

JPMORGAN CHASE & CO  
Form 424B2  
December 17, 2018

**Pricing supplement**

*To prospectus dated April 5, 2018,  
prospectus supplement dated April 5, 2018 and  
product supplement no. 1-1 dated April 5, 2018*

**Registration Statement No. 333-222672**

**Dated December 13, 2018**

**Rule 424(b)(2)**

\$190,100,000 Principal Amount at Maturity

Zero Coupon Notes due November 10, 2036

**General**

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 notes are designed for investors who seek notes issued at a discount to par, with no periodic interest payments, while seeking full payment of principal (\$1,000 per \$1,000 principal amount note) at maturity.

The original issue price of the notes reflects an implied yield to maturity of 4.25% per annum (compounded annually, using a 360-day year composed of twelve 30-day months).

These notes have a long maturity relative to other fixed income products. Longer-dated notes may be riskier than shorter-dated notes. See "Selected Risk Considerations" in this pricing supplement.

The notes may be purchased in minimum denominations of \$1,000 and in integral multiples of \$1,000 thereafter.

**Key Terms**

|                              |   |
|------------------------------|---|
| Issuer:                      | JPMorgan Chase & Co.  |
| Original Issue Price:        | \$474.8857 per \$1,000 principal amount note  |
| Principal Amount:            | \$1,000 per \$1,000 principal amount note   |
| Payment at Maturity:         | On the Maturity Date, we will pay you 100% of the outstanding principal amount of your notes, subject to the Interest Accrual Convention. |
| Interest:                    | The notes do not pay any interest.  |
| Yield to Maturity:           | 4.25% per annum (compounded annually, using a 360-day year composed of twelve 30-day months)  |
| Pricing Date:                | December 13, 2018   |
| Original Issue Date:         | December 19, 2018, subject to the Business Day Convention (Settlement Date)   |
| Maturity Date:               | November 10, 2036, subject to the Business Day Convention   |
| Business Day Convention:     | Following   |
| Interest Accrual Convention: | Unadjusted  |
| CUSIP:                       | 48128GYU8   |

**Investing in the notes involves a number of risks. See “Risk Factors” beginning on page PS-18 of the accompanying product supplement and “Selected Risk Considerations” beginning on page PS-3 of this pricing supplement.**

Neither the Securities and Exchange Commission (the “SEC”) nor any state securities commission has approved or disapproved of the notes or passed upon the accuracy or the adequacy of this pricing supplement or the accompanying product supplement, prospectus supplement and prospectus. Any representation to the contrary is a criminal offense.

**Price to Public<sup>(1)</sup> Fees and Commissions<sup>(2)</sup> Proceeds to Issuer**

|                 |                 |   |                 |
|-----------------|-----------------|---|-----------------|
| <b>Per note</b> | \$474.8857      | — | \$474.8857      |
| <b>Total</b>    | \$90,275,771.57 | — | \$90,275,771.57 |

(1) The price to the public includes the estimated cost of hedging our obligations under the notes through one or more of our affiliates.

(2) J.P. Morgan Securities LLC, which we refer to as JPMS, acting as agent for JPMorgan Chase & Co., will not receive selling commissions for the notes. See “Plan of Distribution (Conflicts of Interest)” in the accompanying product supplement.

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

### Additional Terms Specific to the Notes

You should read this pricing supplement together with the accompanying prospectus, as supplemented by the accompanying prospectus supplement relating to our Series E medium-term notes of which these notes are a part, and the more detailed information contained in the accompanying product supplement. This pricing supplement, together with the documents listed below, 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. You should carefully consider, among other things, the matters set forth in the “Risk Factors” section of the accompanying product supplement, as the notes involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisers before you invest in the notes.

You may access these documents on the SEC website at [www.sec.gov](http://www.sec.gov) as follows (or if such address has changed, by reviewing our filings for the relevant date on the SEC website):

Product supplement no. 1-I dated April 5, 2018:

[http://www.sec.gov/Archives/edgar/data/19617/000089109218003346/e78092\\_424b2.htm](http://www.sec.gov/Archives/edgar/data/19617/000089109218003346/e78092_424b2.htm)

Prospectus supplement and prospectus, each dated April 5, 2018:

[http://www.sec.gov/Archives/edgar/data/19617/000095010318004508/dp87767\\_424b2-ps.pdf](http://www.sec.gov/Archives/edgar/data/19617/000095010318004508/dp87767_424b2-ps.pdf)

Our Central Index Key, or CIK, on the SEC website is 19617. As used in this pricing supplement, “we,” “us,” or “our” refers to JPMorgan Chase & Co.

