

ROYAL BANK OF CANADA  
Form 424B2  
July 28, 2017

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PRICING SUPPLEMENT

Filed Pursuant to Rule 424(b)(2)

Registration Statement No. 333-208507

Dated July 26, 2017

Royal Bank of Canada Capped GEARS

\$466,000 Securities Linked to the Financial Select Sector SPDR® Fund due on September 28, 2018

Investment Description

Capped GEARS (each, a “Security” and collectively, the “Securities”) are unconditional, unsecured and unsubordinated debt securities issued by Royal Bank of Canada with returns linked to the performance of the Financial Select Sector SPDR® Fund (the “Underlying”). If the Underlying Return (as defined below) is positive, we will repay the principal amount at maturity plus pay a return equal to 3 (the “Upside Gearing”) times the Underlying Return, up to the Maximum Gain. If the Underlying Return is negative, we will pay less than the principal amount at maturity and you will lose 1% of the principal amount of your Securities for every 1% decline in the price of the Underlying, up to a loss of 100% of your investment. Investing in the Securities involves significant risks. The Securities do not pay dividends or interest. You may lose some or all of the principal amount. Any payment on the Securities, including any repayment of principal, is subject to our creditworthiness. If we were to default on our payment obligations, you may not receive any amounts owed to you under the Securities and you could lose your entire investment. The Securities will not be listed on any securities exchange.

Features Key Dates

Enhanced Growth Potential Up to the Maximum Gain — At maturity, if the Underlying Return is positive, we will pay you the principal amount plus a return equal to the Upside Gearing times the Underlying Return up to the Maximum Gain.

Full Downside Market Exposure — If the Underlying Return is zero, we will pay the full principal amount at maturity. However, if the Underlying Return is negative, investors will be exposed to the full downside performance of the Underlying and we will pay less than the full principal amount, resulting in a loss of the principal amount that is proportionate to the percentage decline in the Underlying. Accordingly, you may lose some or all of the principal amount of the Securities. Any payment on the Securities, including any repayment of principal, is subject to our creditworthiness.

Trade Date July 26, 2017

Settlement Date July 31, 2017

Final Valuation Date<sup>1</sup> September 25, 2018

Maturity Date<sup>1</sup> September 28, 2018

<sup>1</sup> Subject to postponement in the event of a market disruption event and as described under “General Terms of the Securities — Payment at Maturity” in the accompanying product prospectus supplement no. UBS-EQUITY-1.

NOTICE TO INVESTORS: THE SECURITIES ARE SIGNIFICANTLY RISKIER THAN CONVENTIONAL DEBT INSTRUMENTS. THE ISSUER IS NOT NECESSARILY OBLIGATED TO REPAY THE FULL PRINCIPAL AMOUNT OF THE SECURITIES AT MATURITY, AND THE SECURITIES HAVE FULL DOWNSIDE MARKET RISK SIMILAR TO THE UNDERLYING. THIS MARKET RISK IS IN ADDITION TO THE CREDIT RISK INHERENT IN PURCHASING OUR DEBT OBLIGATION. YOU SHOULD NOT PURCHASE THE SECURITIES IF YOU DO NOT UNDERSTAND OR ARE NOT COMFORTABLE WITH THE SIGNIFICANT RISKS INVOLVED IN INVESTING IN THE SECURITIES. YOU SHOULD CAREFULLY CONSIDER THE RISKS DESCRIBED UNDER “KEY RISKS” BEGINNING ON PAGE 5 OF THIS PRICING SUPPLEMENT AND UNDER “RISK FACTORS” BEGINNING ON PAGE PS-4 OF THE ACCOMPANYING PRODUCT PROSPECTUS SUPPLEMENT NO. UBS-EQUITY-1 BEFORE PURCHASING ANY SECURITIES. EVENTS RELATING TO ANY OF THOSE RISKS, OR OTHER RISKS AND

UNCERTAINTIES, COULD ADVERSELY AFFECT THE MARKET VALUE OF, AND THE RETURN ON, YOUR SECURITIES. YOU COULD LOSE SOME OR ALL OF THE PRINCIPAL AMOUNT OF THE SECURITIES.

Security Offering

We are offering Capped GEARS Linked to the Financial Select Sector SPDR® Fund (“XLF”). The return on the principal amount is subject to, and will not exceed, the predetermined Maximum Gain. The Securities are offered at a minimum investment of 100 Securities at the Price to Public described below.

Underlying	Upside Gearing	Maximum Gain	Initial Underlying Price	CUSIP	ISIN
Financial Select Sector SPDR® Fund (XLF)	3	14.50%	\$25.05	78013F107US	78013F1075

See “Additional Information About Royal Bank of Canada and the Securities” in this pricing supplement. The Securities will have the terms specified in the prospectus dated January 8, 2016, the prospectus supplement dated January 8, 2016, product prospectus supplement no. UBS-EQUITY-1 dated January 4, 2017 and this pricing supplement. Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the Securities or passed upon the accuracy or the adequacy of this pricing supplement or the accompanying prospectus, prospectus supplement and product prospectus supplement no. UBS-EQUITY-1. Any representation to the contrary is a criminal offense.

