but is not payable until the end of the interval. The yield to maturity of a note is the yield to maturity computed on the basis of compounding at the close of each accrual period and appropriately adjusted to take into account the length of the particular accrual period. If all accrual periods are of equal length except for a shorter initial accrual period or a shorter initial and final accrual period, the amount of original issue discount allocable to the initial period may be computed using any reasonable method; however, the original issue discount allocable to the final accrual period will always be the difference between the amount payable at maturity (other than a payment of qualified stated interest) and the adjusted issue price of the note at the beginning of the final accrual period.

Notes Subject to Call or Put Options. For purposes of calculating the yield and maturity of a note subject to an option, in general, a call option held by the issuer is presumed exercised if, upon exercise, the yield on the note is less than it would have been had the option not been exercised, and a put option held by a U.S. Holder is presumed exercised if, upon exercise, the yield on the note is more than it would have been had the option not been exercised. The effect of this rule generally may accelerate or defer the inclusion of original issue discount in the income of a U.S. Holder whose note is subject to a put option or a call option, as compared to a note that does not have such an option. If any option that is presumed to be exercised is not in fact exercised, the note is treated as retired and reissued solely for purposes of the original issue discount rules on the date of presumed exercise for an amount equal to the note's adjusted issue price on that date. The deemed reissuance will have the effect of redetermining the note's yield and maturity for original issue discount purposes and any related subsequent accruals of original issue discount.

Variable Rate Debt Instruments. Certain notes that qualify as “variable rate debt instruments” are subject to the special rules described below. A note will qualify as a variable rate debt instrument if (a) the note's issue price does not exceed the total noncontingent principal payments due under the note by more than a specified *de minimis* amount and (b) the note provides for stated interest, paid or compounded at least annually, at current values of (i) one or more qualified floating rates, (ii) a single fixed rate and one or more qualified floating rates, (iii) a single objective rate, or (iv) a single fixed rate and a single objective rate that is a qualified inverse floating rate.

A “qualified floating rate” is any variable rate where variations in the value of such rate can reasonably be expected to measure contemporaneous variations in the cost of newly borrowed funds in the currency in which the note is denominated. Although a multiple of a qualified floating rate will generally not itself constitute a qualified floating rate, a variable rate equal to the product of a qualified floating rate and a fixed multiple that is greater than .65 but not more than 1.35 will constitute a qualified floating rate. A variable rate equal to the product of a qualified floating rate and a fixed multiple that is greater than .65 but not more than 1.35, increased or decreased by a fixed rate, will also constitute a qualified floating rate. In addition, two or more qualified floating rates that can reasonably be expected to have approximately the same values throughout the term of the note (e.g., two or more qualified floating rates with values within 25 basis points of each other as determined on the note's issue date) will be treated

as a single qualified floating rate. Notwithstanding the foregoing, a variable rate that would otherwise constitute a qualified floating rate but which is subject to one or more restrictions such as a maximum numerical limitation (*i.e.*, a cap) or a minimum numerical limitation (*i.e.*, a floor) may, under certain circumstances, fail to be treated as a qualified floating rate, unless such cap or floor is fixed throughout the term of the note. An “objective rate” is a rate that is not itself a qualified floating rate but which is determined using a single fixed formula and that is based on objective financial or economic information. A rate will not qualify as an objective rate if it is based on information that is within the control of the issuer (or a related party) or that is unique to the circumstances of the issuer (or a related party) such as dividends, profits, or the value of the issuer’s stock (although a rate does not fail to qualify as an objective rate merely because it is based on the credit quality of the issuer). A “qualified inverse floating rate” is any objective rate which is equal to a fixed rate minus a qualified floating rate, as long as variations in the rate can reasonably be expected to inversely reflect contemporaneous variations in the qualified floating rate. Further, if a note provides for stated interest at a fixed rate for an initial period of one year or less followed by a variable rate that is either a qualified floating rate or an objective rate and if the variable rate on the note’s issue date is intended to approximate the fixed rate (*e.g.*, the value of the variable rate on the issue date does not differ from the value of the fixed rate by more than 25 basis points), then the fixed rate and the variable rate together will constitute either a single qualified floating rate or objective rate, as the case may be.

If a note that provides for stated interest at either a single qualified floating rate or a single objective rate throughout the term thereof qualifies as a “variable rate debt instrument”, and if the stated interest on such note is unconditionally payable in cash or property (other than debt instruments of the issuer) at least annually, then all stated interest on the note will constitute qualified stated interest and will be taxed accordingly. Thus, a note that provides for stated interest at either a single qualified floating rate or a single objective rate throughout the term thereof and that qualifies as a “variable rate debt instrument” will generally not be treated as having been issued with original issue discount unless the note is issued at a “true” discount (*i.e.*, at a price below the note’s stated principal amount) in excess of a specified *de minimis* amount. The amount of qualified stated interest and the amount of original issue discount, if any, that accrues during an accrual period on such a note is determined under the rules applicable to fixed rate debt instruments by assuming that the variable rate is a fixed rate equal to (i) in the case of a qualified floating rate or qualified inverse floating rate, the value as of the issue date, of the qualified floating rate or qualified inverse floating rate, or (ii) in the case of an objective rate (other than a qualified inverse floating rate), a fixed rate that reflects the yield that is reasonably expected for the note. The qualified stated interest allocable to an accrual period is increased (or decreased) if the interest actually paid during an accrual period exceeds (or is less than) the interest assumed to be paid during the accrual period pursuant to the foregoing rules.