### Supplemental Terms of the Notes

Notwithstanding anything to the contrary in the accompanying product supplement, for purposes of the section entitled “General Terms of Notes — Payment upon an Event of Default” in the accompanying product supplement, in case of the acceleration of the notes upon an event of default, the amount declared due and payable per \$1,000 principal amount note upon any acceleration of the notes will be determined by the calculation agent and will be an amount in cash equal to the accreted principal amount of the note (equal to the Original Issue Price *plus* an additional amount that accrues on the Original Issue Price from and including the original issue date to but excluding the date of acceleration at the Yield to Maturity, compounded annually, using a 360-day year composed of twelve 30-day months).

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

### Selected Purchase Considerations

**PRESERVATION OF CAPITAL AT MATURITY** — We will pay you the principal amount of your notes if you hold the notes to maturity. **Because the notes are our unsecured and unsubordinated obligations, payment of any amount on the notes is subject to our ability to pay our obligations as they become due.**

**ANNUAL COMPOUNDED ACCRETION OF PRINCIPAL** — The notes will accrete in value based on an implied yield to maturity of 4.25% per annum (compounded annually, using a 360-day year composed of twelve 30-day months). The yield on the notes may be less than the overall return you would receive from a conventional debt security that you could purchase today with the same maturity as the notes.

**TAX TREATMENT** — The notes will be treated for U.S. federal income tax purposes as debt instruments that are subject to the original issue discount rules of the Internal Revenue Code of 1986, as amended, as described in the section entitled “Material U.S. Federal Tax Consequences” in this pricing supplement. You should review that section carefully and consult your tax adviser regarding the U.S. federal income tax consequences of an investment in the notes.

**INSOLVENCY AND RESOLUTION CONSIDERATIONS** — The notes constitute “loss-absorbing capacity” within the meaning of the final rules (the “TLAC rules”) issued by the Board of Governors of the Federal Reserve System (the “Federal Reserve”) on December 15, 2016 regarding, among other things, the minimum levels of unsecured external long-term debt and other loss-absorbing capacity that certain U.S. bank holding companies, including JPMorgan Chase & Co., will be required to maintain, commencing January 1, 2019. Such debt must satisfy certain eligibility criteria under the TLAC rules. If JPMorgan Chase & Co. were to enter into resolution, either in a proceeding under Chapter 11 of the U.S. Bankruptcy Code or into a receivership administered by the Federal Deposit Insurance Corporation (the “FDIC”) under Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the “Dodd-Frank Act”), holders of the notes and other debt and equity securities of JPMorgan Chase & Co. will absorb the losses of JPMorgan Chase & Co. and its affiliates.

**Zero Coupon Notes PS-1**

Under Title I of the Dodd-Frank Act and applicable rules of the Federal Reserve and the FDIC, JPMorgan Chase & Co. is required to submit periodically to the Federal Reserve and the FDIC a detailed plan (the “resolution plan”) for the rapid and orderly resolution of JPMorgan Chase & Co. and its material subsidiaries under the U.S. Bankruptcy Code and other applicable insolvency laws in the event of material financial distress or failure. JPMorgan Chase & Co.’s preferred resolution strategy under its resolution plan contemplates that only JPMorgan Chase & Co. would enter bankruptcy proceedings under Chapter 11 of the U.S. Bankruptcy Code pursuant to a “single point of entry” recapitalization strategy. JPMorgan Chase & Co.’s subsidiaries would be recapitalized as needed so that they could continue normal operations or subsequently be wound down in an orderly manner. As a result, JPMorgan Chase & Co.’s losses and any losses incurred by its subsidiaries would be imposed first on holders of JPMorgan Chase & Co.’s equity securities and thereafter on unsecured creditors, including holders of the notes and other debt securities of JPMorgan Chase & Co. Claims of holders of the notes and those other debt securities would have a junior position to the claims of creditors of JPMorgan Chase & Co.’s subsidiaries and to the claims of priority (as determined by statute) and secured creditors of JPMorgan Chase & Co. Accordingly, in a resolution of JPMorgan Chase & Co. under Chapter 11 of the U.S. Bankruptcy Code, holders of the notes and other debt securities of JPMorgan Chase & Co. would realize value only to the extent available to JPMorgan Chase & Co. as a shareholder of JPMorgan Chase Bank, N.A. and its other subsidiaries, and only after any claims of priority and secured creditors of JPMorgan Chase & Co. have been fully repaid. If JPMorgan Chase & Co. were to enter into a resolution, none of JPMorgan Chase & Co., the Federal Reserve or the FDIC is obligated to follow JPMorgan Chase & Co.’s preferred resolution strategy under its resolution plan.

