

ROYAL BANK OF CANADA  
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Product Supplement No. STEPS-1  
(To Prospectus dated September 7, 2018  
and Series H Prospectus Supplement dated September 7, 2018)  
December 7, 2018

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#### STEP Income Securities<sup>®</sup> Linked to a Single Equity Security

The STEP Income Securities<sup>®</sup> (the “notes”) are unsecured senior debt securities issued by Royal Bank of Canada. All payments due on the notes, including any repayment of principal, will be subject to the credit risk of Royal Bank of Canada.

The notes do not guarantee the return of principal at maturity. Instead, the return on the notes will be based on the performance of an underlying “Market Measure,” which will be the common equity securities of a company other than us, the agents and our respective affiliates (the “Underlying Stock”).

The notes pay a fixed interest rate over their term and provide an opportunity to earn an additional fixed payment at maturity (the “Step Payment”). However, your payment at maturity will be exposed to any negative performance of the Underlying Stock below the Threshold Value (as defined below) on a 1-to-1 basis.

If the value of the Underlying Stock increases from its Starting Value to an Ending Value (each as defined below) that is greater than or equal to a specified “Step Level,” the cash payment per unit at maturity (the “Redemption Amount”) will equal the principal amount plus the Step Payment. Your maximum return on the notes will equal the interest payments plus the Step Payment, if any.

If the Ending Value is less than the Step Level, but greater than or equal to the Threshold Value, you will receive your principal amount at maturity. However, if the Ending Value is less than the Threshold Value, you will be subject to 1-to-1 downside exposure to the decrease of the Underlying Stock below the Threshold Value. In such case, you may lose all or a significant portion of the principal amount of your notes.

This product supplement describes the general terms of the notes, the risk factors to consider before investing, the general manner in which they may be offered and sold, and other relevant information.

For each offering of the notes, we will provide you with a pricing supplement (which we refer to as a “term sheet”) that will describe the specific terms of that offering, including the specific Underlying Stock, the Threshold Value, the Step Level, the Step Payment, the interest rate, the interest payment dates, and certain risk factors. The term sheet will identify, if applicable, any additions or changes to the terms specified in this product supplement.

The notes will be issued in denominations of whole units. Unless otherwise set forth in the applicable term sheet, each unit will have a principal amount of \$10. The term sheet may also set forth a minimum number of units that you must purchase.

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

Merrill Lynch, Pierce, Fenner & Smith Incorporated (“MLPF&S”) and one or more of its affiliates may act as our agents to offer the notes, and MLPF&S will act in a principal capacity in such role.

The notes are unsecured and are not savings accounts or insured deposits of a bank. The notes are not insured by the Canada Deposit Insurance Corporation, the U.S. Federal Deposit Insurance Corporation (the “FDIC”) or any other Canadian or U.S. governmental agency or instrumentality. Potential purchasers of the notes should consider the information in “Risk Factors” beginning on page PS-6 of this product supplement, page S-1 of the accompanying Series H prospectus supplement, and page 1 of the accompanying prospectus. You may lose all or a significant portion of your investment in the notes.

None of the Securities and Exchange Commission (the "SEC"), any state securities commission, or any other regulatory body has approved or disapproved of these securities or passed upon the adequacy or accuracy of this product supplement, the prospectus supplement, or the prospectus. Any representation to the contrary is a criminal offense.

Merrill Lynch & Co.

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“STEP Income Securitie®” and “STEPS” are registered service marks of Bank of America Corporation, the parent corporation of MLPF&S.

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## SUMMARY

The information in this “Summary” section is qualified in its entirety by the more detailed explanation set forth elsewhere in this product supplement, the prospectus supplement, and the prospectus, as well as the applicable term sheet. Neither we nor MLPF&S have authorized any other person to provide you with any information different from the information set forth in these documents. If anyone provides you with different or inconsistent information about the notes, you should not rely on it.

### Key Terms:

- The notes are senior debt securities issued by Royal Bank of Canada, and are not guaranteed or insured by the Canada Deposit Insurance Corporation or the FDIC or secured by collateral. They rank equally with all of our other unsecured senior debt from time to time outstanding. All payments due on the notes, including any repayment of principal, are subject to our credit risk.
- General:** The return on the notes will be based on the performance of an Underlying Stock, and there is no guaranteed return of principal at maturity. Therefore, you may lose all or a significant portion of your investment if the value of the Underlying Stock decreases from the Starting Value to an Ending Value that is less than the Threshold Value.
- Each issue of the notes will mature on the date set forth in the applicable term sheet. We cannot redeem the notes at any earlier date, except under the limited circumstances set forth below. We will make periodic interest payments on the notes at the fixed rate specified in the applicable term sheet.
- Interest Rate:** The interest rate for each issuance of the notes will be specified in the applicable term sheet.
- Underlying Stock:** The common equity securities of a company (the “Underlying Company”) represented either by a class of equity securities registered under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or by American Depositary Receipts (“ADRs”) registered under the Exchange Act.
- The performance of the Underlying Stock will be measured according to the percentage change of the Underlying Stock from its Starting Value to its Ending Value.
- Unless otherwise specified in the applicable term sheet:
- The “Starting Value” will be the price of the Underlying Stock on the date when the notes are priced for initial sale to the public (the “pricing date”), determined as set forth in the applicable term sheet.
- Underlying Stock Performance:** The “Threshold Value” will be a price of the Underlying Stock that equals a specified percentage (100% or less) of the Starting Value. The Threshold Value will be determined on the pricing date and set forth in the term sheet. If the Threshold Value is equal to 100% of the Starting Value, you will be exposed to any decrease in the value of the Underlying Stock from the Starting Value to the Ending Value on a 1-to-1 basis, and you may lose all of your investment in the notes.
- The “Ending Value” will equal the Closing Market Price (as defined below) of the Underlying Stock on the valuation date multiplied by the Price Multiplier (as defined below).
- If a Market Disruption Event (as defined below) occurs and is continuing on the

valuation date, or if certain other events occur, the calculation agent will determine the Ending Value as set forth in the section “Description of the Notes—The Starting Value and the Ending Value—Ending Value.”

Price Multiplier: Unless otherwise set forth in the applicable term sheet, the “Price Multiplier” for each Underlying Stock will be 1, and will be subject to adjustment for certain corporate events relating to an Underlying Stock described below under “Description of the Notes—Anti-Dilution Adjustments.”

Step Level: A price of the Underlying Stock that is a specified percentage (over 100% of the Starting Value, as set forth in the applicable term sheet.

Step Payment: A dollar amount that will be equal to a percentage of the principal amount. The Step Payment will be determined on the pricing date and set forth in the applicable term sheet.

Redemption Amount at Maturity: At maturity, you will receive a Redemption Amount that will equal the principal amount plus the Step Payment if the Ending Value is greater than or equal to the Step Level. If the Ending Value is less than the Step Level, but is greater than or equal to the Threshold Value, then the Redemption Amount will equal the principal amount. If the Ending Value is less than the Threshold Value, you will be subject to 1-to-1 downside exposure to the decrease of the Underlying Stock below the Threshold Value, and will receive a Redemption Amount that is less than the principal amount. If the Threshold Value is equal to 100% of the Starting Value, the Redemption Amount could be zero.

All payments due on the notes, including any repayment of principal, are subject to our credit risk as issuer of the notes.

The Redemption Amount, denominated in U.S. dollars, will be calculated as follows:

- Principal at Risk:** You may lose all or a significant portion of the principal amount of the notes. Further, if you sell your notes prior to maturity, you may find that the market value per note is less than the price that you paid for the notes.
- Calculation Agent:** The calculation agent will make all determinations associated with the notes. Unless otherwise set forth in the applicable term sheet, we will appoint MLPF&S or one of its affiliates to act as calculation agent for the notes. See the section entitled “Description of the Notes—Role of the Calculation Agent.” MLPF&S and one or more of its affiliates will act as our agents in connection with each offering of the notes and will receive an underwriting discount based on the number of units of the notes sold. None of
- Agents:** the agents is your fiduciary or advisor solely as a result of the making of any offering of the notes, and you should not rely upon this product supplement, the term sheet, or the accompanying prospectus or prospectus supplement as investment advice or a recommendation to purchase the notes.
- Listing:** Unless otherwise specified in the applicable term sheet, the notes will not be listed on a securities exchange or quotation system.

This product supplement relates only to the notes and does not relate to the Underlying Stock described in any term sheet. You should read carefully the entire prospectus, prospectus supplement, and product supplement, together with the applicable term sheet, to understand fully the terms of your notes, as well as the tax and other considerations important to you in making a decision about whether to invest in any notes. In particular, you should review carefully the sections in this product supplement and the accompanying prospectus supplement and prospectus entitled “Risk Factors,” which highlight a number of risks of an investment in the notes, to determine whether an investment in the notes is appropriate for you. If information in this product supplement is inconsistent with the prospectus or prospectus supplement, this product supplement will supersede those documents. However, if information in any term sheet is inconsistent with this product supplement, that term sheet will supersede this product supplement. Neither we nor any agent is making an offer to sell the notes in any jurisdiction where the offer or sale is not permitted.

Certain capitalized terms used and not defined in this product supplement have the meanings ascribed to them in the prospectus supplement and prospectus. Unless otherwise indicated or unless the context requires otherwise, all references in this product supplement to “we,” “us,” “our,” or similar references are to Royal Bank of Canada. You are urged to consult with your own attorneys and business and tax advisors before making a decision to purchase any notes.

## RISK FACTORS

Your investment in the notes is subject to investment risks, many of which differ from those of a conventional debt security. Your decision to purchase the notes should be made only after carefully considering the risks, including those discussed below, in light of your particular circumstances. The notes are not an appropriate investment for you if you are not knowledgeable about the material terms of the notes or investments in equity or equity-based securities in general.

### General Risks Relating to the Notes

Your investment may result in a loss; there is no guaranteed return of principal. There is no fixed principal repayment amount on the notes at maturity. The return on the notes will be based on the performance of the Underlying Stock and therefore, you may lose all or a significant portion of your investment if the value of the Underlying Stock decreases from the Starting Value to an Ending Value that is less than the Threshold Value. If the Threshold Value is equal to 100% of the Starting Value, the Redemption Amount could be zero and you may lose all of the principal amount of your notes.