In general, any other note that qualifies as a “variable rate debt instrument” will be converted into an “equivalent” fixed rate debt instrument for purposes of determining the amount and accrual of original issue discount and qualified stated interest on the note. Treasury regulations generally require that such a note be converted into an “equivalent” fixed rate debt instrument by substituting any qualified floating rate or qualified inverse floating rate provided for under the terms of the note with a fixed rate equal to the value of the qualified floating rate or qualified inverse floating rate, as the case may be, as of the note’s issue date. Any objective rate (other than a qualified inverse floating rate) provided for under the terms of the note is converted into a fixed rate that reflects the yield that is reasonably expected for the note. In the case of a note that qualifies as a “variable rate debt instrument” and provides for stated interest at a fixed rate in addition to either one or more qualified floating rates or a qualified inverse floating rate, the fixed rate is initially converted into a qualified floating rate (or a qualified inverse floating rate, if the note provides for a qualified inverse floating rate). Under such circumstances, the qualified floating rate or qualified inverse floating rate that replaces the fixed rate must be such that the fair market value of the note as of the note’s issue date is approximately the same as the fair market value of an otherwise identical debt instrument that provides for either the qualified floating rate or qualified inverse floating rate rather than the fixed rate. Subsequent to converting the fixed rate into either a qualified floating rate or a qualified inverse floating rate, the note is then converted into an “equivalent” fixed rate debt instrument in the manner described above.

Once the note is converted into an “equivalent” fixed rate debt instrument pursuant to the foregoing rules, the amount of original issue discount and qualified stated interest, if any, are determined for the “equivalent” fixed rate debt instrument by applying the general original issue discount rules to the “equivalent” fixed rate debt instrument and a U.S. Holder of the note will account for such original issue discount and qualified stated interest as if the U.S. Holder held the “equivalent” fixed rate debt instrument. In each accrual period, appropriate adjustments will be

made to the amount of qualified stated interest or original issue discount assumed to have been accrued or paid with respect to the “equivalent” fixed rate debt instrument in the event that such amounts differ from the actual amount of interest accrued or paid on the note during the accrual period.

Short-Term Debt Instruments. Certain notes that are treated as “short-term” debt instruments are subject to special rules. U.S. Holders that report income for U.S. federal income tax purposes on the accrual method and certain other holders are required to include original issue discount (equal to the difference between all payments on the note over its issue price) in income. Original issue discount on notes that are short-term debt instruments is accrued on a straight-line basis, unless an irrevocable election with respect to the note is made to accrue the original issue discount under the constant yield method based on daily compounding.

In general, an individual or other cash method U.S. Holder of a short-term debt instrument is not required to accrue original issue discount with respect to a note that is a short-term debt instrument, unless the U.S. Holder elects to do so, but may be required to include interest paid on the note that is a short-term debt instrument in income as the interest is received. An election by a cash basis U.S. Holder to accrue original issue discount on a note that is a short-term debt instrument, applies to all short-term debt instruments acquired by the U.S. Holder during the first taxable year for which the election is made, and all subsequent taxable years of the U.S. Holder, unless the Internal Revenue Service (the “IRS”) consents to a revocation. In the case of a U.S. Holder that is not required (and does not elect) to include original issue discount in income currently, any gain realized on the sale, exchange, retirement, redemption or other disposition of a note that is a short-term debt instrument is treated as ordinary income to the extent of the original issue discount that had accrued on a straight-line basis (or, if elected, under the constant yield method based on daily compounding) through the date of sale, exchange, retirement, redemption or other disposition and the U.S. Holder will be required to defer deductions for any interest paid on indebtedness incurred or continued to purchase or carry the note in an amount not exceeding the accrued original issue discount (determined on a ratable basis, unless the U.S. Holder elects to use a constant yield basis) on the note, until the original issue discount is recognized.

Market Discount and Premium. If a U.S. Holder purchases a note, other than a contingent payment debt instrument or a short-term debt instrument, for an amount that is less than the note’s stated redemption price at maturity or, in the case of a note having original issue discount, less than the note’s revised issue price (which is the sum of the issue price of the note increased by the aggregate amount of the original issue discount previously includible in the gross income of any holder (without regard to any acquisition premium) and decreased by the amount of any payments previously made on the note that were not payments of qualified stated interest), the amount of the difference generally will be treated as market discount for U.S. federal income tax purposes. It is possible that a U.S. Holder may purchase a note at original issuance for an amount that is different than its issue price. The amount of any market discount generally will be treated as *de minimis* and disregarded if the amount is less than the product of $\frac{1}{4}$ of 1 percent of the stated redemption price at maturity of the note and the number of complete remaining years to maturity (or weighted average remaining maturity in the case of notes paying any amount other than qualified stated interest prior to maturity).