The FDIC has similarly indicated that a single point of entry recapitalization model could be a desirable strategy to resolve a systemically important financial institution, such as JPMorgan Chase & Co., under Title II of the Dodd-Frank Act. Pursuant to that strategy, the FDIC would use its power to create a “bridge entity” for JPMorgan Chase & Co.; transfer the systemically important and viable parts of its business, principally the stock of JPMorgan Chase & Co.’s main operating subsidiaries and any intercompany claims against such subsidiaries, to the bridge entity; recapitalize those subsidiaries using assets of JPMorgan Chase & Co. that have been transferred to the bridge entity; and exchange external debt claims against JPMorgan Chase & Co. for equity in the bridge entity. Under this Title II resolution strategy, the value of the stock of the bridge entity that would be redistributed to holders of the notes and other debt securities of JPMorgan Chase & Co. may not be sufficient to repay all or part of the principal amount and interest on the notes and those other securities. To date, the FDIC has not formally adopted a single point of entry resolution strategy, and it is not obligated to follow such a strategy in a Title II resolution of JPMorgan Chase & Co.

## **Zero Coupon Notes PS-2**

## Selected Risk Considerations

An investment in the notes involves significant risks. These risks are explained in more detail in the “Risk Factors” section of the accompanying product supplement.

**NO INTEREST PAYMENTS** — As a holder of the notes, you will not receive any interest payments.

**LONGER-DATED NOTES MAY BE RISKIER THAN SHORTER-DATED NOTES** — By purchasing a note with a longer tenor, you are more exposed to fluctuations in interest rates than if you purchased a note with a shorter tenor. The present value of a longer-dated note tends to be more sensitive to rising interest rates than the present value of a shorter-dated note. If interest rates rise, the present value of a longer-dated note will fall faster than the present value of a shorter-dated note. You should purchase these notes only if you are comfortable with owning a note with a longer tenor.

**CREDIT RISK OF JPMORGAN CHASE & CO.** — The notes are subject to the credit risk of JPMorgan Chase & Co., and our credit ratings and credit spreads may adversely affect the market value of the notes. Investors are dependent on JPMorgan Chase & Co.’s ability to pay all amounts due on the notes. Any actual or potential change in our creditworthiness or credit spreads, as determined by the market for taking our credit risk, 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.

**POTENTIAL CONFLICTS** — We and our affiliates play a variety of roles in connection with the issuance of the notes, including acting as calculation agent and as an agent of the offering of the notes and hedging our obligations under the notes. In performing these duties, our economic interests and the economic interests of the calculation agent and other affiliates of ours are potentially adverse to your interests as an investor in the notes. In addition, our business activities, including hedging and trading activities for our own accounts or on behalf of customers, could cause our economic interests to be adverse to yours and could adversely affect any payment on the notes and the value of the notes. It is possible that hedging or trading activities of ours or our affiliates in connection with the notes could result in substantial returns for us or our affiliates while the value of the notes declines. Please refer to “Risk Factors — Risks Relating to Conflicts of Interest” in the accompanying product supplement for additional information about these risks.

**CERTAIN BUILT-IN COSTS ARE LIKELY TO AFFECT ADVERSELY THE VALUE OF THE NOTES PRIOR TO MATURITY** — While the payment at maturity described in this pricing supplement is based on the full principal amount of your notes, the original issue price of the notes includes the agent’s commission and the estimated cost of hedging our obligations under the notes through one or more of our affiliates. As a result, 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 and any sale prior to the Maturity Date could result in a substantial loss to you. This secondary market price will also be affected by a number of factors aside from the agent’s commission and hedging costs, including those referred to under “Many Economic and Market Factors Will Impact the Value of the Notes” below.

The notes are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your notes to maturity.

**LACK OF LIQUIDITY** — The notes will not be listed on any securities exchange. JPMS intends to offer to purchase the notes in the secondary market but is not required to do so. Even if there is a secondary market, it may not provide enough liquidity to allow you to trade or sell the notes easily. Because other dealers are not likely to make a 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.