You will not receive a Step Payment at maturity unless the Ending Value of the Underlying Stock is greater than or equal to the Step Level on the valuation date. If the Ending Value of your notes is less than the Step Level on the valuation date, you will not receive a Step Payment on the maturity date. This will be the case even if the value of the Underlying Stock to which your notes are linked is (a) equal to or greater than the Starting Value but less than the Step Level on the valuation date or (b) equal to or greater than the Step Level at certain points during the term of the notes other than the valuation date.

Your return on the notes may be less than the yield on a conventional fixed or floating rate debt security of comparable maturity. Any return that you receive on the notes may be less than the return you would earn if you purchased a conventional debt security with the same maturity date. As a result, your investment in the notes may not reflect the full opportunity cost to you when you consider factors, such as inflation, that affect the time value of money.

Your investment return is limited to the return represented by the periodic interest payments over the term of the notes and the Step Payment, if any, and may be less than a comparable investment directly in the Underlying Stock. Your return on the notes is based on the periodic interest payments over the term of the notes and on the performance of the Underlying Stock from the Starting Value to the Ending Value. However, your return on the notes will never exceed the sum of (i) the periodic interest payments over the term of the notes and (ii) the Step Payment, if any, at maturity, regardless of the extent to which the Ending Value exceeds the Step Level. In contrast, a direct investment in the Underlying Stock would allow you to receive the full benefit of any appreciation in the value of the Underlying Stock. In addition, unless otherwise set forth in the applicable term sheet or in this product supplement under “Description of the Notes—Anti-Dilution Adjustments,” the Ending Value will not reflect the value of dividends paid, or distributions made, on the Underlying Stock, or any other rights associated with the Underlying Stock. Your return on the notes will not reflect the return you would realize if you actually owned shares of the Underlying Stock.

Payments on the notes are subject to our credit risk, and actual or perceived changes in our creditworthiness are expected to affect the value of the notes. The notes are our senior unsecured debt securities. As a result, your receipt of the interest payments on the notes and the Redemption Amount at maturity is dependent upon our ability to repay our

obligations on the applicable payment dates, regardless of whether the Underlying Stock increases from the Starting Value to the Ending Value. No assurance can be given as to what our financial condition will be on any payment date. If we become unable to meet our financial obligations as they become due, you may not receive the amounts payable under the terms of the notes.

In addition, our credit ratings are an assessment by ratings agencies of our ability to pay our obligations.

Consequently, our perceived creditworthiness and actual or anticipated decreases in our credit ratings or increases in the spread between the yield on our securities and the yield on U.S. Treasury securities (the “credit spread”) prior to the maturity date may adversely affect the market value of the notes. However, because your return on the notes depends upon factors in addition to our ability to pay our obligations, such as the value of the Underlying Stock, an improvement in our credit ratings will not reduce the other investment risks related to the notes.

The initial estimated value of the notes considers certain assumptions and variables and relies in part on certain forecasts about future events, which may prove to be incorrect. The initial estimated value of the notes, which will be set forth in the applicable term sheet, is an estimate only, determined as of a particular point in time by reference to our and its affiliates’ pricing models. These pricing models consider certain assumptions and variables, including our credit spreads, our internal funding rate on the pricing date, mid-market terms on hedging transactions, expectations on interest rates, and volatility, price-sensitivity analysis, and the expected term of the notes. These pricing models rely in part on certain forecasts about future events, which may prove to be incorrect.

The public offering price you pay for the notes will exceed the initial estimated value. If you attempt to sell the notes prior to maturity, their market value may be lower than the price you paid for them and lower than the initial estimated value. This is due to, among other things, changes in the value of the Underlying Stock, the internal funding rate we pay to issue equity linked notes, and the inclusion in the public offering price of the underwriting discount and an expected hedging related charge. These factors, together with various credit, market and economic factors over the term of the notes, are expected to reduce the price at which you may be able to sell the notes in any secondary market and will affect the value of the notes in complex and unpredictable ways.

The initial estimated value does not represent a minimum or maximum price at which we, MLPF&S or any of our respective affiliates would be willing to purchase your notes in any secondary market (if any exists) at any time. The value of your notes at any time after issuance will vary based on many factors that cannot be predicted with accuracy, including the performance of the Underlying Stock, our creditworthiness and changes in market conditions.

We cannot assure you that there will be a trading market for your notes. If a secondary market exists, we cannot predict how the notes will trade, or whether that market will be liquid or illiquid. The development of a trading market for the notes will depend on various factors, including our financial performance and changes in the price of the Underlying Stock. The number of potential buyers of your notes in any secondary market may be limited. There is no assurance that any party will be willing to purchase your notes at any price in any secondary market.

We anticipate that one or more of the agents or their affiliates will act as a market-maker for the notes, but none of them is required to do so and may cease to do so at any time. Any price at which an agent or its affiliates may bid for, offer, purchase, or sell any notes may be higher or lower than the applicable public offering price, and that price may differ from the values determined by pricing models that it may use, whether as a result of dealer discounts,



mark-ups, or other transaction costs. These bids, offers, or transactions may adversely affect the prices, if any, at which the notes might otherwise trade in the market. In addition, if at any time any entity were to cease acting as a market-maker for any issue of the notes, it is likely that there would be significantly less liquidity in that secondary market. In such a case, the price at which those notes could be sold likely would be lower than if an active market existed.

Unless otherwise stated in the term sheet, we will not list the notes on any securities exchange or quotation system. Even if an application were made to list your notes, we cannot assure you that the application will be approved or that your notes will be listed and, if listed, that they will remain listed for their entire term. The listing of the notes on any securities exchange or quotation system will not necessarily ensure that a trading market will develop, and if a trading market does develop, that there will be liquidity in the trading market.

The Redemption Amount will not reflect changes in the value of the Underlying Stock other than on the valuation date. Changes in the value of the Underlying Stock during the term of the notes other than on the applicable valuation date will not be reflected in the calculation of the Redemption Amount. To calculate the Redemption Amount, the calculation agent will compare only the Ending Value to the Step Level and the Threshold Value. No other values of the Underlying Stock will be taken into account. As a result, even if the value of the Underlying Stock has increased at certain times during the term of the notes, you will receive a Redemption Amount that is less than the principal amount if the Ending Value is less than the Threshold Value.

If you attempt to sell the notes prior to maturity, their market value, if any, will be affected by various factors that interrelate in complex ways, and their market value may be less than the principal amount. The notes are not designed to be short-term trading instruments. The limited protection against the risk of losses provided by the Threshold Value, if any, will only apply if you hold the notes to maturity. You have no right to have your notes redeemed prior to maturity. If you wish to liquidate your investment in the notes prior to maturity, your only option would be to sell them. At that time, there may be an illiquid market for the notes or no market at all. Even if you were able to sell the notes, there are many factors outside of our control that may affect their market value, some of which, but not all, are stated below. The impact of any one factor may be offset or magnified by the effect of another factor. The following paragraphs describe a specific factor's expected impact on the market value of the notes, assuming all other conditions remain constant.

**Value of the Underlying Stock.** We anticipate that the market value of the notes prior to maturity generally will depend to a significant extent on the value of the Underlying Stock. In general, it is expected that the market value of the notes will decrease as the value of the Underlying Stock decreases, and increase as the value of the Underlying Stock increases (up to the Step Level). However, as the value of the Underlying Stock increases or decreases, the market value of the notes is not expected to increase or decrease at the same rate. If you sell your notes when the value of the Underlying Stock is less than, or not sufficiently above, the applicable Starting Value, then you may receive less than the principal amount of your notes.

In addition, we do not expect that the notes will trade in any secondary market at a price that is greater than the sum of the principal amount, the value of any remaining interest payments and the applicable Step Payment.

**Volatility of the Underlying Stock.** Volatility is the term used to describe the size and frequency of market fluctuations. Increases or decreases in the volatility of the Underlying Stock may have an adverse impact on the market value of the notes. Even if the value of the Underlying Stock increases after the applicable pricing date, if you are

able to sell your notes before their maturity date, you may receive substantially less than the amount that would be payable at maturity based on that value because of the anticipation that the value of the Underlying Stock will continue to fluctuate until the Ending Value is determined.

**Economic and Other Conditions Generally.** The general economic conditions of the capital markets in the United States, as well as geopolitical conditions and other financial, political, regulatory, and judicial events and related uncertainties that affect stock markets generally, may adversely affect the value of the Underlying Stock and the market value of the notes.

**Interest Rates.** We expect that changes in interest rates will affect the market value of the notes. In general, if U.S. interest rates increase, we expect that the market value of the notes will decrease, and conversely, if U.S. interest rates decrease, we expect that the market value of the notes will increase. In general, we expect that the longer the amount of time that remains until maturity, the more significant the impact of these changes will be on the value of the notes. The level of interest rates also may affect the U.S. economy and any applicable market outside of the U.S., and, in turn, the value of the Underlying Stock, and, thus, the market value of the notes may be adversely affected. If the Underlying Stock is an ADR, the level of interest rates in the relevant foreign country may affect the economy of that foreign country and, in turn, the value of the ADR, and, thus, the market value of the notes may be adversely affected.

**Dividend Yields.** In general, if the cumulative dividend yield on the Underlying Stock increases, we anticipate that the market value of the notes will decrease; conversely, if that dividend yield decreases, we anticipate that the market value of your notes will increase.

**Our Financial Condition and Creditworthiness.** Our perceived creditworthiness, including any increases in our credit spreads and any actual or anticipated decreases in our credit ratings, may adversely affect the market value of the notes. In general, we expect the longer the amount of time that remains until maturity, the more significant the impact will be on the value of the notes. However, a decrease in our credit spreads or an improvement in our credit ratings will not necessarily increase the market value of the notes.

**Time to Maturity.** There may be a disparity between the market value of the notes prior to maturity and their value at maturity. This disparity is often called a time “value,” “premium,” or “discount,” and reflects expectations concerning the value of the Underlying Stock prior to the maturity date. As the time to maturity decreases, this disparity may decrease, such that the value of the notes will approach the expected Redemption Amount and the interest payment to be paid at maturity.

**Trading and hedging activities by us, the agents, and our respective affiliates may affect your return on the notes and their market value.** We, the agents, and our respective affiliates may buy or sell shares of the Underlying Stock, futures or options contracts on the Underlying Stock, or other listed or over-the counter derivative instruments linked to the Underlying Stock. We, the agents, and our respective affiliates, may execute such purchases or sales for our own or their own accounts, for business reasons, or in connection with hedging our obligations under the notes. These transactions could adversely affect the value of an Underlying Stock in a manner that could be adverse to your investment in the notes. On or before the applicable pricing date, any purchases by us (including those for the purpose of hedging our obligations under the notes), the agents, and our respective affiliates, or others on our or their behalf may increase the value of the Underlying Stock. Consequently, the value of

that Underlying Stock may decrease subsequent to the pricing date of an issue of the notes, which may adversely affect the-market value of the notes.