Under the market discount rules, a U.S. Holder is required to treat any principal payment on, or any gain on the sale, exchange, retirement, redemption or other disposition of a note as ordinary income to the extent of any accrued market discount that has not previously been included in income. If the note is disposed of in a nontaxable transaction (other than certain specified nonrecognition transactions), accrued market discount will be includible as ordinary income to the U.S. Holder as if the U.S. Holder had sold the note at its then fair market value. In addition, the U.S. Holder may be required to defer, until the maturity of the note or its earlier disposition in a taxable transaction, the deduction of all or a portion of the interest expense on any indebtedness incurred or continued to purchase or carry the note.

Market discount accrues ratably during the period from the date of acquisition to the maturity of a note, unless the U.S. Holder elects to accrue it under the constant yield method. A U.S. Holder of a note may elect to include market discount in income currently as it accrues (either ratably or under the constant yield method), in which case the rule described above regarding deferral of interest deductions will not apply. The election to include market discount currently applies to all market discount obligations acquired during or after the first taxable year to which the election applies and may not be revoked without the consent of the IRS. If an election is made to include market

discount in income currently, the basis of the note in the hands of the U.S. Holder will be increased by the market discount thereon as it is included in income.

A U.S. Holder that purchases a note having original issue discount, other than a contingent payment debt instrument, for an amount exceeding its “adjusted issue price” (which is described above under “— Original Issue Discount”) and less than or equal to the sum of all remaining amounts payable on the note other than payments of qualified stated interest will be treated as having purchased the note with acquisition premium. The amount of original issue discount that the U.S. Holder must include in gross income with respect to such note will be reduced in the proportion that the excess bears to the original issue discount remaining to be accrued as of the note’s acquisition date and ending on the stated maturity date. Rather than apply the above fraction, the U.S. Holder that, as discussed below, elects to treat all interest as original issue discount would treat the purchase at an acquisition premium as a purchase at original issuance and calculate original issue discount accruals on a constant yield to maturity basis.

A U.S. Holder that acquires a note, other than a contingent payment debt instrument, for an amount that is greater than the sum of all remaining amounts payable on the note other than payments of qualified stated interest will be treated as having purchased the note at a bond premium and will not be required to include any original issue discount in income. A U.S. Holder generally may elect to amortize bond premium. The election to amortize bond premium must be made with a timely filed U.S. federal income tax return for the first taxable year to which the U.S. Holder wishes the election to apply.

If bond premium is amortized, the amount of interest that must be included in the U.S. Holder’s income for each period ending on an interest payment date or on stated maturity, as the case may be, will be reduced by the portion of bond premium allocable to such period based on the note’s yield to maturity (or, in certain circumstances, until an earlier call date) determined by using the U.S. Holder’s basis of the note, compounding at the close of each accrual period. If the bond premium allocable to an accrual period is in excess of qualified stated interest allocable to that period, the excess may be deducted to the extent of prior interest income inclusions and is then carried to the next accrual period and offsets qualified stated interest in such period (subject to the same limitation in such future accrual periods). Any amortizable bond premium remaining at the time the note is sold, retired or otherwise disposed of will be deductible as a bond premium deduction and will not be treated as a capital loss. If an election to amortize bond premium is not made, a U.S. Holder must include the full amount of each interest payment in income in accordance with its regular method of accounting and will receive a tax benefit from the premium only in computing its gain or loss upon the sale, exchange, retirement, redemption or other disposition or payment of the principal amount of the note.

An election to amortize bond premium will apply to amortizable bond premium on all notes and other bonds, the interest on which is includible in the U.S. Holder’s gross income, held at the beginning of the U.S. Holder’s first taxable year to which the election applies or thereafter acquired, and may be revoked only with the consent of the IRS. The election to treat all interest as original issue discount is treated as an election to amortize premium. Special rules may apply if a note is subject to call prior to maturity at a price in excess of its stated redemption price at maturity.

Election to Treat All Interest and Discount as Original Issue Discount (Constant Yield Method). A U.S. Holder of a note may elect to include in income all interest and discount (including *de minimis* original issue discount and *de minimis* market discount), as adjusted by any premium with respect to the note, based on a constant yield method, which is described above under “— Original Issue Discount.” The election is made for the taxable year in which the U.S. Holder acquired the note, and it may not be revoked without the consent of the IRS. If such election is made with respect to a note having market discount, the U.S. Holder will be deemed to have elected currently to include market discount on a constant yield basis with respect to all debt instruments having market discount acquired during the year of election or thereafter. If made with respect to a note having amortizable bond premium, the U.S. Holder will be deemed to have made an election to amortize premium generally with respect to all debt instruments having amortizable bond premium held by the U.S. Holder during the year of election or thereafter.