Offering of the Securities	Price to Public		Fees and Commissions <sup>(1)</sup>		Proceeds to Us	
	Total	Per Security	Total	Per Security	Total	Per Security
Financial Select Sector SPDR® Fund (XLF)	\$466,000.00	\$10.00	\$9,320.00	\$0.20	\$456,680.00	\$9.80

(1) UBS Financial Services Inc., which we refer to as UBS, will receive a commission of \$0.20 per \$10 principal amount of the Securities. See “Supplemental Plan of Distribution (Conflicts of Interest)” on page 13 of this pricing supplement.

The initial estimated value of the Securities as of the date of this document is \$9.7946 per \$10 in principal amount, which is less than the price to public. The actual value of the Securities at any time will reflect many factors, cannot be predicted with accuracy, and may be less than this amount. We describe our determination of the initial estimated value under “Key Risks” beginning on page 5, “Supplemental Plan of Distribution (Conflicts of Interest)” on page 13 and “Structuring the Securities” on page 13 of this pricing supplement.

The Securities will not constitute deposits insured under the Canada Deposit Insurance Corporation Act or by the United States Federal Deposit Insurance Corporation or any other Canadian or United States government agency or instrumentality.

UBS Financial Services Inc. RBC Capital Markets, LLC

Additional Information About Royal Bank of Canada and the Securities

You should read this pricing supplement together with the prospectus dated January 8, 2016, as supplemented by the prospectus supplement dated January 8, 2016, relating to our senior global medium-term notes, Series G, of which these Securities are a part, and the more detailed information contained in product prospectus supplement no. UBS-EQUITY-1 dated January 4, 2017. This pricing supplement, together with the documents listed below, contains the terms of the Securities and supersedes all other prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, fact sheets, brochures or other educational materials of ours. You should carefully consider, among other things, the matters set forth in “Risk Factors” in the accompanying product prospectus supplement no. UBS-EQUITY-1, as the Securities involve risks not associated with conventional debt securities. If the terms discussed in this pricing supplement differ from those discussed in the product prospectus supplement no. UBS-EQUITY-1, the prospectus supplement, or the prospectus, the terms discussed herein will control. You may access these on the SEC website at [www.sec.gov](http://www.sec.gov) as follows (or if such address has changed, by reviewing our filing for the relevant date on the SEC website):

“Product prospectus supplement no. UBS-EQUITY-1 dated January 4, 2017:

<https://www.sec.gov/Archives/edgar/data/1000275/000114036117000487/form424b5.htm>

“Prospectus supplement dated January 8, 2016:

<http://www.sec.gov/Archives/edgar/data/1000275/000121465916008811/p14150424b3.htm>

“Prospectus dated January 8, 2016:

<http://www.sec.gov/Archives/edgar/data/1000275/000121465916008810/j18160424b3.htm>

As used in this pricing supplement, “we,” “us” or “our” refers to Royal Bank of Canada.

### Investor Suitability

The Securities may be suitable for you if, among other considerations:

- .. You fully understand the risks inherent in an investment in the Securities, including the risk of loss of your entire initial investment.
- .. You can tolerate the loss of some or all of the principal amount of the Securities and are willing to make an investment that has similar downside market risk as a hypothetical investment in the Underlying.
- .. You believe that the price of the Underlying will appreciate over the term of the Securities and that the appreciation is unlikely to exceed the Maximum Gain.
- .. You understand and accept that your potential return is limited by the Maximum Gain and you are willing to invest in the Securities based on the Maximum Gain indicated on the cover page of this pricing supplement.
- .. You can tolerate fluctuations in the price of the Securities prior to maturity that may be similar to or exceed the downside fluctuations in the price of the Underlying.
- .. You fully understand and accept the risks associated with the Underlying.
- .. You do not seek current income from your investment and are willing to forgo dividends paid on the Underlying.
- .. You are willing to hold the Securities to maturity and accept that there may be little or no secondary market for the Securities.
- .. You are willing to assume our credit risk for all payments under the Securities, and understand that if we default on our obligations, you may not receive any amounts due to you, including any repayment of principal.

The Securities may not be suitable for you if, among other considerations:

- .. You do not fully understand the risks inherent in an investment in the Securities, including the risk of loss of your entire initial investment.
- .. You require an investment designed to provide a full return of principal at maturity.
- .. You cannot tolerate the loss of some or all of the principal amount of the Securities, and you are not willing to make an investment that has similar downside market risk as a hypothetical investment in the Underlying.
- .. You believe that the price of the Underlying will decline over the term of the Securities, or you believe the price of the Underlying will appreciate over the term of the Securities by a percentage that exceeds the Maximum Gain.
- .. You seek an investment that has unlimited return potential without a cap on appreciation.
- .. You are unwilling to invest in the Securities based on the Maximum Gain indicated on the cover page of this pricing supplement.
- .. You cannot tolerate fluctuations in the price of the Securities prior to maturity that may be similar to or exceed the downside fluctuations in the price of the Underlying.
- .. You do not fully understand or accept the risks associated with the Underlying.
- .. You seek current income from this investment or prefer to receive the dividends paid on the Underlying.
- .. You are unable or unwilling to hold the Securities to maturity or you seek an investment for which there will be an active secondary market.
- .. You are not willing to assume our credit risk for all payments under the Securities, including any repayment of principal.