We, the agents, or one or more of our respective affiliates may also engage in hedging activities that could increase the value of the Underlying Stock on the applicable pricing date. In addition, these activities may decrease the market value of your notes prior to maturity, including on the valuation date, and may adversely affect the Redemption Amount.

We, the agents, or one or more of our respective affiliates may purchase or otherwise acquire a long or short position in the notes, and may hold or resell the notes. For example, the agents may enter into these transactions in connection with any market making activities in which they engage. We cannot assure you that these activities will not adversely affect the value of the Underlying Stock, the market value of your notes prior to maturity or the Redemption Amount. Our trading, hedging and other business activities, and those of the agents or one or more of our respective affiliates, may create conflicts of interest with you. We, the agents, or one or more of our respective affiliates may engage in trading activities related to the Underlying Stock that are not for your account or on your behalf. These trading and other business activities may present a conflict of interest between your interest in the notes and the interests we, the agents, and our respective affiliates may have in our proprietary accounts, in facilitating transactions, including block trades, for our or their other customers, and in accounts under our or their management. These trading and other business activities, if they influence the value of the Underlying Stock or secondary trading in your notes, could be adverse to your interests as a beneficial owner of the notes.

We, the agents, and our respective affiliates expect to enter into arrangements or adjust or close out existing transactions to hedge our obligations under the notes. We, the agents, or our respective affiliates also may enter into hedging transactions relating to other securities or instruments that we or they issue, some of which may have returns calculated in a manner related to that of a particular issue of the notes. We may enter into such hedging arrangements with one or more of our subsidiaries or affiliates, or with one or more of the agents or their affiliates. Such a party may enter into additional hedging transactions with other parties relating to the notes and the applicable Underlying Stock. This hedging activity is expected to result in a profit to those engaging in the hedging activity, which could be more or less than initially expected, or the hedging activity could also result in a loss. We, the agents, and our respective affiliates will price these hedging transactions with the intent to realize a profit, regardless of whether the value of the notes increases or decreases. Any profit in connection with such hedging activities will be in addition to any other compensation that we, the agents, and our respective affiliates receive for the sale of the notes, which creates an additional incentive to sell the notes to you.

There may be potential conflicts of interest involving the calculation agent. We may appoint and remove the calculation agent. We expect to appoint MLPF&S or one of its affiliates as the calculation agent for the notes and, as such, it will determine, among other things, the Starting Value, the Threshold Value, the Step Level, the Ending Value and the Redemption Amount. Under some circumstances, these duties could result in a conflict of interest, for example, in connection with the calculation agent's determination as to whether a Market Disruption Event has occurred, or in connection with judgments that the calculation agent would be required to make if certain corporate events occur with respect to any Underlying Stock. See the sections entitled "Description of the Notes—Market Disruption Events" and "—Anti-Dilution Adjustments." The calculation agent will be required to carry out its duties in good faith and use its reasonable judgment. However, because MLPF&S or one of its affiliates is expected to serve as

the calculation agent, potential conflicts of interest could arise. As the calculation agent, MLPF&S or one of its affiliates will have discretion in making various determinations that affect your notes. The exercise of this discretion by the calculation agent could adversely affect the value of your notes and may present the calculation agent with a conflict of interest of the kind described under “—Trading and hedging activities by us, the agents, and our respective affiliates may affect your return on the notes and their market value” and “—Our trading, hedging and other business activities, and those of the agents or one or more of our respective affiliates, may create conflicts of interest with you” above.

Significant aspects of the U.S. federal income tax treatment of the notes are uncertain. The tax treatment of the notes is uncertain. We do not plan to request a ruling from the Internal Revenue Service (the “IRS”) regarding the tax treatment of the notes, and the IRS or a court may not agree with the tax treatment described in this product supplement. Although the U.S. federal income tax treatment of the stated periodic interest payments is uncertain, we intend to take the position that the stated periodic interest payments constitute taxable ordinary income to a U.S. holder at the time received or accrued in accordance with the holder’s regular method of accounting.

The IRS has issued a notice indicating that it and the Treasury Department are actively considering whether, among other issues, the holder of an instrument such as the notes should be required to accrue ordinary income on a current basis, and they are seeking comments on the subject. The outcome of this process is uncertain and could apply on a retroactive basis.

Please read carefully the section entitled “U.S. Federal Income Tax Summary” in this product supplement. You should consult your tax advisor about your own tax situation.

A 30% U.S. federal withholding tax will be withheld on the stated periodic interest payments paid to non-U.S. holders. While the U.S. federal income tax treatment of the notes (including proper characterization of the stated periodic interest payments for U.S. federal income tax purposes) is uncertain, U.S. federal income tax at a 30% rate (or at a lower rate under an applicable income tax treaty) will be withheld in respect of the stated periodic interest payments made to a non-U.S. holder unless such payments are effectively connected with the conduct by the non-U.S. holder of a trade or business in the U.S. We will not pay any additional amounts in respect of such withholding.

Please read carefully the section entitled “U.S. Federal Income Tax Summary” in this product supplement. You should consult your tax advisor about your own tax situation.

#### Risks Relating to the Underlying Stock

You must rely on your own evaluation of the merits of an investment linked to the applicable Underlying Stock. In the ordinary course of business, we, the agents, and our respective affiliates may have expressed views on expected movements in an Underlying Stock, and may do so in the future. These views or reports may be communicated to our clients and clients of these entities. However, these views are subject to change from time to time. Moreover, other professionals who deal in markets relating to an Underlying Stock may at any time have significantly different views from our views and the views of these entities. For these reasons, you are encouraged to derive information concerning an Underlying Stock from multiple sources, and you should not rely on our views or the views expressed by these entities.

You will have no rights of a holder of shares of the Underlying Stock, and you will not be entitled to receive shares, dividends or other distributions by the Underlying Company. The notes are our debt securities. They are not equity instruments, shares of stock, or securities of any other issuer. Investing in the notes will not make you a holder of the Underlying Stock. You will not have any voting rights, any rights to receive dividends or other distributions, or any other rights with respect to the Underlying Stock. As a result, the return on your notes may not reflect the return you would realize if you actually owned shares of the Underlying Stock and received the dividends paid or other distributions made in connection with them. Your notes will be paid in cash and you have no right to receive any shares of the Underlying Stock.

If shares of the Underlying Company are also listed on a foreign exchange, your return may be affected by factors affecting international securities markets. The value of securities traded outside of the U.S. may be adversely affected by a variety of factors relating to the relevant securities markets. Factors which could affect those markets, and therefore the return on your notes, include:

**Market Liquidity and Volatility.** The relevant foreign securities markets may be less liquid and/or more volatile than U.S. or other securities markets and may be affected by market developments in different ways than U.S. or other securities markets.

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

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

Unless otherwise set forth in the applicable term sheet, we and the agents do not control the Underlying Company and have not verified any disclosure made by any Underlying Company. We, the agents, or our respective affiliates currently, or in the future, may engage in business with the Underlying Company, and we, the agents, or our respective affiliates may from time to time own securities of the Underlying Company. However, none of us, the agents, or any of our respective affiliates has the ability to control any actions of the Underlying Company or have undertaken any independent review of, or made any due diligence inquiry with respect to, the Underlying Company. You should make your own investigation into the Underlying Stock.

Our business activities and those of the agents relating to the Underlying Company or the notes may create conflicts of interest with you. We, the agents and our

respective affiliates, at the time of any offering of the notes or in the future, may engage in business with the Underlying Company, including making loans to, equity investments in, or providing investment banking, asset management, or other services to the Underlying Company, its affiliates, and its competitors.

In connection with these activities, any of these entities may receive information about those companies that we will not divulge to you or other third parties. We, the agents, and our respective affiliates have published, and in the future may publish, research reports on one or more of these companies. The agents may also publish research reports relating to our or our affiliates' securities, including the notes. This research is modified from time to time without notice and may express opinions or provide recommendations that are inconsistent with purchasing or holding your notes. Any of these activities may adversely affect the price of the Underlying Stock and, consequently, the market value of your notes. None of us, the agents, or our respective affiliates makes any representation to any purchasers of the notes regarding any matters whatsoever relating to the Underlying Company. Any prospective purchaser of the notes should undertake an independent investigation of the Underlying Company to the extent that, in its judgment, is appropriate to make an informed decision regarding an investment in the notes. The selection of the Underlying Stock does not reflect any investment recommendations from us, the agents, or our respective affiliates.

The Underlying Company will have no obligations relating to the notes and we will not perform any due diligence procedures with respect to the Underlying Company. The Underlying Company will not have any financial or legal obligation with respect to the notes or the amounts to be paid to you, including any obligation to take our needs or the needs of noteholders into consideration for any reason, including taking any corporate actions that might affect the value of the Underlying Stock or the value of the notes. The Underlying Company will not receive any of the proceeds from any offering of the notes, and will not be responsible for, or participate in, the offering of the notes. No Underlying Company will be responsible for, or participate in, the determination or calculation of the amount receivable by holders of the notes.

None of us, the agents, or any of our respective affiliates will conduct any due diligence inquiry with respect to the Underlying Stock in connection with an offering of the notes. None of us, the agents, or any of our respective affiliates has made any independent investigation as to the completeness or accuracy of publicly available information regarding the Underlying Company or as to the future performance of the Underlying Stock. Any prospective purchaser of the notes should undertake such independent investigation of the Underlying Company as in its judgment is appropriate to make an informed decision with respect to an investment in the notes.

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

#### Risks Relating to Underlying Stocks that Are ADRs

The value of an ADR may not accurately track the value of the common shares of the related Underlying Company. If the Underlying Stock is an ADR, each ADR will represent

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

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

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

Delisting of an Underlying Stock that is an ADR may adversely affect the value of the notes.

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

#### Other Risk Factors Relating to the Underlying Stock

The applicable term sheet may set forth additional risk factors as to the Underlying Stock that you should review prior to purchasing the notes.

USE OF PROCEEDS AND HEDGING

We will use the net proceeds we receive from each sale of the notes for the purposes described in the accompanying prospectus supplement under “Use of Proceeds.” In addition, we expect that we or our affiliates may use a portion of the net proceeds to hedge our obligations under the notes.