Sale, Exchange, Retirement, Redemption or Repayment of the Notes. Upon the disposition of a note by sale, exchange, retirement, redemption, or other disposition or repayment of principal at maturity, a U.S. Holder will

generally recognize taxable gain or loss equal to the difference between (i) the amount realized on the disposition (other than amounts attributable to accrued but unpaid interest, which will be taxable as such) and (ii) the U.S. Holder's adjusted tax basis in the note. A U.S. Holder's adjusted tax basis in a note generally will equal the cost of the note (net of accrued interest) to the U.S. Holder, increased by amounts includible in income as original issue discount or market discount, as described above (if the holder elects to include market discount in income on a current basis) and reduced by any amortized bond premium and any payments (other than payments of qualified stated interest) made on the note.

Such gain or loss (except to the extent that the market discount rules or the rules relating to short-term debt instruments or contingent payment debt instruments otherwise provide) will generally constitute capital gain or loss, which will be long-term capital gain or loss if the note was held for more than one year. Long-term capital gains of individual taxpayers may be eligible for reduced rates of taxation. The deductibility of capital losses is subject to certain limitations.

Contingent Payment Debt Instruments. Certain notes that are treated as "contingent payment debt instruments" are subject to special rules. The relevant terms supplement will indicate whether we intend to treat a note as a contingent payment debt instrument. If a contingent payment debt instrument is issued for cash or publicly traded property, original issue discount is determined and accrued under the "noncontingent bond method." Unless otherwise indicated in the relevant terms supplement, we intend to treat all notes that are treated as contingent payment debt instruments as subject to the noncontingent bond method.

Under the noncontingent bond method, for each accrual period, U.S. Holders of the notes accrue original issue discount equal to the product of (i) the "comparable yield" (adjusted for the length of the accrual period) and (ii) the "adjusted issue price" of the notes at the beginning of the accrual period. This amount is ratably allocated to each day in the accrual period and is includible as ordinary interest income by a U.S. Holder for each day in the accrual period on which the U.S. Holder holds the contingent payment debt instrument, whether or not the amount of any payment is fixed or determinable in the taxable year. Thus, the noncontingent bond method may result in recognition of income prior to the receipt of cash.

In general, the comparable yield of a contingent payment debt instrument is equal to the yield at which the issuer would issue a fixed rate debt instrument with terms and conditions similar to those of the contingent payment debt instrument, including level of subordination, term, timing of payments, and general market conditions. For example, if a hedge of the contingent payment debt instrument is available that, if integrated with the contingent payment debt instrument, would produce a "synthetic debt instrument" with a specific yield to maturity, the comparable yield will be equal to the yield of the synthetic debt instrument. However, if such a hedge is not available, but similar fixed rate debt instruments of the issuer are traded at a price that reflects a spread above a benchmark rate, the comparable yield is the sum of the benchmark rate on the issue date and the spread.

The adjusted issue price at the beginning of each accrual period is generally equal to the issue price of the note plus the amount of original issue discount previously accrued upon the note (generally determined without regard to any positive or negative adjustments, as discussed below) less any noncontingent payment and the projected amount of any contingent payment contained in the projected payment schedule (as described below) previously made on the contingent payment debt instrument.

In addition to the determination of a comparable yield, the noncontingent bond method requires us to construct a projected payment schedule. The projected payment schedule includes all noncontingent payments, and projected amounts for each contingent payment to be made under the contingent payment debt instrument that are adjusted to produce the comparable yield. Except as discussed below, the projected payment schedule remains fixed throughout the term of the contingent payment debt instrument and is not revised to account for changes in circumstances that occur while the notes are outstanding. A U.S. Holder is required to use the issuer's projected payment schedule to determine its interest accruals and adjustments, unless the U.S. Holder determines that the issuer's projected payment schedule is unreasonable, in which case the U.S. Holder must disclose its own projected payment schedule in connection with its U.S. federal income tax return and the reason(s) why it is not using the issuer's projected payment schedule.

The comparable yield and the projected payment schedule are used to determine accruals of interest FOR U.S. FEDERAL INCOME TAX PURPOSES ONLY and are not assurances or predictions by us with respect to the actual yield of or payments to be made in respect of a note. The comparable yield and the projected payment schedule do not represent our expectations regarding such yield or the amount of such payments.