The suitability considerations identified above are not exhaustive. Whether or not the Securities are a suitable investment for you will depend on your individual circumstances, and you should reach an investment decision only after you and your investment, legal, tax, accounting, and other advisers have carefully considered the suitability of an investment in the Securities in light of your particular circumstances. You should also review carefully the “Key Risks” beginning on page 5 of this pricing supplement and “Risk Factors” beginning on page PS-4 of the accompanying product prospectus supplement no. UBS-EQUITY-1 for risks related to an investment in the Securities. In addition, you should review carefully “The Financial Select Sector SPD<sup>®</sup> Fund” beginning on page 10 of this pricing supplement for more information about the Underlying.

Final Terms of the Securities<sup>1</sup>

Issuer: Royal Bank of Canada  
 Issue Price: \$10 per Security (subject to a minimum purchase of 100 Securities).  
 Principal Amount: \$10 per Security.  
 Term: Approximately 14 months  
 Underlying: Financial Select Sector SPDR® Fund  
 Upside Gearing: 3  
 Maximum Gain: 14.50%  
 Payment at Maturity (per \$10 Security): If the Underlying Return is positive or zero, we will pay you: \$10 + (\$10 x the lesser of (i) Upside Gearing x Underlying Return and (ii) Maximum Gain)  
 If the Underlying Return is negative, we will pay you: \$10 + (\$10 x Underlying Return)  
 In this scenario, you will lose some or all of the principal amount of the Securities, in an amount proportionate to the negative Underlying Return.  
 Underlying Return: Final Underlying Price – Initial Underlying Price  
 Initial Underlying Price: Initial Underlying Price  
 Initial Underlying Price: \$25.05, which was the Closing Price of the Underlying on the Trade Date.  
 Final Underlying Price: The Closing Price of the Underlying on the Final Valuation Date.

Investment Timeline

Trade Date: The Maximum Gain was set. The Initial Underlying Price was determined.

The Final Underlying Price and Underlying Return are determined.  
 If the Underlying Return is positive or zero, we will pay you a cash payment per \$10 Security that provides you with your principal amount plus a return equal to the Underlying Return multiplied by the Upside Gearing, subject to the Maximum Gain. Your payment at maturity per \$10 Security will be equal to:  
 Maturity Date: \$10 + (\$10 x the lesser of (i) Upside Gearing x Underlying Return and (ii) Maximum Gain)  
 If the Underlying Return is negative, we will pay you a cash payment that is less than the principal amount of \$10.00 per Security, resulting in a loss of principal that is proportionate to the percentage decline in the Underlying, and equal to:  
 \$10 + (\$10 x Underlying Return)  
 In this scenario, you will lose some or all of the principal amount of the Securities, in an amount proportionate to the negative Underlying Return.

INVESTING IN THE SECURITIES INVOLVES SIGNIFICANT RISKS. YOU MAY LOSE SOME OR ALL OF YOUR PRINCIPAL AMOUNT. ANY PAYMENT ON THE SECURITIES, INCLUDING ANY REPAYMENT OF PRINCIPAL, IS SUBJECT TO OUR CREDITWORTHINESS. IF WE WERE TO DEFAULT ON OUR PAYMENT OBLIGATIONS, YOU MAY NOT RECEIVE ANY AMOUNTS OWED TO YOU UNDER THE SECURITIES AND YOU COULD LOSE YOUR ENTIRE INVESTMENT.

<sup>1</sup> Terms used in this pricing supplement, but not defined herein, shall have the meanings ascribed to them in the product prospectus supplement.

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## Key Risks

An investment in the Securities involves significant risks. Investing in the Securities is not equivalent to investing directly in the Underlying. These risks are explained in more detail in the "Risk Factors" section of the accompanying product prospectus supplement no. UBS-EQUITY-1. Investing in the Securities is not equivalent to investing directly in the Underlying or the securities held by the Underlying. We also urge you to consult your investment, legal, tax, accounting and other advisors before investing in the Securities.

### Risks Relating to the Securities Generally

**Your Investment in the Securities May Result in a Loss of Principal:** The Securities differ from ordinary debt securities in that we are not necessarily obligated to repay the full principal amount of the Securities at maturity. The return on the Securities at maturity is linked to the performance of the Underlying and will depend on whether, and the extent to which, the Underlying Return is positive or negative. If the Final Underlying Price is less than the Initial Underlying Price, you will be fully exposed to any negative Underlying Return and we will pay you less than your principal amount at maturity, resulting in a loss of principal of your Securities that is proportionate to the percentage decline in the Underlying. Accordingly, you could lose the entire principal amount of the Securities.

**The Upside Gearing Applies Only if You Hold the Securities to Maturity:** The application of the Upside Gearing only applies at maturity. If you are able to sell your Securities prior to maturity in the secondary market, the price you receive will likely not reflect the full effect of the Upside Gearing and the return you realize may be less than the Upside Gearing times the return of the Underlying at the time of sale, even if that return is positive and does not exceed the Maximum Gain.