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## DESCRIPTION OF THE NOTES

### General

Each issue of the notes will be part of a series of medium-term notes entitled “Senior Global Medium-Term Notes, Series H” that will be issued under the senior indenture, as amended and supplemented from time to time. The senior indenture is described more fully in the prospectus and prospectus supplement. The following description of the notes supplements and, to the extent it is inconsistent with, supersedes the description of the general terms and provisions of the notes and debt securities set forth under the headings “Description of the Notes We May Offer” in the prospectus supplement and “Description of Debt Securities” in the prospectus. These documents should be read in connection with the applicable term sheet.

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

The notes do not guarantee the return of principal at maturity. The notes will be payable only in U.S. dollars.

Prior to the maturity date, the notes are not redeemable by us, except under the limited circumstances set forth below, or repayable at the option of any holder. The notes are not subject to any sinking fund. The notes are not subject to the defeasance provisions described in the prospectus under the caption “Description of Debt Securities—Defeasance.” We will issue the notes in denominations of whole units. Unless otherwise set forth in the applicable term sheet, each unit will have a principal amount of \$10. The CUSIP number for each issue of the notes will be set forth in the applicable term sheet. You may transfer the notes only in whole units.

### Interest

The notes will bear periodic interest payments at the fixed rate specified in the applicable term sheet. Unless otherwise set forth in the applicable term sheet, the interest will be paid quarterly in cash in arrears on each interest payment date specified in the term sheet. Interest payable on the notes will be computed on the basis of a 360-day year of twelve 30-day months.

Each interest payment will include interest accrued from, and including, the issue date or the most recent interest payment date to, but excluding, the next interest payment date. Unless otherwise specified in the term sheet, for so long as the notes are held in book-entry form only, we will pay interest to the persons in whose names the notes are registered at the close of business one business day prior to each interest payment date. If an interest payment date falls on a day that is not a business day, that interest payment will be made on the next succeeding business day and no additional interest will accrue as a result of the delayed payment.

Unless otherwise set forth in the term sheet, a “business day” means any day other than a day on which banking institutions in New York, 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.

Notwithstanding the foregoing, the final payment of interest and the Redemption Amount will be paid to the person in whose names the notes are registered on the maturity date.

Payment at Maturity

At maturity, subject to our credit risk as issuer of the notes, in addition to the final interest payment on the notes, you will receive a Redemption Amount, denominated in U.S. dollars. The "Redemption Amount" will be calculated as follows:

· If the Ending Value is greater than or equal to the Step Level, then the Redemption Amount will equal:

· If the Ending Value is less than the Step Level but is greater than or equal to the Threshold Value, then the Redemption Amount will equal the principal amount.

· If the Ending Value is less than the Threshold Value, then the Redemption Amount will equal:

The Redemption Amount will not be less than zero.

The "Step Level" will be a price of the Underlying Stock that reflects a specified percentage above the Starting Value.

The Step Level will be determined on the pricing date and set forth in the term sheet.

The "Step Payment" will be a dollar amount representing a fixed percentage of the principal amount and set forth in the term sheet.

The "Threshold Value" will be a price of the Underlying Stock that equals a specified percentage of the Starting Value, which will be less than or equal to 100%. The Threshold Value will be determined on the pricing date and set forth in the term sheet. If the Threshold Value is equal to 100% of the Starting Value, then the Redemption Amount for the notes will be less than the principal amount if there is any decrease in the value of the Underlying Stock from the Starting Value to the Ending Value, and you may lose all of your investment in the notes.

Each term sheet will provide examples of payments on the notes based on a hypothetical Starting Value, Threshold Value, Step Level, Step Payment and hypothetical Ending Values.

The term sheet will set forth information as to the Underlying Stock, including information as to the historical prices of the Underlying Stock. However, historical prices of the Underlying Stock are not indicative of its future performance or the performance of your notes.

An investment in the notes does not entitle you to any ownership interest, including any voting rights, in the Underlying Stock, nor dividends paid or other distributions made, by the Underlying Company.

The Starting Value and the Ending Value

Starting Value

Unless otherwise specified in the term sheet, the “Starting Value” will be the price of the Underlying Stock on the pricing date, determined as set forth in the term sheet.

Ending Value

Unless otherwise specified in the term sheet, the “Ending Value” will equal the Closing Market Price of the Underlying Stock on the valuation date multiplied by the Price Multiplier.

Unless otherwise specified in the applicable term sheet, the following definitions will apply:

The “valuation date” means a trading day shortly before the maturity date. The valuation date will be set forth in the term sheet.

A “trading day” means a day on which trading is generally conducted (or was scheduled to have been generally conducted, but for the occurrence of a Market Disruption Event) on the New York Stock Exchange (the “NYSE”), the Nasdaq Stock Market, the Chicago Board Options Exchange, and in the over-the-counter market for equity securities in the United States, or any successor exchange or market, or in the case of a security traded on one or more non-U.S. securities exchanges or markets, on the principal non-U.S. securities exchange or market for such security .

The “Closing Market Price” for one share of the Underlying Stock (or one unit of any other security for which a Closing Market Price must be determined) on any trading day means any of the following:

if the Underlying Stock (or such other security) is listed or admitted to trading on a national securities exchange, the last reported sale price, regular way (or, in the case of The Nasdaq Stock Market, the official closing price), of the principal trading session on that day on the principal U.S. securities exchange registered under the Exchange Act on which the Underlying Stock (or such other security) is listed or admitted to trading;

if the Underlying Stock (or such other security) is not listed or admitted to trading on any national securities exchange but is included in the OTC Bulletin Board, the last reported sale price of the principal trading session on the OTC Bulletin Board on that day;

if the Underlying Stock (or such other security) is issued by a foreign issuer and its closing price cannot be determined as set forth in the two bullet points above, and the Underlying Stock (or such other security) is listed or admitted to trading on a non-U.S. securities exchange or market, the last reported sale price, regular way, of the principal trading session on that day on the primary non-U.S. securities exchange or market on which the Underlying Stock (or such other security) is listed or admitted to trading (converted to U.S. dollars using such exchange rate as the calculation agent, in its sole discretion, determines to be commercially reasonable); or

if the Closing Market Price cannot be determined as set forth in the prior bullets, the mean, as determined by the calculation agent, of the bid prices for the Underlying Stock (or such other security) obtained from as many dealers in that security (which may

include us, MLPF&S and/or any of our respective affiliates), but not exceeding three, as will make the bid prices available to the calculation agent. If no such bid price can be obtained, the Closing Market Price will be determined (or, if not determinable, estimated) by the calculation agent in its sole discretion in a commercially reasonable manner. If the valuation date is not a trading day or if there is a Market Disruption Event on that day, the valuation date will be the immediately succeeding trading day during which no Market Disruption Event occurs or is continuing; provided that the Closing Market Price of the Underlying Stock will be determined (or, if not determinable, estimated) by the calculation agent in a commercially reasonable manner on a date no later than the second scheduled trading day prior to the maturity date, regardless of the occurrence of a Market Disruption Event on that day.

The initial "Price Multiplier" for the Underlying Stock will be one, unless otherwise set forth in the applicable term sheet. The Price Multiplier will be subject to adjustment for certain corporate events relating to the Underlying Stock described below under "—Anti-Dilution Adjustments."

#### Market Disruption Events

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

- (A) the suspension of or material limitation of trading, in each case, for more than two consecutive hours of trading, or during the one-half hour period preceding the close of trading, of the shares of the Underlying Stock (or the successor to the Underlying Stock) on the primary exchange where such shares trade, as determined by the calculation agent (without taking into account any extended or after-hours trading session); or
- (B) the suspension of or material limitation of trading, in each case, for more than two consecutive hours of trading, or during the one-half hour period preceding the close of trading, on the primary exchange that trades options contracts or futures contracts related to the shares of the Underlying Stock (or successor to the Underlying Stock) as determined by the calculation agent (without taking into account any extended or after-hours trading session), in options contracts or futures contracts related to the shares of the Underlying Stock; or
- (C) the determination that the scheduled valuation date is not a trading day by reason of an extraordinary event, occurrence, declaration, or otherwise.

For the purpose of determining whether a Market Disruption Event has occurred:

- (1) a limitation on the hours in a trading day and/or number of days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of the relevant exchange;
- (2) a decision to permanently discontinue trading in the shares of the Underlying Stock (or successor Underlying Stock) or the relevant futures or options contracts relating to such shares will not constitute a Market Disruption Event;
- (3) a suspension in trading in a futures or options contract on the shares of the Underlying Stock (or successor Underlying Stock), by a major securities market by reason of (a) a price change violating limits set by that securities market, (b) an imbalance of orders relating to those contracts, or (c) a disparity in bid and

ask quotes relating to those contracts, will each constitute a suspension of or material limitation on trading in futures or options contracts relating to the Underlying Stock;

(4) subject to paragraph (3) above, a suspension of or material limitation on trading on the relevant exchange will not include any time when that exchange is closed for trading under ordinary circumstances; and

for the purpose of clause (A) above, any limitations on trading during significant market fluctuations under NYSE (5) Rule 80B, or any applicable rule or regulation enacted or promulgated by the NYSE or any other self-regulatory organization or the SEC of similar scope as determined by the calculation agent, will be considered "material."

#### Anti-Dilution Adjustments

As to any Underlying Stock, the calculation agent, in its sole discretion, may adjust the Price Multiplier (and as a result, the Ending Value), and any other terms of the notes (such as the Starting Value), if an event described below occurs after the pricing date and on or before the valuation date and if the calculation agent determines that such an event has a diluting or concentrative effect on the theoretical value of the shares of the Underlying Stock or successor Underlying Stock.

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

No adjustments to the Price Multiplier or any other terms of the notes will be required other than those specified below. However, the calculation agent may, at its sole discretion, make additional adjustments to the Price Multiplier or any other terms of the notes to reflect changes to the Underlying Stock if the calculation agent determines that the adjustment is appropriate to ensure an equitable result.

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

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

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

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

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

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

- the prior Price Multiplier; and

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

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

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

- the prior Price Multiplier; and

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

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

**Extraordinary Dividends.** There will be no adjustments to the Price Multiplier to reflect any cash dividends or cash distributions paid with respect to the Underlying Stock other than Extraordinary Dividends, as described below, and distributions described under the section entitled “—Reorganization Events” below.