If the actual amounts of contingent payments are different from the amounts reflected in the projected payment schedule, a U.S. Holder is required to make adjustments in its original issue discount accruals when such amounts are paid. In addition, if a note has been held until maturity, for purposes of determining the amount realized upon retirement of the note at maturity, the U.S. Holder is generally treated as receiving the projected amount of any contingent payment due at maturity, as provided by the projected payment schedule (subject to adjustment, as described below). Adjustments arising from contingent payments that are greater than the projected amounts of those payments are referred to as "positive adjustments"; adjustments arising from contingent payments that are less than the projected amounts are referred to as "negative adjustments." Positive and negative adjustments are netted for each taxable year with respect to each note. Any net positive adjustment for a taxable year is treated as additional original issue discount income of the U.S. Holder. Any net negative adjustment reduces any original issue discount on the note for the taxable year that would otherwise accrue. Any excess is then treated as a current-year ordinary loss to the U.S. Holder to the extent of original issue discount accrued in prior years. The balance, if any, is treated as a negative adjustment in subsequent taxable years. Finally, to the extent that it has not previously been taken into account, an excess negative adjustment reduces the amount realized upon a sale, exchange, retirement, redemption or other disposition of the note.

Notwithstanding the foregoing, special rules will apply if a contingent payment on a note becomes fixed more than six months prior to its scheduled date of payment. Generally, in such a case, a U.S. Holder would be required to account for the difference between the present value of the fixed payment and the present value of the projected payment as either a positive adjustment or a negative adjustment (*i.e.*, either as additional original issue discount or as an offset to future original issue discount or as an ordinary loss, as appropriate) on the date the payment becomes fixed. Notwithstanding the preceding sentence, if all remaining contingent payments become fixed substantially contemporaneously, any positive or negative adjustment is taken into account in a reasonable manner over the remaining term of the CD. In addition, the projected payment schedule will generally be modified prospectively to reflect the fixed amount of the payment, and no further adjustment will be made when the payment is actually made. The adjusted issue price of the note and a U.S. Holder's tax basis in the note and the character of any gain or loss on the sale of the note could also be affected. U.S. Holders should consult their own tax advisors concerning these special rules.

A U.S. Holder's basis in a contingent payment debt instrument is increased by the original issue discount previously accrued by the U.S. Holder on the contingent payment debt instrument (as determined without regard to adjustments made to reflect differences between actual and projected payments, except as discussed in the preceding paragraph) and reduced by the amount of any non-contingent payments and the projected amount of any contingent payments previously made to the U.S. Holder. Gain on the sale, exchange, retirement, redemption or other disposition of a contingent payment debt instrument generally is treated as ordinary income. Loss, on the other hand, is treated as ordinary loss only to the extent of the U.S. Holder's prior net original issue discount inclusions (*i.e.*, reduced by the total net negative adjustments previously allowed to the U.S. Holder as an ordinary loss) and capital loss to the extent in excess thereof. The deductibility of capital losses is subject to certain limitations.

A U.S. Holder that purchases a note for an amount other than the issue price of the note will be required to adjust its original issue discount inclusions to account for the difference. These adjustments will affect the U.S. Holder's basis in the note. Reports to U.S. Holders may not include these adjustments. U.S. Holders that purchase notes for an amount other than the issue price should consult their tax advisors regarding these adjustments.

Prospective investors should consult their own tax advisors with respect to the application of the contingent payment debt instrument provisions to notes.

Tax Treatment as Income-Bearing Pre-paid Derivative Contracts

If so indicated in the relevant terms supplement, insofar as we have tax reporting responsibilities with respect to your notes, we will (in the absence of an administrative determination or judicial ruling to the contrary) treat your notes for U.S. federal income tax purposes as income-bearing pre-paid derivative contracts, as specified in the relevant terms supplement.

At the time of the relevant offering, we may seek an opinion of counsel regarding the tax consequences of owning and disposing of the notes. In this event, whether or not counsel is able to opine regarding the correctness of the treatment of the notes described above, we expect that counsel will be able to opine that the following are the material tax consequences of owning and disposing of the notes if the treatment of the notes described above is respected, as well as material tax consequences that may apply if it is not respected. The following discussion assumes this treatment is respected, except where otherwise indicated. The relevant terms supplement may indicate other issues applicable to a particular offering of notes.

If the treatment of the notes as income-bearing pre-paid derivative contracts, as specified in the relevant terms supplement, is respected, the following is a discussion of the material U.S. federal income tax consequences of owning and disposing of the notes.

Interest payments that you receive should be included in ordinary income at the time you receive the payments or when the payments accrue, in accordance with your regular method of accounting for U.S. federal income tax purposes.

Upon the sale, exchange, redemption or maturity of your notes, you should recognize capital gain or loss equal to the difference between the amount realized on the sale, exchange, redemption or maturity (excluding amounts attributable to interest) and your tax basis in your notes. Your tax basis in your notes will generally be equal to the amount that you paid for the notes. Such capital gain or loss should generally be short-term capital gain or loss if you hold the notes for one year or less, and should be long-term capital gain or loss if you hold the notes for more than one year. Short-term capital gains are generally subject to tax at the marginal tax rates applicable to ordinary income. The deductibility of capital losses is subject to limitations.