**The Appreciation Potential of the Securities Is Limited by the Maximum Gain:** If the Underlying Return is positive, we will pay you \$10 per Security at maturity plus an additional return that will not exceed the Maximum Gain, regardless of the appreciation in the Underlying, which may be significant. Therefore, you will not benefit from any appreciation of the Underlying in excess of an amount that, when multiplied by the Upside Gearing, exceeds the Maximum Gain and your return on the Securities may be less than your return would be on a hypothetical direct investment in the Underlying.

**No Interest Payments:** We will not pay any interest with respect to the Securities.

**An Investment in the Securities Is Subject to Our Credit Risk:** The Securities are unsubordinated, unsecured debt obligations of the issuer, Royal Bank of Canada, and are not, either directly or indirectly, an obligation of any third party. Any payment to be made on the Securities, including any repayment of principal at maturity, depends on our ability to satisfy our obligations as they come due. As a result, our actual and perceived creditworthiness may affect the market value of the Securities and, in the event we were to default on our obligations, you may not receive any amounts owed to you under the terms of the Securities and you could lose your entire initial investment.

**Your Return on the Securities May Be Lower than the Return on a Conventional Debt Security of Comparable Maturity:** The return that you will receive on the Securities, which could be negative, may be less than the return you could earn on other investments. Even if your return is positive, your return may be less than the return you could earn if you bought a conventional senior interest bearing debt security of ours with the same maturity date or if you invested directly in the Underlying. Your investment may not reflect the full opportunity cost to you when you take into account factors that affect the time value of money.

**The Initial Estimated Value of the Securities Is Less than the Price to the Public:** The initial estimated value that is set forth on the cover page of this document, which is less than the public offering price you pay for the Securities, does not represent a minimum price at which we, RBCCM or any of our other affiliates would be willing to purchase the Securities in any secondary market (if any exists) at any time. If you attempt to sell the Securities prior to maturity, their market value may be lower than the price you paid for them and the initial estimated value. This is due to, among other things, changes in the price of the Underlying, the borrowing rate we pay to issue securities of this kind, and the inclusion in the price to public of the underwriting discount, and our estimated profit and the costs relating to our hedging of the Securities. These factors, together with various credit, market and economic factors over the term of the Securities, are expected to reduce the price at which you may be able to sell the Securities in any secondary market and will affect the value of the Securities in complex and unpredictable ways. Assuming no change in market conditions or any other relevant factors, the price, if any, at which you may be able to sell your Securities prior to maturity may be less than the price to public, as any such sale price would not be expected to include the

underwriting discount and our estimated profit and the costs relating to our hedging of the Securities. In addition, any price at which you may sell the Securities is likely to reflect customary bid-ask spreads for similar trades. In addition to bid-ask spreads, the value of the Securities determined for any secondary market price is expected to be based on the secondary market rate rather than the internal borrowing rate used to price the Securities and determine the initial estimated value. As a result, the secondary market price will be less than if the internal borrowing rate was used. The Securities are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your Securities to maturity.

**Our Initial Estimated Value of the Securities Is an Estimate Only, Calculated as of the Time the Terms of the Securities Were Set:** The initial estimated value of the Securities is based on the value of our obligation to make the payments on the Securities, together with the mid-market value of the derivative embedded in the terms of the Securities. See “Structuring the Securities” below. Our estimate is based on a variety of assumptions, including our credit spreads, expectations as to dividends, interest rates and volatility, and the expected term of the Securities.

These assumptions are based on certain forecasts about future events, which may prove to be incorrect. Other entities may value the Securities or similar securities at a price that is significantly different than we do.

The value of the Securities at any time after the Trade Date will vary based on many factors, including changes in market conditions, and cannot be predicted with accuracy. As a result, the actual value you would receive if you sold the Securities in any secondary market, if any, should be expected to differ materially from the initial estimated value of your Securities and the amount that will be paid at maturity.

**Owning the Securities Is Not the Same as Owning the Underlying or the Stocks Comprising the Underlying’s**

**Underlying Index:** The return on your Securities may not reflect the return you would realize if you actually owned the Underlying or stocks included in the Underlying’s underlying index. As a holder of the Securities, you will not have voting rights or rights to receive dividends or other distributions or other rights that holders of the Underlying or these stocks would have, and any such dividends will not be incorporated in the determination of the Underlying Return.

**The Policies of the Underlying’s Investment Adviser Could Affect the Amount Payable on the Securities and Their**

**Market Value:** The policies of the Underlying’s investment adviser concerning the management of the Underlying, additions, deletions or substitutions of the securities



held by the Underlying could affect the market price of shares of the Underlying and, therefore, the amount payable on the Securities on the maturity date and the market value of the Securities before that date. The amount payable on the Securities and their market value could also be affected if the Underlying investment adviser changes these policies, for example, by changing the manner in which it manages the Underlying, or if the Underlying investment adviser discontinues or suspends maintenance of the Underlying, in which case it may become difficult to determine the market value of the Securities. The Underlying's investment adviser has no connection to the offering of the Securities and has no obligations to you as an investor in the Securities in making its decisions regarding the Underlying.