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

- the prior Price Multiplier; and

a fraction, the numerator of which is the Closing Market Price per share of the Underlying Stock on the trading day preceding the ex-dividend date and the denominator of which is the amount by which the Closing Market Price per share of the Underlying Stock on that preceding trading day exceeds the Extraordinary Dividend Amount.

The “Extraordinary Dividend Amount” with respect to an Extraordinary Dividend will equal:

in the case of cash dividends or other distributions that constitute regular dividends, the amount per share of the Underlying Stock of that Extraordinary Dividend minus the amount per share of the immediately preceding non-Extraordinary Dividend for that share; or

in the case of cash dividends or other distributions that do not constitute regular dividends, the amount per share of the Underlying Stock of that Extraordinary Dividend.

To the extent an Extraordinary Dividend is not paid in cash, the value of the non-cash component will be determined by the calculation agent, whose determination will be conclusive, absent a determination of manifest error. A distribution on the Underlying Stock described in the section “—Issuance of Transferable Rights or Warrants” or clause (a), (d) or (e) of the section entitled “—Reorganization Events” below that also constitutes an Extraordinary Dividend will only cause an adjustment under those respective sections.

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

the prior Price Multiplier; and

the number of shares of the Underlying Stock that can be purchased with the cash value of those warrants or rights distributed on one share of the Underlying Stock.

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

**Reorganization Events**

If after the pricing date and on or prior to the valuation date of the notes, as to any Underlying Stock:

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

(e) the Underlying Company issues to all of its shareholders securities of an issuer other than the Underlying Company, including equity securities of an affiliate of the Underlying Company, other than in a transaction described in clauses (b), (c), or (d) above;

(f) a tender or exchange offer or going-private transaction is consummated for all the outstanding shares of the Underlying Company;

(g) there occurs any reclassification or change of the Underlying Stock that results in a transfer or an irrevocable commitment to transfer all such outstanding shares of the Underlying Stock to another entity or person;

(h) the Underlying Company or any Successor Entity is the surviving entity of a merger, combination, or consolidation, that results in the outstanding Underlying Stock (other than Underlying Stock owned or controlled by the other party to such transaction) immediately prior to such event collectively representing less than 50% of the outstanding Underlying Stock immediately following such event; or

(i) the Underlying Company ceases to file the financial and other information with the SEC in accordance with Section 13(a) of the Exchange Act (an event in clauses (a) through (i), a "Reorganization Event"), then, on or after the date of the occurrence of a Reorganization Event, the calculation agent shall, in its sole discretion, make an adjustment to the Price Multiplier or to the method of determining the Redemption Amount or any other terms of the notes as the calculation agent, in its sole discretion, determines appropriate to account for the economic effect on the notes of that Reorganization Event (including adjustments to account for changes in volatility, expected dividends, stock loan rate, or liquidity relevant to the Underlying Stock or to the notes), which may, but need not, be determined by reference to the adjustment(s) made in respect of such Reorganization Event by an options exchange to options on the relevant Underlying Stock traded on that options exchange and determine the effective date of that adjustment. If the calculation agent determines that no adjustment that it could make will produce a commercially reasonable result, then the calculation agent may cause the maturity date of the notes to be accelerated to the fifth business day following the date of that determination and the Redemption Amount payable to you will be calculated as though the date of early repayment were the stated maturity date of the notes and as though the valuation date were the fifth trading day prior to the date of acceleration.

If the Underlying Company ceases to file the financial and other information with the SEC in accordance with Section 13(a) of the Exchange Act, as contemplated by clause (i) above,



and the calculation agent determines in its sole discretion that sufficiently similar information is not otherwise available to you, then the calculation agent may cause the maturity date of the notes to be accelerated to the fifth business day following the date of that determination and the Redemption Amount payable to you will be calculated as though the date of early repayment were the stated maturity date of the notes, and as though the valuation date were the fifth trading day prior to the date of acceleration. If the calculation agent determines that sufficiently similar information is available to you, the Reorganization Event will be deemed to have not occurred.

If the notes are accelerated as described in the two preceding paragraphs, you will also receive interest accrued on the notes until the date that the Redemption Amount is paid. However, upon any such acceleration, you will not be entitled to any interest that would have accrued after the date of acceleration.

#### Alternative Anti-Dilution and Reorganization Adjustments

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

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

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

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

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

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

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

#### Delisting of ADRs or Termination of ADR Facility

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

#### Underlying Stock

Any information regarding the Underlying Stock or the Underlying Company will be derived from publicly available documents. Any Underlying Stock will be registered under the Exchange Act. Information provided to or filed with the SEC by any Underlying Company can be located at the SEC’s facilities or through the SEC’s website, [www.sec.gov](http://www.sec.gov). None of us, the agents, or any of our respective affiliates will have independently verified the accuracy or completeness of any of the information or reports of an Underlying Company.

The selection of the Underlying Stock is not a recommendation to buy or sell the Underlying Stock. Neither we nor any of our subsidiaries or affiliates makes any representation to any purchaser of the notes as to the performance of the Underlying Stock.

#### Role of the Calculation Agent

The calculation agent has the sole discretion to make all determinations regarding the notes as described in this product supplement, including determinations regarding the Starting Value, the Threshold Value, the Step Level, the Ending Value, the Price Multiplier, the Closing Market Price, the Redemption Amount, any Market Disruption Events, a successor Underlying Stock, business days, and trading days. Absent manifest error, all determinations of the calculation agent will be conclusive for all purposes and final and binding on you and us, without any liability on the part of the calculation agent.

We expect to appoint MLPF&S or one of its affiliates as the calculation agent for each issue of the notes. However, we may change the calculation agent at any time without

notifying you. The identity of the calculation agent will be set forth in the applicable term sheet.

#### Payment of Additional Amounts

We will pay any amounts to be paid by us on the notes without deduction or withholding for, or on account of, any and all present or future income, stamp and other taxes, levies, imposts, duties, charges, fees, deductions or withholdings (“taxes”) now or hereafter imposed, levied, collected, withheld or assessed by or on behalf of Canada or any Canadian political subdivision or authority that has the power to tax, unless the deduction or withholding is required by law or by the interpretation or administration thereof by the relevant governmental authority. At any time a Canadian taxing jurisdiction requires us to deduct or withhold for or on account of taxes from any payment made under or in respect of the notes, we will pay such additional amounts (“Additional Amounts”) as may be necessary, so that the net amounts received by each holder (including Additional Amounts), after such deduction or withholding, shall not be less than the amount the holder would have received had no such deduction or withholding been required. However, no Additional Amounts will be payable with respect to a payment made to a holder of a note or of a right to receive payments in respect thereto (a “Payment Recipient”), which we refer to as an “Excluded Holder,” in respect of a beneficial owner or Payment Recipient:

- (i) is someone with whom we do not deal at arm’s length (within the meaning of the Income Tax Act (Canada)) at the time of making such payment;
- (ii) is subject to such taxes by reason of its being connected presently or formerly with Canada or any province or territory thereof otherwise than by reason of the holder’s activity in connection with purchasing the notes, the holding of the notes or the receipt of payments thereunder;
- (iii) is, or does not deal at arm’s length with a person who is, a “specified shareholder” (within the meaning of subsection 18(5) of the Income Tax Act (Canada)) of Royal Bank of Canada (generally a person will be a “specified shareholder” for this purpose if that person, either alone or together with persons with whom the person does not deal at arm’s length, owns 25% or more of (a) our voting shares, or (b) the fair market value of all of our issued and outstanding shares);
- (iv) presents such notes for payment (where presentation is required, such as if a note is issued in definitive form) more than 30 days after the relevant date; for this purpose, the “relevant date” in relation to any payments on any note means:
  - (a) the due date for payment thereof (whether at maturity or upon an earlier acceleration), or
  - (b) if the full amount of the monies payable on such date has not been received by the trustee on or prior to such due date, the date on which the full amount of such monies has been received and notice to that effect is given to holders of the notes in accordance with the senior indenture;
- (v) could lawfully avoid (but has not so avoided) such withholding or deduction by complying, or requiring that any third party comply with, any statutory

requirements or by making, or requiring that any third party make, a declaration of non-residence or other similar claim for exemption to any relevant tax authority; or

is subject to deduction or withholding on account of any tax, assessment, or other governmental charge that is imposed or withheld by reason of the application of Section 1471 through 1474 of the United States Internal (vi) Revenue Code of 1986, as amended (the “Code”) (or any successor provisions), any regulation, pronouncement, or agreement thereunder, official interpretations thereof, or any law implementing an intergovernmental approach thereto, whether currently in effect or as published and amended from time to time.

For the purposes of clause (iv) above, if a note is presented for payment more than 30 days after the relevant date, we shall only be required to pay such Additional Amounts as shall have accrued as of such 30th day, and no further Additional Amounts shall accrue or become payable after such date.

For the avoidance of doubt, we will not have any obligation to pay any holders Additional Amounts on any tax which is payable otherwise than by deduction or withholding from payments made under or in respect of the notes.

We will also make such withholding or deduction and remit the full amount deducted or withheld to the relevant authority in accordance with applicable law. We will furnish to the trustee, within 30 days after the date the payment of any taxes is due pursuant to applicable law, certified copies of tax receipts evidencing that such payment has been made or other evidence of such payment satisfactory to the trustee. We will indemnify and hold harmless each holder of the notes (other than an Excluded Holder) and upon written request reimburse each such holder for the amount of (x) any taxes so levied or imposed and paid by such holder as a result of payments made under or with respect to the notes and (y) any taxes levied or imposed and paid by such holder with respect to any reimbursement under (x) above, but excluding any such taxes on such holder’s net income or capital.

For additional information, see the section entitled “Tax Consequences—Canadian Taxation” in the accompanying prospectus.

#### Same-Day Settlement and Payment

The notes will be delivered in book-entry form only through The Depository Trust Company against payment by purchasers of the notes in immediately available funds. We will pay interest and the Redemption Amount in immediately available funds so long as the notes are maintained in book-entry form.

#### Events of Default and Acceleration

Events of default are defined in the senior indenture. If such an event occurs and is continuing, unless otherwise stated in the term sheet, the amount payable to a holder of the notes upon any acceleration permitted under the senior indenture will be equal to the Redemption Amount described under the caption “—Payment at Maturity,” determined as if the date of acceleration was the maturity date and as though the fifth trading day prior to the date of acceleration was the valuation date. If a bankruptcy proceeding is commenced in respect of us, your claim may be limited under applicable bankruptcy law. In case of a default in payment of the notes, whether at their maturity or upon acceleration, they will not bear a default interest rate.