Other Possible Tax Treatments. Assuming that your notes have a term of more than one year, the IRS might treat the notes as “contingent payment debt instruments.” In that event, regardless of whether you are an accrual-method or cash-method taxpayer, (i) in each year that you hold your notes, you will be required to accrue into income original issue discount on your notes at our “comparable yield” for similar noncontingent debt, determined at the time of the issuance of the notes and (ii) any income recognized at maturity or upon sale, exchange or redemption of your notes will generally be treated as interest income. In addition, you could be subject to special reporting requirements if any loss exceeded certain thresholds. You should consult your tax adviser regarding these issues.

It is also possible that the IRS could seek to characterize your notes as notional principal contracts. It is also possible that the interest payments would not be treated as interest for U.S. federal income tax purposes, but instead would be treated in some other manner. For example, the interest payments could be treated all or in part as contract fees in respect of a forward contract, and the United States federal income tax treatment of such contract fees is uncertain.

It is also possible that your notes could be treated in the manner described above, except that (i) any gain or loss that you recognize at maturity or upon sale, exchange or redemption of your notes would be treated as ordinary income or loss or (ii) you should not include the interest payments, if any, in income as you receive them but instead you should reduce your basis in your notes by the amount of the interest payments that you receive. You should consult your tax advisor as to the tax consequences of any possible alternative characterizations of your notes for United States federal income tax purposes.

In 2007, the Treasury Department and the IRS released a notice requesting comments on the U.S. federal income tax treatment of “prepaid forward contracts” and similar instruments. While it is not 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. 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.

If your notes have a term of one year or less, the IRS may assert that your notes should be treated as contingent short-term notes. There is no statutory, judicial or administrative authority that governs how short-term contingent debt should be treated for U.S. federal income tax purposes. Accordingly, if your notes have a term of one year or less, you should consult your tax advisor about this potential alternative treatment. Moreover, the relevant terms supplement will further discuss the U.S. federal income tax treatment of your notes if such notes have a term of one year or less.

Tax Consequences to Non-U.S. Holders

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

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

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

Except as provided below, payments on the notes to Non-U.S. Holders will not be subject to U.S. federal withholding tax if the following conditions are satisfied:

- the Non-U.S. Holder does not actually or constructively own 10% or more of the total combined voting power of all classes of our stock entitled to vote;
- the Non-U.S. Holder is not a controlled foreign corporation for U.S. federal income tax purposes that is related to us through actual or constructive ownership;
- the Non-U.S. Holder is not a bank receiving interest on a loan made in the ordinary course of its trade or business;
- interest payable on the notes is either (a) not determined by reference to any receipts, sales or other cash flow, income or profits, change in the value of any property of, or any dividend or similar payment made by us or a person related to us, within the meaning of Section 871(h)(4)(A) of the Code or (b) determined by reference to changes in the value of actively traded property or an index of the value of actively traded property, within the meaning of Section 871(h)(4)(C)(v) of the Code; and
- the payments are not effectively connected with a trade or business conducted by the Non-U.S. holder in the United States and either (a) the Non-U.S. Holder provides a correct, complete and executed IRS Form W-8BEN or Form W-8IMY (or successor form) with appropriate attachments, or (b) the Non-U.S. Holder holds its note through a qualified intermediary (generally a foreign financial institution or clearing organization or a Non-U.S. branch or office of a U.S. financial institution or clearing organization that is a party to a withholding agreement with the IRS) which has provided an IRS Form W-8IMY and has received documentation upon which it can rely to treat the payment as made to a foreign person.

If any of these conditions are not satisfied, interest (including original issue discount) on the notes may be subject to a 30% withholding tax, unless an income tax treaty reduces or eliminates the tax or the interest is

effectively connected with the conduct of a U.S. trade or business and, in either case, certain certification requirements are met.

Notwithstanding the foregoing, as previously discussed, the United States federal income tax treatment (including the applicability of withholding) of the interest payments on the notes treated as income-bearing pre-paid derivative contracts is uncertain, and although we believe it is reasonable to take a position that the interest payments on such notes are not subject to U.S. withholding tax (at least if a valid IRS Form W-8 is provided), a withholding agent may nonetheless withhold on these payments (generally at a rate of 30%, subject to the possible reduction or elimination of that rate under an applicable income tax treaty), unless income from your notes is effectively connected with your conduct of a trade or business in the United States (and, if an applicable treaty so requires, attributable to a permanent establishment in the United States). In the event of any withholding, we will not be required to pay any additional amounts with respect to amounts so withheld. If you are a Non-U.S. Holder, you are urged to consult your tax adviser regarding the U.S. federal income tax consequences of an investment in the notes in light of your particular circumstances. If you are eligible for a reduced rate of United States withholding tax, you may obtain a refund of any amounts withheld in excess of that rate by filing a refund claim with the IRS.

“Effectively connected” payments includable in your United States gross income are generally taxed at rates applicable to United States citizens, resident aliens, and domestic corporations; if you are a corporate Non-U.S. Holder, “effectively connected” payments may be subject to an additional “branch profits tax” under certain circumstances.