**Historical Prices of the Underlying Should Not Be Taken as an Indication of Its Future Prices During the Term of the Securities:** The trading prices of the Underlying will determine the value of the Securities at any given time.

However, it is impossible to predict whether the price of the Underlying will rise or fall, and trading prices of the common stocks held by the Underlying will be influenced by complex and interrelated political, economic, financial and other factors that can affect the issuers of those stocks, and therefore, the price of the Underlying.

**The Underlying and its Underlying Index Are Different:** The performance of the Underlying may not exactly replicate the performance of the underlying index, because the Underlying will reflect transaction costs and fees that are not included in the calculation of the underlying index. It is also possible that the performance of the Underlying may not fully replicate or may in certain circumstances diverge significantly from the performance of the underlying index due to the temporary unavailability of certain securities in the secondary market, the performance of any derivative instruments contained in the Underlying or due to other circumstances. The Underlying may use futures contracts, options, swap agreements, currency forwards and repurchase agreements in seeking performance that corresponds to the underlying index and in managing cash flows.

During periods of market volatility, securities underlying the Underlying may be unavailable in the secondary market, market participants may be unable to calculate accurately the net asset value per share of the Underlying and the liquidity of the Underlying may be adversely affected. This kind of market volatility may also disrupt the ability of market participants to create and redeem shares of the Underlying. Further, market volatility may adversely affect, sometimes materially, the prices at which market participants are willing to buy and sell shares of the Underlying. As a result, under these circumstances, the market value of shares of the Underlying may vary substantially from the net asset value per share of the Underlying. For all of the foregoing reasons, the performance of the Underlying may not correlate with the performance of its underlying index as well as the net asset value per share of the Underlying, which could materially and adversely affect the value of the Securities in the secondary market and/or reduce your payment at maturity.

**Management Risk:** The Underlying is not managed according to traditional methods of “active” investment management, which involve the buying and selling of securities based on economic, financial and market analysis and investment judgment. Instead, the Underlying, utilizing a “passive” or indexing investment approach, attempts to approximate the investment performance of its underlying index by investing in a portfolio of securities that generally replicate the underlying index. Therefore, unless a specific security is removed from the underlying index, the Underlying generally would not sell a security because the security’s issuer was in financial trouble. In addition, the Underlying is subject to the risk that the investment strategy of the Underlying’s investment advisor may not produce the intended results.

**The Securities Composing the Underlying Index Are Concentrated in One Sector:** All of the securities included in the Underlying Index are issued by companies in the financial services industry. As a result, the securities that will determine the performance of the Underlying and the value of the Securities are concentrated in one sector. Although an investment in the Securities will not give holders any ownership or other direct interests in the securities composing the Underlying Index, the return on an investment in the Securities will be subject to certain risks associated with a direct equity investment in companies in the market sector. Accordingly, by investing in the Securities, you will not benefit from the diversification which could result from an investment linked to companies that operate in multiple sectors.

**There Are Risks Associated With the Financial Services Industry:** The Underlying invests in financial services companies, which are subject to extensive governmental regulation that may limit both the amounts and types of loans and other financial commitments they can make and the interest rates and fees they can charge. Market or economic factors impacting financial services companies and companies that rely heavily on the financial services

industry could have a major effect on the value of the Underlying's investments. Profitability is largely dependent on the availability and cost of capital, and can fluctuate significantly when interest rates change or due to increased competition. In addition, adverse conditions in the financial industry during the past several years generally has caused an adverse impact in a broad range of markets, including U.S. and international credit and interbank money markets generally, thereby affecting a wide range of financial institutions and markets. Events during the past several years in the financial sector have resulted, and may continue to result, in an unusually high degree of volatility in the financial markets, both domestic and foreign, and caused certain financial services companies to incur large losses. Numerous financial services companies have experienced substantial declines in the valuations of their assets, taken action to raise capital (such as the issuance of debt or equity securities), or even ceased operations. These actions have caused the securities of many financial services companies to experience a dramatic decline in value. Credit losses resulting from financial difficulties of borrowers and financial losses associated with investment activities can negatively impact the sector. As a result, the Underlying will be more volatile than an exchange-traded fund whose sector(s) is more diversified.

**Lack of Liquidity:** The Securities will not be listed on any securities exchange. RBCCM intends to offer to purchase the Securities in the secondary market, but is not required to do so. Even if there is a secondary market, it may not provide enough liquidity to allow you to trade or sell the Securities easily. Because other dealers are not likely to make a secondary market for the Securities, the price at which you may be able to trade your Securities is likely to depend on the price, if any, at which RBCCM is willing to buy the Securities.

**Potential Conflicts:** We and our affiliates play a variety of roles in connection with the issuance of the Securities, including hedging our obligations under the Securities. In performing these duties, the economic interests of the calculation agent and other affiliates of ours are potentially adverse to your interests as an investor in the Securities.

**Potentially Inconsistent Research, Opinions or Recommendations by RBCCM, UBS or Their Affiliates:** RBCCM, UBS, and our respective affiliates may publish research, express opinions or provide recommendations that are inconsistent with investing in or holding the Securities, and which may be revised at any time. Any such research, opinions or recommendations could affect the price of the Underlying, and therefore, the market value of the Securities.