For additional discussion of these matters, please see the discussion in the prospectus under the headings “Description of Debt Securities—Modification and Waiver of the Debt Securities” beginning on page 10 and “—Events of Default” beginning on page 15.

Listing

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

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#### SUPPLEMENTAL PLAN OF DISTRIBUTION

MLPF&S and one or more of its affiliates may act as our agents for any offering of the notes. The agents may act on either a principal basis or an agency basis, as set forth in the applicable term sheet. Each agent will be a party to the distribution agreement described in the “Supplemental Plan of Distribution” on page S-29 of the accompanying prospectus supplement.

Each agent will receive an underwriting discount that is a percentage of the aggregate principal amount of the notes sold through its efforts, which will be set forth in the applicable term sheet. You must have an account with the applicable agent in order to purchase the notes.

None of the agents is acting as your fiduciary or advisor solely as a result of the making of any offering of the notes, and you should not rely upon this product supplement, the term sheet, or the accompanying prospectus or prospectus supplement as investment advice or a recommendation to purchase any notes. You should make your own investment decision regarding the notes after consulting with your legal, tax, and other advisors.

MLPF&S and its affiliates may use this product supplement, the prospectus supplement, and the prospectus, together with the applicable term sheet, in market-making transactions for any notes after their initial sale solely for the purpose of providing investors with the description of the terms of the notes that were made available to investors in connection with the initial distribution of the notes. Secondary market investors should not, and will not be authorized to rely on these documents for information regarding Royal Bank of Canada or for any purpose other than that described in the immediately preceding sentence.

#### Selling Restrictions

##### European Economic Area

None of this product supplement, the prospectus supplement, the prospectus nor any related term sheet is a prospectus for the purposes of the Prospectus Directive (as defined below). This product supplement, the prospectus supplement, the prospectus and any related term sheet have been prepared on the basis that any offer of the notes in any Member State of the European Economic Area (the “EEA”) which has implemented the Prospectus Directive (each, a “Relevant Member State”) will only be made to a legal entity which is a qualified investor under the Prospectus Directive (“Qualified Investors”). Accordingly any person making or intending to make an offer in that Relevant Member State of the notes which are the subject of the offering contemplated in this product supplement, the prospectus supplement, the prospectus and any related term sheet may only do so with respect to Qualified Investors. Neither Royal Bank of Canada nor the agents have authorized, nor do they authorize, the making of any offer of the notes other than to Qualified Investors. The expression “Prospectus Directive” means Directive 2003/71/EC (as amended, including by Directive 2010/73/EU), including any relevant implementing measure in the Relevant Member State.

PRIIPs Regulation / Prospectus Directive / Prohibition of sales to EEA retail investors — The notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the EEA. For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU, as amended (“MiFID II”); or (ii) a customer within the meaning of Directive 2002/92/EC, as amended (the “Insurance Mediation Directive”), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in the

Prospectus Directive. Consequently no key information document required by Regulation (EU) No 1286/2014, as amended (the “PRIIPs Regulation”) for offering or selling the notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

MLPF&S has represented and agreed, and each further agent appointed under the program will be required to represent and agree, that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any notes to any retail investor (as defined in the foregoing paragraph) in the EEA. For the purposes of this provision, and the foregoing paragraph, the expression “offer” includes 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 for the notes.

#### United Kingdom

MLPF&S has represented and agreed, and each further agent appointed under the program will be required to represent and agree, that:

- (a) 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 United Kingdom's Financial Services and Markets Act 2000, as amended (the “FSMA”)) received by it in connection with the issue or sale of any of the notes in circumstances in which section 21(1) of the FSMA would not, if Royal Bank of Canada were not an authorized person, apply to Royal Bank of Canada; and
- (b) 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.

#### Argentina

The notes are not and will not be marketed in Argentina by means of a public offer of securities, as such term is defined under Sections 2 and 83 of the Argentine Capital Markets Law No. 26,831, as securities. No application has been or will be made with the Argentine Comisión Nacional de Valores, the Argentine securities governmental authority, to offer the notes in Argentina.

#### Brazil

The information contained in this product supplement and in the accompanying prospectus supplement and prospectus does not constitute a public offering or distribution of the notes in Brazil and no registration or filing with respect to any securities or financial products described in these documents has been made with the Comissão de Valores Mobiliários (the “CVM”). No public offer of securities or financial products described in this product supplement or in the accompanying prospectus supplement and prospectus should be made in Brazil without the applicable registration at the CVM.

#### The People’s Republic of China

These offering documents have not been filed with or approved by the People’s Republic of China (for such purposes, not including Hong Kong and Macau Special Administrative Regions or Taiwan) authorities, and is not an offer of securities (whether public offering or

private placement) within the meaning of the Securities Law or other pertinent laws and regulations of the People's Republic of China. These offering documents shall not be offered to the general public if used within the People's Republic of China, and the notes so offered cannot be sold to anyone that is not a qualified purchaser of the People's Republic of China. MLPF&S has represented, warranted and agreed that the notes are not being offered or sold and may not be offered or sold, directly or indirectly, in the People's Republic of China, except under circumstances that will result in compliance with applicable laws and regulations.

#### France

The offering documents have not been approved by the Autorité des marchés financiers ("AMF").

Offers of the notes (a) have only been made and will only be made to the public (offre au public) in France or an admission of the notes to trading on a regulated market in France in the period beginning (i) when a prospectus in relation to those notes has been approved by the AMF, on the date of such publication or, (ii) when a prospectus in relation to those notes has been approved by the competent authority of another Member State of the European Economic Area which has implemented the EU Prospectus Directive 2003/71/EC, on the date of notification of such approval to the AMF and, in either case, when the formalities required by French laws and regulations have been carried out, and ending at the latest on the date which is 12 months after the date of the approval of the prospectus, all in accordance with articles L.412-1 and L.621-8 to L.621-8-3 of the French Code monétaire et financier and the Règlement général of the AMF, or (b) have only been made and will only be made to the public in France or an admission of the notes to trading on a regulated market in France in circumstances which do not require the publication by the offeror of a prospectus pursuant to the French Code monétaire et financier and the Règlement général of the Autorité des marchés financiers.

The notes have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France, and have not been distributed or caused to be distributed and the offering documents, or any other offering material relating to the notes, will not be distributed or caused to be distributed to the public in France, and such offers, sales and distributions have been and will be made in France only to (i) providers of the investment service of portfolio management for the account of third parties, and/or (ii) qualified investors (investisseurs qualifiés) other than individuals, acting for their own account, all as defined in, and in accordance with, articles L.411-2, D.411-1 to D.411-3, D.744-1, D.754-1 and D.764-1 of the French Code monétaire et financier. The direct or indirect resale of the notes to the public in France may be made only as provided by, and in accordance with, articles L.411-1, L.411-2, L.412-1 and L.621-8 to L.621-8-3 of the French Code monétaire et financier.

In addition, the notes, the offering documents and any other offering material relating to the notes, have not been and will not be distributed or caused to be distributed in the Republic of France, other than to investors to whom offers and sales of the notes in the Republic of France may be made as described above.

#### Italy

No offers of the notes may be made to residents of the Republic of Italy.

#### Mexico

The notes have not been and will not be registered in the National Securities Registry (Registro Nacional de Valores). Therefore, the notes may not be offered or sold in the United Mexican States ("Mexico") by any means except in circumstances which constitute a private



offering (oferta privada) pursuant to Article 8 of the Securities Market Law (Ley del Mercado de Valores) and its regulations. All applicable provisions of the Securities Market Law must be complied with in respect to anything done in relation to the notes in, from or otherwise involving Mexico.

Netherlands

No offers of the notes may be made to residents of the Netherlands.

New Zealand

No offeree of the notes shall directly or indirectly offer, sell or deliver any notes, or distribute the offering documents or any advertisement in relation to any offer of the notes, in New Zealand other than to persons whose principal business is the investment of money or who, in the course of and for the purposes of their business, habitually invest money, or who are each required to pay a minimum subscription price of at least NZ\$500,000 for the notes (excluding any amounts lent by the issuer or any of its affiliates) before the allotment of those notes, or who in all the circumstances can properly be regarded as having been selected otherwise than as members of the public, or in other circumstances where there is no contravention of the Securities Act 1978 of New Zealand.

Philippines

THE NOTES BEING OFFERED OR SOLD HAVE NOT BEEN REGISTERED WITH THE PHILIPPINES SECURITIES AND EXCHANGE COMMISSION UNDER THE SECURITIES REGULATION CODE. ANY FUTURE OFFER OR SALE THEREOF IS SUBJECT TO REGISTRATION REQUIREMENTS UNDER THE CODE UNLESS SUCH OFFER OR SALE QUALIFIES AS AN EXEMPT TRANSACTION.

Switzerland

The notes may not be offered, sold or advertised directly or indirectly into or in Switzerland except in a manner which will not result in a public offering within the meaning of article 652a or 1156 of the Swiss Federal Code of Obligations ("CO"). Neither this product supplement or the accompanying prospectus supplement and prospectus nor any other offering or marketing materials relating to the notes have been prepared with regard to the disclosure standards for prospectuses under article 652a or 1156 CO, and therefore do not constitute a prospectus within the meaning of article 652a or 1156 CO. Neither this prospectus supplement and the accompanying prospectus nor any other offering or marketing materials relating to the notes may be distributed, published or otherwise made available in Switzerland except in a manner which will not constitute a public offering of the notes into or in Switzerland.

Taiwan

The notes may be made available for purchase outside Taiwan by investors residing in Taiwan (either directly or through properly licensed Taiwan intermediaries acting on behalf of such investors) but may not be offered or sold in Taiwan.

Uruguay

The notes have not been registered under the Uruguayan Securities Market Law or recorded in the Uruguayan Central Bank. The notes are not available publicly in Uruguay and are offered only on a private basis. No action may be taken in Uruguay that would render any

offering of the notes a public offering in Uruguay. No Uruguayan regulatory authority has approved the notes or passed on our solvency. In addition, any resale of the notes must be made in a manner that will not constitute a public offering in Uruguay.

Los valores no han sido registrados bajo la Ley de Mercado de Valores de la República Oriental del Uruguay o registrados ante el Banco Central del Uruguay. Los valores no son ofrecidos en forma pública en Uruguay y lo son únicamente en forma privada. Ninguna acción puede ser adoptada en Uruguay en relación a estos valores que resulte en que esta oferta de valores sea una oferta pública de valores en Uruguay. Ninguna autoridad regulatoria del Uruguay ha aprobado estos valores o se ha manifestado sobre nuestra solvencia. Adicionalmente, cualquier reventa de estos valores debe ser realizada en forma tal que no constituya oferta pública de valores en el Uruguay.