In general, gain realized on the sale, exchange, retirement, redemption or other disposition of the notes by a Non-U.S. Holder will not be subject to U.S. federal income tax, unless:

- the gain with respect to the notes is effectively connected with a trade or business conducted by the Non-U.S. Holder in the United States, or
- the Non-U.S. Holder is a nonresident alien individual who holds the notes as a capital asset and is present in the United States for more than 182 days in the taxable year of the sale and certain other conditions are satisfied.

If the gain realized on the sale, exchange, retirement, redemption or other disposition of the notes by the Non-U.S. Holder is described in either of the two preceding bullet points, the Non-U.S. Holder may be subject to U.S. federal income tax with respect to the gain except to the extent that an income tax treaty reduces or eliminates the tax and the appropriate documentation is provided.

As discussed above, alternative characterizations of the notes for U.S. federal income tax purposes are possible. Should an alternative characterization of the notes, by reason of a change or clarification of the law, by regulation or otherwise, cause payments with respect to the notes to become subject to withholding tax, we (or our withholding agents) will likely be required to withhold at the applicable statutory rate and we will not make payments of any additional amounts. Prospective Non-U.S. Holders of the notes should consult their own tax advisors in this regard.

Furthermore, in 2007, as discussed above, the Treasury Department and the IRS released a notice requesting comments on various issues, including whether instruments such as your notes should be subject to withholding. It is therefore possible that rules will be issued in the future, possibly with retroactive effects, that would cause payments on your notes at maturity to be subject to withholding, even if you comply with certification requirements as to your foreign status.

Non-U.S. Holders should note that recently proposed Treasury regulations, if finalized in their current form, could impose a withholding tax at a rate of 30% (subject to reduction under an applicable income tax treaty) on amounts attributable to U.S.-source dividends that are paid or “deemed paid” after December 31, 2015. However, in a recently published notice, the IRS and the Treasury Department announced their intent that the proposed regulations, if finalized, would only apply to financial instruments that are issued on or after 90 days after the date of publication of the final regulations. As significant aspects of the application of these proposed regulations to certain

notes are uncertain, depending on their ultimate effective date and their exact content, we (or our withholding agents) might determine that withholding is required with respect to notes held by a Non-U.S. Holder or that the Non-U.S. Holder must provide information to establish that withholding is not required. Non-U.S. Holders should consult their tax advisers regarding the potential application of these proposed regulations. If withholding is so required, we will not be required to pay any additional amounts with respect to amounts so withheld.

Non-U.S. Holders should also note that the Treasury Department and the IRS have released final regulations and other IRS guidance with respect to the Foreign Account Tax Compliance Act ("FATCA"). FATCA will generally impose a withholding tax of 30% on payments of U.S.-source income to certain foreign entities (including financial intermediaries) with respect to financial instruments issued after June 30, 2014, unless various U.S. information reporting and due diligence requirements (that are in addition to, and potentially significantly more onerous than, the requirement to deliver an IRS Form W-8BEN) have been satisfied. Pursuant to the regulations and other IRS guidance, this withholding tax will be imposed on payments on such financial instruments made after June 30, 2014, and on payments of gross proceeds from a disposition of such financial instruments after December 31, 2016. Non-U.S. Holders should consult their tax advisers regarding the potential application of FATCA to their ownership and disposition of the notes. If withholding is so required, we will not be required to pay any additional amounts with respect to amounts so withheld.

Federal Estate Tax

Notes Treated as Indebtedness. Notes treated as indebtedness will not be includible in the estate of a Non-U.S. Holder unless the individual is a direct or indirect 10% or greater shareholder of the us or, at the time of such individual's death, payments in respect of the notes would have been effectively connected with the conduct by such individual of a trade or business in the United States.

Notes Treated as Income-Bearing Pre-Paid Derivative Contracts. 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 treated as an income-bearing pre-paid derivative contract 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 such notes.

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

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

PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

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

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

Our affiliates, including JPMS, may use this product supplement no. 1-V, any related underlying supplement and the accompanying prospectus supplement, prospectus or terms supplement in connection with offers and sales of the notes in the secondary market. JPMS or another Agent may act as principal or agent in connection with offers and sales of the notes in the secondary market. Secondary market offers and sales will be made at prices related to market prices at the time of such offer or sale; accordingly, the Agents or a dealer may change the public offering price, concession and discount after the offering has been completed.

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

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

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

No action has been or will be taken by us, JPMS or any dealer that would permit a public offering of the notes or possession or distribution of this product supplement no. 1-V, any related underlying supplement or the accompanying prospectus supplement, prospectus or terms supplement, other than in the United States, where

action for that purpose is required. No offers, sales or deliveries of the notes, or distribution of this product supplement no. 1-V, any related underlying supplement or the accompanying prospectus supplement, prospectus or terms supplement or any other offering material relating to the notes, may be made in or from any jurisdiction except in circumstances which will result in compliance with any applicable laws and regulations and will not impose any obligations on us, the Agents or any dealer.