**Uncertain Tax Treatment:** Significant aspects of the tax treatment of an investment in the Securities are uncertain. You should consult your tax adviser about your tax situation.

**Potential Royal Bank of Canada and UBS Impact on Price:** Trading or other transactions by Royal Bank of Canada, UBS and our respective affiliates in the Underlying or the securities included in the Underlying's underlying index, or in futures, options, exchange-traded funds or other derivative

products on the Underlying or those securities, may adversely affect the market value of the Underlying and, therefore, the market value of the Securities.

The Probability That the Underlying Will Fall Below the Initial Underlying Price on the Final Valuation Date Will Depend on the Volatility of the Underlying: "Volatility" refers to the frequency and magnitude of changes in the price of the Underlying. Greater expected volatility with respect to the Underlying reflects a higher expectation as of the Trade Date that the Underlying could close below its Initial Underlying Price on the Final Valuation Date, resulting in the loss of some or all of your investment. However, an Underlying's volatility can change significantly over the term of the Securities. The price of the Underlying could fall sharply, which could result in a significant loss of principal.

The Terms of the Securities at Issuance Were Influenced and Their Market Value Prior to Maturity Will Be Influenced by Many Unpredictable Factors: Many economic and market factors influenced the terms of the Securities at issuance and will influence their value prior to maturity. These factors are similar in some ways to those that could affect the value of a combination of instruments that might be used to replicate the payments on the Securities, including a combination of a bond with one or more options or other derivative instruments. For the market value of the Securities, we expect that, generally, the price of the Underlying on any day will affect the value of the Securities more than any other single factor. However, you should not expect the value of the Securities in the secondary market to vary in proportion to changes in the price of the Underlying. The value of the Securities will be affected by a number of other factors that may either offset or magnify each other, including:

- the price of the Underlying;
- the actual and expected volatility of the price of the Underlying;
  - the time remaining to maturity of the Securities;
- the dividend rates on the securities held by the Underlying;
- interest and yield rates in the market generally, as well as in each of the markets of the securities held by the Underlying;
- a variety of economic, financial, political, regulatory or judicial events;
- the occurrence of certain events with respect to the Underlying that may or may not require an adjustment to the terms of the Securities; and
- our creditworthiness, including actual or anticipated downgrades in our credit ratings.

Some or all of these factors influenced the terms of the Securities at issuance and will influence the price you will receive if you choose to sell the Securities prior to maturity. The impact of any of the factors set forth above may enhance or offset some or all of any change resulting from another factor or factors. You may have to sell the Securities at a substantial discount from the principal amount if, for example, the price of the Underlying is at, below or not sufficiently above, its Initial Underlying Price.

The Anti-Dilution Protection for the Underlying Is Limited: The calculation agent will make adjustments to the Initial Underlying Price and the Final Underlying Price for certain events affecting the shares of the Underlying. However, the calculation agent will not be required to make an adjustment in response to all events that could affect the Underlying. If an event occurs that does not require the calculation agent to make an adjustment, the value of the Securities and the Payment at Maturity may be materially and adversely affected.

## Hypothetical Examples and Return Table at Maturity

Hypothetical terms only. Actual terms may vary. See the cover page for actual offering terms.

The following table and hypothetical examples below illustrate the payment at maturity per \$10.00 Security for a hypothetical range of Underlying Returns from -100.00% to +100.00% and assume a hypothetical Initial Underlying Price of \$100.00, and reflect the Upside Gearing of 3 and the Maximum Gain of 14.50%. The actual Initial Underlying Price is set forth in “Final Terms of the Securities” and on the cover page of this pricing supplement. The hypothetical Payment at Maturity examples set forth below are for illustrative purposes only and may not be the actual returns applicable to a purchaser of the Securities. The actual payment at maturity will be determined based on the Final Underlying Price on the Final Valuation Date. You should consider carefully whether the Securities are suitable to your investment goals. The numbers appearing in the table below have been rounded for ease of analysis.

Example 1 – On the Final Valuation Date, the Underlying closes 2% above the Initial Underlying Price. Because the Underlying Return is positive, we will pay you an amount based upon the lesser of the Underlying Return times the Upside Gearing and the Maximum Gain. Since the Underlying Return of 2% times the Upside Gearing is less than the Maximum Gain, we will pay you at maturity a cash payment of \$10.60 per \$10 principal amount Security, calculated as follows:

$$\$10 + (\$10 \times 2\% \times 3) = \$10 + \$0.60 = \$10.60$$

Example 2 – On the Final Valuation Date, the Underlying closes 40% above the Initial Underlying Price. Because the Underlying Return is positive, we will pay you an amount based upon the lesser of the Underlying Return times the Upside Gearing and the Maximum Gain. Since the Underlying Return of 40% times the Upside Gearing is greater than the Maximum Gain, we will pay you at maturity a cash payment of \$11.45 per \$10 principal amount Security, calculated as follows:

$$\$10 + (\$10 \times 14.50\%) = \$10 + \$1.45 = \$11.45$$

Example 3 – On the Final Valuation Date, the Underlying closes 40% below the Initial Underlying Price. Because the Underlying Return is -40%, which is negative, we will pay you at maturity a cash payment of \$6.00 per \$10 principal amount Security (a 40% loss on the principal amount), calculated as follows:

$$\$10 + (\$10 \times -40\%) = \$10 - \$4.00 = \$6.00$$

Hypothetical Final Underlying Price (\$)	Hypothetical Underlying Return <sup>1</sup>	Hypothetical Payment at Maturity (\$)	Hypothetical Total Return on Securities <sup>2</sup>
\$200.00	100.00%	\$11.45	14.50%
\$175.00	75.00%	\$11.45	14.50%
\$150.00	50.00%	\$11.45	14.50%
\$140.00	40.00%	\$11.45	14.50%
\$130.00	30.00%	\$11.45	14.50%
\$120.00	20.00%	\$11.45	14.50%
\$110.00	10.00%	\$11.45	14.50%
\$104.83	4.83%	\$11.45	14.50%
\$104.00	4.00%	\$11.20	12.00%
\$102.00	2.00%	\$10.60	6.00%
\$100.00	0.00%	\$10.00	0.00%
\$90.00	-10.00%	\$9.00	-10.00%
\$80.00	-20.00%	\$8.00	-20.00%
\$75.00	-25.00%	\$7.50	-25.00%
\$70.00	-30.00%	\$7.00	-30.00%
\$60.00	-40.00%	\$6.00	-40.00%
\$50.00	-50.00%	\$5.00	-50.00%
\$25.00	-75.00%	\$2.50	-75.00%
\$0.00	-100.00%	\$0.00	-100.00%

(1) The Underlying Return excludes any cash dividend payments.

(2) The “total return” is the number, expressed as a percentage, that results from comparing the payment at maturity per \$10 principal amount Security to the purchase price of \$10 per Security.

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## What Are the Tax Consequences of the Securities?

### U.S. Federal Income Tax Consequences

Set forth below, together with the discussion of U.S. federal income tax in the accompanying product prospectus supplement, prospectus supplement, and prospectus, is a summary of the material U.S. federal income tax consequences relating to an investment in the Securities. The following summary supplements and to the extent inconsistent with supersedes the discussion under the section entitled "Supplemental Discussion of U.S. Federal Income Tax Consequences" in the accompanying product prospectus supplement, the section entitled "Certain Income Tax Consequences" in the accompanying prospectus supplement, and the section entitled "Tax Consequences" in the accompanying prospectus, which you should carefully review prior to investing in the Securities.

In the opinion of our counsel, Morrison & Foerster LLP, it would generally be reasonable to treat a security with terms described herein as a pre-paid cash-settled derivative contract in respect of the Underlying for U.S. federal income tax purposes, and the terms of the Securities require a holder and us (in the absence of a change in law or an administrative or judicial ruling to the contrary) to treat the Securities for all tax purposes in accordance with such characterization. If the Securities are so treated, subject to the discussion in the accompanying product prospectus supplement concerning the potential application of the "constructive ownership" rules under Section 1260 of the Code, a holder should generally recognize capital gain or loss upon the sale or maturity of the Securities in an amount equal to the difference between the amount a holder receives at such time and the holder's tax basis in the Securities. Capital gain recognized by an individual U.S. holder is generally taxed at preferential rates where the property is held for more than one year and is generally taxed at ordinary income rates where the property is held for one year or less. The deductibility of capital losses is subject to limitations.

Alternative tax treatments are also possible and the Internal Revenue Service might assert that a treatment other than that described above is more appropriate. In addition, the Internal Revenue Service has released a notice that may affect the taxation of holders of the Securities. According to the notice, the Internal Revenue Service and the Treasury Department are actively considering whether the holder of an instrument such as the Securities should be required to accrue ordinary income on a current basis. It is not possible to determine what guidance they will ultimately issue, if any. It is possible, however, that under such guidance, holders of the Securities will ultimately be required to accrue income currently and this could be applied on a retroactive basis. The Internal Revenue Service and the Treasury Department are also considering other relevant issues, including whether additional gain or loss from such instruments should be treated as ordinary or capital and whether the special "constructive ownership rules" of Section 1260 of the Internal Revenue Code might be applied to such instruments. Holders are urged to consult their tax advisors concerning the significance, and the potential impact, of the above considerations.

Individual holders that own "specified foreign financial assets" may be required to include certain information with respect to such assets with their U.S. federal income tax return. You are urged to consult your own tax advisor regarding such requirements with respect to the Securities.

Under Section 871(m) of the Code, a "dividend equivalent" payment is treated as a dividend from sources within the United States. Such payments generally would be subject to a 30% U.S. withholding tax if paid to a non-U.S. holder. Under U.S. Treasury Department regulations, 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, U.S. Treasury Department regulations 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, 2018. Based on our determination that the Securities are not delta-one instruments, non-U.S. holders should not be subject to withholding on dividend equivalent payments, if any, under the Securities. However, it is possible that the Securities could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting the Underlying or the Securities, and following such occurrence the Securities 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 or the Securities should consult their tax advisors as to the application of the dividend equivalent withholding tax in the context of the Securities and their other transactions. If any payments are treated as dividend equivalents subject to withholding, we (or the applicable withholding agent) would be entitled to withhold taxes

without being required to pay any additional amounts with respect to amounts so withheld.