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#### CANADIAN FEDERAL INCOME TAX SUMMARY

An investor should read carefully the description of material Canadian federal income tax considerations relevant to a Non-resident Holder owning debt securities under “Tax Consequences—Canadian Taxation” in the accompanying prospectus.

#### U.S. FEDERAL INCOME TAX SUMMARY

The following summary of the material U.S. federal income tax considerations of the acquisition, ownership, and disposition of the notes supplements, and to the extent inconsistent supersedes, the discussions under “Tax Consequences—United States Taxation” in the accompanying prospectus and under “Certain Income Tax Consequences—United States Taxation” in the accompanying prospectus supplement and is not exhaustive of all possible tax considerations. This summary is based upon the Internal Revenue Code of 1986, as amended (the “Code”), regulations promulgated under the Code by the U.S. Treasury Department (“Treasury”) (including proposed and temporary regulations), rulings, current administrative interpretations and official pronouncements of the Internal Revenue Service (the “IRS”), and judicial decisions, all as currently in effect and all of which are subject to differing interpretations or to change, possibly with retroactive effect. No assurance can be given that the IRS would not assert, or that a court would not sustain, a position contrary to any of the tax consequences described below. This summary does not include any description of the tax laws of any state or local governments, or of any foreign government, that may be applicable to a particular holder. Further, this discussion does not address the tax consequences applicable to any holders under Section 451(b) of the Code. If the tax consequences associated with the notes are different than those described below, they will be described in the applicable term sheet.

This summary is directed solely to U.S. holders and non-U.S. holders that, except as otherwise specifically noted, will purchase the notes upon original issuance and will hold the notes as capital assets within the meaning of Section 1221 of the Code, which generally means property held for investment, and that are not excluded from the discussion under “Tax Consequences—United States Taxation” in the accompanying prospectus.

You should consult your own tax advisor concerning the U.S. federal income tax consequences to you of acquiring, owning, and disposing of the notes, as well as any tax consequences arising under the laws of any state, local, foreign, or other tax jurisdiction and the possible effects of changes in U.S. federal or other tax laws.

#### General

Although there is no statutory, judicial, or administrative authority directly addressing the characterization of the notes, in the opinion of our counsel, Morrison & Foerster LLP, it would be reasonable to treat the notes with terms described in this product supplement as income-bearing pre-paid cash settled derivative contracts with respect to the Underlying Stock and under the terms of the notes, we and every investor in the notes agree, in the absence of an administrative determination or judicial ruling to the contrary, to treat the notes for all tax purposes in accordance with such characterization. This discussion assumes that the notes constitute income-bearing pre-paid cash settled derivative contracts with respect to the Underlying Stock for U.S. federal income tax purposes. If the notes did not constitute income-bearing pre-paid cash settled derivative contracts, the tax consequences described below would be materially different.

This characterization of the notes is not binding on the IRS or the courts. No statutory, judicial, or administrative authority directly addresses the characterization of the notes or any

similar instruments for U.S. federal income tax purposes, and no ruling is being requested from the IRS with respect to their proper characterization and treatment. Due to the absence of authorities on point, significant aspects of the U.S. federal income tax consequences of an investment in the notes are not certain, and no assurance can be given that the IRS or any court will agree with the characterization and tax treatment described in this product supplement. Accordingly, you are urged to consult your tax advisor regarding all aspects of the U.S. federal income tax consequences of an investment in the notes, including possible alternative characterizations.

Unless otherwise stated, the following discussion is based on the characterization described above. The discussion in this section assumes that there is a significant possibility of a significant loss of principal on an investment in the notes.

We will not attempt to ascertain whether the issuer of any Underlying Stock would be treated as a “passive foreign investment company” (“PFIC”), within the meaning of Section 1297 of the Code, or a United States real property holding corporation, within the meaning of Section 897(c) of the Code. If the issuer of any Underlying Stock were so treated, certain adverse U.S. federal income tax consequences could possibly apply to a holder of the notes. You should refer to information filed with the SEC by the issuer of any Underlying Stock and consult your tax advisor regarding the possible consequences to you, if any, if the issuer of any Underlying Stock is or becomes a PFIC or is or becomes a United States real property holding corporation.

#### U.S. Holders

Although the U.S. federal income tax treatment of the stated periodic interest payments on the notes is uncertain, we intend to take the position, and the following discussion assumes, that the stated periodic interest payments constitute taxable ordinary income to a U.S. holder at the time received or accrued in accordance with the U.S. holder’s regular method of accounting. By purchasing the notes you agree, in the absence of an administrative determination or judicial ruling to the contrary, to treat the stated periodic interest payments as described in the preceding sentence. Upon receipt of a cash payment at maturity or upon a sale or exchange of the notes prior to maturity, a U.S. holder generally will recognize capital gain or loss equal to the difference between the amount realized (other than amounts representing accrued stated periodic interest payments, which would be taxed as described in the preceding paragraph) and the U.S. holder’s tax basis in the notes. A U.S. holder’s tax basis in the notes will equal the amount paid by that holder to acquire them. This capital gain or loss generally will be long-term capital gain or loss if the U.S. holder held the notes for more than one year. The deductibility of capital losses is subject to limitations.

**Alternative Tax Treatments.** Due to the absence of authorities that directly address the proper tax treatment of the notes, prospective investors are urged to consult their tax advisors regarding all possible alternative tax treatments of an investment in the notes. In particular, if the notes have a term that exceeds one year, the IRS could seek to subject the notes to the Treasury regulations governing contingent payment debt instruments. If the IRS were successful in that regard, the timing and character of income on the notes would be affected significantly. Among other things, a U.S. holder would be required to accrue original issue discount every year at a “comparable yield” determined at the time of issuance. In addition, any gain realized by a U.S. holder at maturity, or upon a sale or exchange, of the notes generally would be treated as ordinary income, and any loss realized at maturity would be treated as ordinary loss to the extent of the U.S. holder’s prior accruals of original issue discount, and as capital loss thereafter. If the notes have a term of one year or less, the notes

would generally be subject to the rules concerning short-term debt instruments as described under the heading “Tax Consequences—United States Taxation—Original Issue Discount—Short-Term Debt Securities” in the accompanying prospectus.

In addition, it is possible that the notes could be treated as a unit consisting of a deposit and a put option written by the note holder or as a notional principal contract, in which case the timing and character of income on the notes would be affected significantly.

The IRS released Notice 2008-2 (“Notice”), which sought comments from the public on the taxation of financial instruments currently taxed as “prepaid forward contracts.” This Notice addresses instruments such as the notes. According to the Notice, the IRS and Treasury are considering whether a holder of an instrument such as the notes should be required to accrue ordinary income on a current basis, regardless of whether any payments are made prior to maturity. It is not possible to determine what guidance the IRS and Treasury will ultimately issue, if any. Any such future guidance may affect the amount, timing and character of income, gain, or loss in respect of the notes, possibly with retroactive effect.

The IRS and Treasury are also considering additional issues, including whether additional gain or loss from such instruments should be treated as ordinary or capital, whether foreign holders of such instruments should be subject to withholding tax on any deemed income accruals, whether Section 1260 of the Code, concerning certain “constructive ownership transactions,” generally applies or should generally apply to such instruments, and whether any of these determinations depend on the nature of the underlying asset.

In addition, proposed Treasury regulations require the accrual of income on a current basis for contingent payments made under certain notional principal contracts. The preamble to the regulations states that the “wait and see” method of accounting does not properly reflect the economic accrual of income on those contracts, and requires current accrual of income for some contracts already in existence. While the proposed regulations do not apply to prepaid forward contracts, the preamble to the proposed regulations expresses the view that similar timing issues exist in the case of prepaid forward contracts. If the IRS or Treasury publishes future guidance requiring current economic accrual for contingent payments on prepaid forward contracts, it is possible that you could be required to accrue income over the term of the notes.

Because of the absence of authority regarding the appropriate tax characterization of the notes, it is also possible that the IRS could seek to characterize the notes in a manner that results in tax consequences that are different from those described above. For example, the IRS could possibly assert that any gain or loss that a holder may recognize at maturity or upon the sale or exchange of the notes should be treated as ordinary gain or loss.

#### Non-U.S. Holders

The following discussion applies to non-U.S. holders of the notes. A non-U.S. holder is a beneficial owner of the notes that, for U.S. federal income tax purposes, is a non-resident alien individual, a foreign corporation, or a foreign estate or trust.

Because the U.S. federal income tax treatment of the notes (including the periodic stated interest payments) is uncertain, we will withhold U.S. federal income tax at a 30% rate (or at a lower rate under an applicable income tax treaty) on the entire amount of stated periodic interest payments made unless such payments are effectively connected with the conduct by the non-U.S. holder of a trade or business in the U.S. (in which case, to avoid withholding, the non-U.S. holder will be required to provide a Form W-8ECI). We will not pay any additional amounts in respect of such withholding. To claim benefits under an income tax

treaty, a non-U.S. holder must obtain a taxpayer identification number and certify as to its eligibility under the appropriate treaty's limitations on benefits article, if applicable. In addition, special rules may apply to claims for treaty benefits made by non-U.S. holders that are entities rather than individuals. The availability of a lower rate of withholding under an applicable income tax treaty will depend on whether such rate applies to the characterization of the payments under U.S. federal income tax laws. A non-U.S. holder that is eligible for a reduced rate of U.S. federal withholding tax pursuant to an income tax treaty may obtain a refund of any excess amounts withheld by filing an appropriate claim for refund with the IRS.

A non-U.S. holder will not be subject to U.S. federal income or withholding tax for amounts paid in respect of the notes, provided that the non-U.S. holder complies with applicable certification requirements and that the payment is not effectively connected with the conduct by the non-U.S. holder of a U.S. trade or business. Notwithstanding the foregoing, gain from the sale or exchange of the notes or their settlement at maturity may be subject to U.S. federal income tax if that non-U.S. holder is a non-resident alien individual and is present in the U.S. for 183 days or more during the taxable year of the settlement at maturity, sale or exchange and certain other conditions are satisfied.