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

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

Conflicts of Interest

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

NOTICE TO INVESTORS

We will offer to sell, and will seek offers to buy, the notes only in jurisdictions where offers and sales are permitted. None of the accompanying prospectus supplement and prospectus, this product supplement no. 1-V, any related underlying supplement and the terms supplement (each, a “Disclosure Document” and, collectively, the “Disclosure Documents”) will constitute an offer to sell, or a solicitation of an offer to buy, the notes by any person in any jurisdiction in which it is unlawful for that person to make an offer or solicitation. Neither the delivery of any Disclosure Document nor any sale made thereunder implies that our affairs have not changed or that the information in any Disclosure Document is correct as of any date after the date thereof.

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

Argentina

The notes have not been and will not be authorized by the *Comisión Nacional de Valores* (the “CNV”) for public offer in Argentina and therefore may not be offered or sold to the public at large or to sectors or specific groups thereof by any means, including, but not limited to, personal offerings, written materials, advertisements, the internet or the media, in circumstances that constitute a public offering of securities under Argentine Law No. 17,811, as amended (the “Argentine Public Offering Law”).

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

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

The Bahamas

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

Control Regulations, 1956 must receive the prior approval of the Central Bank of The Bahamas prior to accepting an offer to purchase any notes.

Bermuda

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

Brazil

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

British Virgin Islands

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

Cayman Islands

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

Chile

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

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

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

- (i) to be a financial institution and/or an institutional investor or a qualified investor with such knowledge and experience in financial and business matters as to be capable of evaluating the risks and merits of an investment in the notes;

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

Colombia

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

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

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

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

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

El Salvador

The notes may not be offered to the general public in El Salvador, and according to Article 2 of the *Ley de Mercado de Valores* (Securities Market Law) of the Republic of El Salvador, Legislative Decree number 809 dated 16 February 1994, published on the *Diario Oficial* (Official Gazette) number 73-BIS, Number 323, dated 21 April 1994, and in compliance with the aforementioned regulation, each Agent has represented and agreed that it will not make an invitation for subscription or purchase of the notes to indeterminate individuals, nor will it make known any Disclosure Document in the territory of El Salvador through any mass media communication such as television, radio, press or any similar medium, other than publications of an international nature that are received in El

Salvador, such as internet access or foreign cable advertisements, that are not directed to the Salvadoran public. The offering of the notes will not be registered with an authorized stock exchange in the Republic of El Salvador. Any negotiation for the purchase or sale of notes in the Republic of El Salvador will be negotiated only on an individual basis with determinate individuals or entities in strict compliance with the aforementioned Article 2 of the Salvadoran Securities Market Law, and will, in any event, be effected in accordance with all securities, tax and exchange control of the Dominican Republic, Central America, and United States Free Trade Agreements, and other applicable laws or regulations of the Republic of El Salvador.

European Economic Area

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

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

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

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

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

Hong Kong

Each Agent has represented and agreed that:

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

only to “professional investors” as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Jersey

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

Mexico

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

The Netherlands

Each Agent has represented and agreed that with effect from and including January 1, 2012, it will not make an offer of notes that are the subject of the offering contemplated by the Disclosure Documents to the public in The Netherlands in reliance on Article 3(2) of the Prospectus Directive if and to the extent article 5:20(5) of the Dutch Financial Supervision Act (Wet op het financieel toezicht, the “DFSA”) will be applied, unless such offer is made exclusively to qualified investors in The Netherlands as defined in the Prospectus Directive, *provided* that no offer of the notes will require us or any Agent to publish a prospectus pursuant to Article 3 of the Prospectus Directive. For the purposes of this provision, the expressions (i) an “offer of notes to the public” in The Netherlands; and (ii) “Prospectus Directive” have the meaning given to them above under the section entitled “European Economic Area.”

Panama

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

Peru

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

Singapore

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

the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the notes are subscribed or purchased under Section 275 of the SFA by a relevant person, which is: (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust will not be transferred within six months after that corporation or that trust has acquired the notes pursuant to an offer made under Section 275 of the SFA except: (1) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA; (2) where no consideration is or will be given for the transfer; (3) where the transfer is by operation of law; or (4) as specified in Section 276(7) of the SFA.

Switzerland

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

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

United Kingdom

Each Agent has represented and agreed that:

- (a) in relation to any notes that have a maturity of less than one year, (i) it is a person whose ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of its business and (ii) it has not offered or sold and will not offer or sell the notes other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or as agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage or dispose of investments (as principal or agent) for the purposes of their businesses where the issue of the notes would otherwise constitute a contravention of Section 19 of the Financial Services and Markets Act 2000 (the "FSMA")) by the Issuer;
- (b) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of the notes in circumstances in which Section 21(1) of the FSMA does not apply to us; and
- (c) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the notes in, from or otherwise involving the United Kingdom.

Uruguay

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

Venezuela

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

BENEFIT PLAN INVESTOR CONSIDERATIONS

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

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

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

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

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

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

constitute a non-exempt prohibited transaction under ERISA or Section 4975 of the Code or a violation of any applicable Similar Laws.

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

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

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

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