**MANY ECONOMIC AND MARKET FACTORS WILL IMPACT THE VALUE OF THE NOTES** — The value of the notes will be affected by a number of economic and market factors that may either offset or magnify each

other, including but not limited to:

- any actual or potential change in our creditworthiness or credit spreads;
- the time to maturity of the notes;
- interest and yield rates in the market generally, as well as the volatility of those rates; and
- a variety of economic, financial, political, regulatory and judicial events.

**Supplemental Use of Proceeds**

Notwithstanding anything to the contrary in the accompanying prospectus, we will contribute the net proceeds that we receive from the sale of the notes offered by this pricing supplement to our “intermediate holding company” subsidiary, JPMorgan Chase Holdings LLC, which will use those net proceeds for general corporate purposes. General corporate purposes may include investments in our subsidiaries, payments of dividends to us, extensions of credit to us or our subsidiaries or the financing of possible acquisitions or business expansion. Interest on our debt securities (including interest on the notes offered by this pricing supplement) and dividends on our equity

**Zero Coupon Notes PS-3**

securities, as well as redemptions or repurchases of our outstanding securities, will be made using amounts we receive as dividends or extensions of credit from JPMorgan Chase Holdings LLC or as dividends from JPMorgan Chase Bank, N.A.

### Supplemental Plan of Distribution

We expect that delivery of the notes will be made against payment for the notes on or about the Original Issue Date set forth on the front cover of this pricing supplement, which will be the fourth business day following the Pricing Date of the notes (this settlement cycle being referred to as “T+4”). Under Rule 15c6-1 of the Securities Exchange Act of 1934, as amended, trades in the secondary market generally are required to settle in two business days, unless the parties to that trade expressly agree otherwise. Accordingly, purchasers who wish to trade notes on any date prior to two business days before delivery will be required to specify an alternate settlement cycle at the time of any such trade to prevent a failed settlement and should consult their own advisors.

### Material U.S. Federal Tax Consequences

**Prospective investors should note that the discussion under “Material U.S. Federal Tax Consequences” in the accompanying product supplement no. 1-I does not apply to the notes issued under this pricing supplement and is superseded by the following discussion.**

The following discussion of the material U.S. federal income and certain estate tax consequences of owning and disposing of the notes constitutes the full opinion of our special tax counsel, Davis Polk & Wardwell LLP. It applies to you only if you are an initial investor that purchases a note at its issue price for cash and holds it as a capital asset within the meaning of Section 1221 of the Internal Revenue Code of 1986, as amended (the “Code”).

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

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

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



This discussion is based on the Code, administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations as of the date of this pricing supplement, changes to any of which, subsequent to the date hereof, may affect the tax consequences described herein, possibly with retroactive effect. As the law applicable to the U.S. federal income taxation of instruments such as the notes is technical and complex, the discussion below necessarily represents only a general discussion.

Moreover, the effects of any applicable state, local or non-U.S. tax laws are not discussed. **You should consult your tax adviser concerning the application of U.S. federal income and estate tax laws to your particular**

**Zero Coupon Notes PS-4**

**situation, as well as any tax consequences arising under the laws of any state, local or non-U.S. jurisdiction.**

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

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

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

The notes will be treated for U.S. federal income tax purposes as debt instruments that are subject to the original issue discount (“OID”) rules of the Code. You will be required to include OID in your income for federal income tax purposes as it accrues, in accordance with a constant-yield method based on a compounding of interest, although you will not receive cash attributable to this income prior to maturity. Under this method, you generally will be required to include in income increasingly greater amounts of OID in successive accrual periods.

For each taxable year, the amount of OID that you must include in income in respect of a note will be the sum of the daily portions of OID for each day during the taxable year or any portion of the taxable year in which you held the note. These daily portions are determined by allocating to each day in an accrual period a *pro rata* portion of the OID allocable to that accrual period. Accrual periods may be of any length and may vary in length over the term of a note, though they may not be longer than one year.

The amount of OID allocable to any accrual period generally will equal the product of a note’s adjusted issue price at the beginning of the accrual period multiplied by its yield to maturity (as adjusted to take into account the length of the accrual period). The adjusted issue price of a note at the beginning of any accrual period will equal the issue price of the note, increased by all OID accrued in prior accrual periods. The yield to maturity of a note is the discount rate (appropriately adjusted to reflect the length of accrual periods) that causes the present value on the issue date of the payment at maturity on the note to equal the issue price.