If a non-U.S. holder of the notes is engaged in the conduct of a trade or business within the U.S. and if periodic stated interest payments and gain realized on the settlement at maturity, sale or exchange of the notes, is effectively connected with the conduct of such trade or business (and, if certain tax treaties apply, is attributable to a permanent establishment maintained by the non-U.S. holder in the U.S.), the non-U.S. holder generally will be subject to U.S. federal income tax on such periodic stated interest payments and gain on a net income basis in the same manner as if it were a U.S. holder. Such non-U.S. holders should read the material under the heading "—U.S. Holders," for a description of the U.S. federal income tax consequences of acquiring, owning, and disposing of the notes. In addition, if such non-U.S. holder is a foreign corporation, it may also be subject to a branch profits tax equal to 30% (or such lower rate provided by any applicable tax treaty) of a portion of its earnings and profits for the taxable year that are effectively connected with its conduct of a trade or business in the U.S., subject to certain adjustments.

Under Section 871(m) of the Code, a "dividend equivalent" payment is treated as a dividend from sources within the United States and such payments generally would be subject to a 30% (or a lower rate under an applicable treaty) U.S. withholding tax if paid to a non-U.S. holder. Under Treasury regulations, certain payments (including deemed payments) with respect to equity-linked instruments ("ELIs") that are "specified ELIs" may be treated as dividend equivalents if such specified ELIs reference an interest in an "underlying security," which is generally any interest in an entity taxable as a corporation for U.S. federal income tax purposes if a payment with respect to such interest could give rise to a U.S. source dividend. However, the IRS has issued guidance that states that the Treasury and the IRS intend to amend the effective date of the Treasury regulations to provide that withholding on "dividend equivalent" payments will not apply to specified ELIs that are not delta-one instruments and that are issued before January 1, 2021. Accordingly, if the notes are not delta-one instruments and issued before January 1, 2021, non-U.S. holders should not be subject to withholding on dividend equivalent payments, if any, under the notes. However, it is possible that the notes could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting the underlying Market Measure or the note, and following such occurrence the notes could be treated as subject to withholding on dividend equivalent payments. Non-U.S. holders that enter, or have entered, into other transactions in respect of the underlying Market Measure or the notes should consult their tax advisors as to the application of the dividend equivalent withholding tax in the context of the notes and their other transactions. If any payments are treated as dividend equivalents subject to withholding,

we (or the applicable paying agent) would be entitled to withhold taxes without being required to pay any additional amounts with respect to amounts so withheld.

As discussed above, alternative characterizations of the notes for U.S. federal income tax purposes are possible. Should an alternative characterization, by reason of change or clarification of the law, by regulation or otherwise, cause payments as to the notes to become subject to withholding tax in addition to the withholding tax described above, tax will be withheld at the applicable statutory rate. Prospective non-U.S. holders of the notes should consult their own tax advisors in this regard.

**U.S. Federal Estate Tax.** Under current law, while the matter is not entirely clear, individual non-U.S. holders, and entities whose property 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, the notes may be treated as U.S. situs property, subject to U.S. federal estate tax. These individuals and entities should consult their own tax advisors regarding the U.S. federal estate tax consequences of investing in the notes.

#### Backup Withholding and Information Reporting

Payments made with respect to the notes and proceeds from the sale of the notes may be subject to a backup withholding tax unless, in general, the holder complies with certain procedures or is an exempt recipient. Any amounts so withheld generally will be refunded by the IRS or allowed as a credit against the holder's U.S. federal income tax, provided the holder makes a timely filing of an appropriate tax return or refund claim.

Reports will be made to the IRS and to holders that are not excepted from the reporting requirements.

#### Foreign Account Tax Compliance Act

The Foreign Account Tax Compliance Act ("FATCA") will impose a 30% U.S. withholding tax on certain U.S. source payments, including interest (and OID), dividends, other fixed or determinable annual or periodical gain, profits, and income, and on the gross proceeds from a disposition of property of a type which can produce U.S. source interest or dividends ("Withholdable Payments"), if paid to a foreign financial institution (including amounts paid to a foreign financial institution on behalf of a holder), unless such institution enters into an agreement with Treasury to collect and provide to Treasury certain information regarding U.S. financial account holders, including certain account holders that are foreign entities with U.S. owners, with such institution or otherwise complies with FATCA. In addition, the notes may constitute a "financial account" for these purposes and thus, be subject to information reporting requirements pursuant to FATCA. FATCA also generally imposes a withholding tax of 30% on Withholdable Payments made to a non-financial foreign entity unless such entity provides the withholding agent with a certification that it does not have any substantial U.S. owners or a certification identifying the direct and indirect substantial U.S. owners of the entity. Under certain circumstances, a holder may be eligible for refunds or credits of such taxes. The U.S. Treasury Department and the IRS have announced that withholding on payments of gross proceeds from a sale or redemption of the notes will only apply to payments made after December 31, 2018. If we determine withholding is appropriate with respect to the notes, we will withhold tax at the applicable statutory rate, and we will not pay any additional amounts in respect of such withholding. Foreign financial institutions and non-financial

foreign entities located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules. Prospective investors are urged to consult with their own tax advisors regarding the possible implications of FATCA on their investment in the notes.

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## ERISA CONSIDERATIONS

Each fiduciary of a pension, profit-sharing, or other employee benefit plan subject to the Employee Retirement Income Security Act of 1974 (“ERISA”) (a “Plan”), should consider the fiduciary standards of ERISA in the context of the Plan’s particular circumstances before authorizing an investment in the notes. Accordingly, 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 Plan.

In addition, we, the agents, and certain of our respective subsidiaries and affiliates may be each considered a party in interest within the meaning of ERISA, or a disqualified person (within the meaning of the Code), with respect to many Plans, as well as many individual retirement accounts and Keogh plans (also “Plans”). Prohibited transactions within the meaning of ERISA or the Code would likely arise, for example, if the notes are acquired by or with the assets of a Plan with respect to which we or any of our affiliates is a party in interest, unless the notes are acquired under an exemption from the prohibited transaction rules. A violation of these prohibited transaction rules could result in an excise tax or other liabilities under ERISA and/or Section 4975 of the Code for such persons, unless exemptive relief is available under an applicable statutory or administrative exemption.

Under ERISA and various prohibited transaction class exemptions (“PTCEs”) issued by the U.S. Department of Labor, exemptive relief may be available for direct or indirect prohibited transactions resulting from the purchase, holding, or disposition of the notes. Those 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), PTCE 84-14 (for certain transactions determined by independent qualified asset managers), and the exemption under Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code for certain arm’s-length transactions with a person that is a party in interest solely by reason of providing services to Plans or being an affiliate of such a service provider (the “Service Provider Exemption”).

Because we may be considered a party in interest with respect to many Plans, the notes may not be purchased, held, or disposed of 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 purchase, holding, or disposition is eligible for exemptive relief, including relief available under PTCE 96-23, 95-60, 91-38, 90-1, or 84-14 or the Service Provider Exemption, or such purchase, holding, or disposition is otherwise not prohibited. Any purchaser, including any fiduciary purchasing on behalf of a Plan, transferee or holder of the notes will be deemed to have represented, in its corporate and its fiduciary capacity, by its purchase and holding of the notes that either (a) it is not a Plan or a Plan Asset Entity and is not purchasing such notes on behalf of or with plan assets of any Plan or any plan subject to similar laws or (b) its purchase, holding, and disposition are eligible for exemptive relief or such purchase, holding, and disposition are not prohibited by ERISA or Section 4975 of the Code or similar laws.

Further, any person acquiring or holding the notes on behalf of any plan or with any plan assets shall be deemed to represent on behalf of itself and such plan that (x) the plan is paying no more than, and is receiving no less than, adequate consideration within the meaning of Section 408(b)(17) of ERISA in connection with the transaction or any redemption of the notes, (y) none of us, MLPF&S, or any other agent directly or indirectly exercises any discretionary authority or control or renders investment advice or otherwise acts in a fiduciary capacity with respect to the assets of the plan within the meaning of ERISA and (z) in making the foregoing representations and warranties, such person has applied sound business

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principles in determining whether fair market value will be paid, and has made such determination acting in good faith.

The fiduciary investment considerations summarized above generally apply to employee benefit plans maintained by private-sector employers and to individual retirement accounts and other arrangements subject to Section 4975 of the Code, but generally do not apply to governmental plans (as defined in Section 3(32) of ERISA), certain church plans (as defined in Section 3(33) of ERISA), and foreign plans (as described in Section 4(b)(4) of ERISA). However, these other plans may be subject to similar provisions under applicable federal, state, local, foreign, or other regulations, rules, or laws (“similar laws”). The fiduciaries of plans subject to similar laws should also consider the foregoing issues in general terms as well as any further issues arising under the applicable similar laws.

In addition, any purchaser, that is a Plan or a Plan Asset Entity or that is acquiring the notes on behalf of a Plan or a Plan Asset Entity, including any fiduciary purchasing on behalf of a Plan or Plan Asset entity, will be deemed to have represented, in its corporate and its fiduciary capacity, by its purchase and holding of the notes that (a) none of us, MLPF&S, or any of our respective affiliates is a “fiduciary” (under Section 3(21) of ERISA, or under any final or proposed regulations thereunder, or with respect to a governmental, church, or foreign plan under any similar laws) with respect to the acquisition, holding or disposition of the notes, or as a result of any exercise by us or our affiliates of any rights in connection with the notes, (b) no advice provided by us or any of our affiliates has formed a primary basis for any investment decision by or on behalf of such purchaser in connection with the notes and the transactions contemplated with respect to the notes, and (c) such purchaser recognizes and agrees that any communication from us or any of our affiliates to the purchaser with respect to the notes is not intended by us or any of our affiliates to be impartial investment advice and is rendered in its capacity as a seller of such notes and not a fiduciary to such purchaser. Purchasers of the notes have exclusive responsibility for ensuring that their purchase, holding, and disposition of the notes do not violate the prohibited transaction rules of ERISA or the Code or any similar regulations applicable to governmental or church plans, as described above.

This discussion is a general summary of some of the rules which apply to benefit plans and their related investment vehicles. This summary does not include all of the investment considerations relevant to Plans and other benefit plan investors such as governmental, church, and foreign plans and should not be construed as legal advice or a legal opinion. Due to the complexity of these rules and the penalties that may be imposed upon persons involved in non-exempt prohibited transactions, it is particularly important that fiduciaries or other persons considering purchasing the notes on behalf of or with “plan assets” of any Plan or other benefit plan investor consult with their legal counsel prior to directing any such purchase.