Upon a sale or exchange of a note, you will recognize capital gain or loss equal to the difference between the amount realized on the sale or exchange and your adjusted tax basis in the note. Your adjusted tax basis in a note generally will equal your original purchase price for the note, increased by the amounts of OID that you previously included in income with respect to the note. Your gain or loss generally will be long-term capital gain or loss if at the time of the sale or exchange you held the notes for more than one year, and short-term capital gain or loss otherwise. Long-term capital gains recognized by non-corporate U.S. holders are generally subject to taxation at reduced rates. Any capital loss you recognize may be subject to limitations.

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

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

- a nonresident alien individual;
- a foreign corporation; or

a foreign estate or trust.

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

Subject to the discussions under “Backup Withholding and Information Reporting” and “FATCA” below, income and gain from a note generally will be exempt from U.S. federal income tax (including withholding tax) if these amounts are not effectively connected with your conduct of a U.S. trade or business and you provide a properly completed applicable Internal Revenue Service (“IRS”) Form W-8 appropriate to your circumstances.

If you are engaged in a U.S. trade or business, and if income or gain from a note is effectively connected with your conduct of that trade or business (and, if an applicable income tax treaty so requires, is attributable to a permanent establishment in the United States), although exempt from the withholding tax discussed above, you

#### **Zero Coupon Notes PS-5**

generally will be taxed in the same manner as a U.S. Holder with respect to that income. You will not be subject to withholding in this case if you provide a properly completed IRS Form W-8ECI. If this paragraph applies to you, you should consult your tax adviser with respect to other U.S. tax consequences of owning and disposing of notes, including the possible imposition of a 30% branch profits tax if you are a corporation.

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

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

If you are an individual Non-U.S. Holder, your notes will generally not be treated as U.S.-situs property subject to U.S. federal estate tax, provided that your income from the notes is not then effectively connected with your conduct of a U.S. trade or business.

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

OID accrued on your notes and the proceeds received from a sale or exchange of your notes (including at maturity) will generally be subject to information reporting unless you are a U.S. Holder and an “exempt recipient,” and payments of OID may also be subject to backup withholding 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.

### **FATCA**

Legislation commonly referred to as “FATCA,” and regulations promulgated thereunder, generally impose a 30% withholding tax on payments to certain foreign entities (including financial intermediaries) with respect to debt instruments such as the notes, unless various U.S. information reporting and due diligence requirements have been satisfied. An intergovernmental agreement between the United States and the foreign entity’s jurisdiction may modify these requirements. This regime applies to payments of interest and may apply to the payment on your notes at maturity, as well as the proceeds of any sale or other disposition of a note occurring after December 31, 2018, although under recently proposed regulations (the preamble to which specifies that taxpayers are permitted to rely on them pending finalization), no withholding will apply on payments of gross proceeds. You should consult your tax adviser regarding the potential application of FATCA to the notes.

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

### **Validity of the Notes**

In the opinion of Davis Polk & Wardwell LLP, as our special products counsel, when the notes offered by this pricing supplement have been executed and issued by us and authenticated by the trustee pursuant to the indenture, and delivered against payment as contemplated herein, such notes will be our valid and binding obligations, enforceable in accordance with their terms, subject to applicable bankruptcy, insolvency and similar laws affecting creditors’ rights

generally, concepts of reasonableness and equitable principles of general applicability (including, without limitation, concepts of good faith, fair dealing and the lack of bad faith), *provided* that such counsel expresses no opinion as to (x) the effect of fraudulent conveyance, fraudulent transfer or similar provision of applicable law on the conclusions expressed above or (y) the validity, legally binding effect or enforceability of any provision that permits holders to collect any portion of the stated principal amount upon acceleration of the notes to the extent determined to constitute unearned interest. This opinion is given as of the date hereof and is limited to the laws of the State of New York and the General Corporation Law of the State of Delaware. In addition, this opinion is subject to customary assumptions about the trustee's authorization, execution and delivery of the indenture and its authentication of the notes and the validity, binding nature and enforceability of the indenture with respect to the trustee, all as stated in the letter of such counsel dated March 8, 2018, which was filed as an exhibit to the Registration Statement on Form S-3 by us on March 8, 2018.

**Zero Coupon Notes PS-6**