Please see the discussion under the section entitled “Supplemental Discussion of U.S. Federal Income Tax Consequences” in the accompanying product prospectus supplement for a further discussion of the U.S. federal income tax consequences of an investment in the Securities.

#### Canadian Federal Income Tax Consequences

For a discussion of the material Canadian federal income tax consequences relating to an investment in the Securities, please see the section entitled “Tax Consequences—Canadian Taxation” in the accompanying prospectus, which you should carefully review prior to investing in the Securities.

### Information About the Underlying

Included on the following pages is a brief description of the Underlying. This information has been obtained from publicly available sources. Set forth below is a table that provides the quarterly high and low closing prices for the Underlying. We obtained the closing price information set forth below from the Bloomberg Professional® service (“Bloomberg”) without independent verification. You should not take the historical prices of the Underlying as an indication of future performance.

The Underlying is registered under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) and the Investment Company Act of 1940, as amended (the “Investment Company Act”). Companies with securities registered under the Exchange Act and the Investment Company Act are required to file financial and other information specified by the SEC periodically. Information filed by the Underlying with the SEC can be reviewed electronically through a web site maintained by the SEC. The address of the SEC’s web site is <http://www.sec.gov>. Information filed with the SEC by the issuer of the Underlying under the Exchange Act can be located by reference to its SEC Central Index Key number provided below. In addition, information filed with the SEC can be inspected and copied at the Public Reference Section of the SEC, 100 F Street, N.E., Room 1580, Washington, D.C. 20549. Copies of this material can also be obtained from the Public Reference Section, at prescribed rates. Information from outside sources is not incorporated by reference in, and should not be considered part of, this pricing supplement or any accompanying prospectus or prospectus supplement. We have not independently reviewed the accuracy or completeness of the information contained in outside sources.

### Financial Select Sector SPDR® Fund

All disclosures contained in this document regarding the Underlying, including, without limitation, its make up, method of calculation, and changes in its components, have been derived from publicly available sources. The information reflects the policies of, and is subject to change by SSgA Funds Management, Inc. (“SSFM”). SSFM has no obligation to continue to publish or sponsor the Underlying, and may discontinue publication or sponsorship of, the Underlying. Neither we nor RBCCM accepts any responsibility for the calculation, maintenance, publication or sponsorship of the Underlying, or any successor.

### The Financial Select Sector SPDR® Fund

The Underlying is an investment portfolio maintained and managed by SSFM. The Underlying is an exchange traded fund that trades on NYSE Arca under the ticker symbol “XLF.” The Underlying seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the S&P® Financial Select Sector Index (the “Underlying Index”). The Underlying Index measures the performance of the financial sector of the U.S. equity market.

### The Underlying Index

The stocks included in the Underlying Index are selected by Merrill Lynch acting as index sponsor, in consultation with S&P, from the universe of companies represented by the S&P 500® Index. S&P acts as index calculation agent in connection with the calculation and dissemination of each Select Sector Index. Each stock in the S&P 500® Index is allocated to only one Select Sector Index, and the nine Select Sector Indices together comprise all of the companies in the S&P 500® Index.

### Index Maintenance

Each Select Sector Index was developed and is maintained in accordance with the following criteria:

Each of the component stocks in a Select Sector Index (the “SPDR® Component Stocks”) is a constituent company of the S&P 500® Index.

The nine Select Sector Indices together will include all of the companies represented in the S&P 500® Index and each of the stocks in the S&P 500® Index will be allocated to one and only one of the Select Sector Indices.

Each constituent stock of the S&P 500® Index is assigned to a Select Sector Index. Each company’s stock is assigned to a particular Select Sector Index on the basis of that company’s sales and earnings composition and the sensitivity of the company’s stock price and business results to the common factors that affect other companies in each Select Sector Index.

S&P has sole control over the removal of stocks from the S&P 500® Index and the selection of replacement stocks to be added to the S&P 500® Index. However, S&P plays only a consulting role in the Select Sector Indices.



Each Select Sector Index is calculated by S&P using a modified “market capitalization” methodology. This design ensures that each of the component stocks within a Select Sector Index is represented in a proportion consistent with its percentage with respect to the total market capitalization of that Select Sector Index. However, under certain conditions, the number of shares of a component stock within the Select Sector Index may be adjusted to conform to certain Internal Revenue Code requirements.

#### Calculation of the Underlying Index

Each Select Sector Index is calculated using the same methodology utilized by S&P in calculating the S&P 500<sup>®</sup> Index, using a base-weighted aggregate methodology. The daily calculation of each Select Sector Index is computed by dividing the total market value of the companies in the Select Sector Index by a number called the index divisor. SPDR<sup>®</sup> Component Stocks removed from and added to the S&P 500<sup>®</sup> Index will be deleted from and added to the appropriate Select Sector Index on the same schedule used by S&P for additions and deletions from the S&P 500<sup>®</sup> Index insofar as practicable.

## Historical Information

The following table sets forth the quarterly high, low and period-end Closing Prices of the Underlying, as reported by Bloomberg. The historical performance of the Underlying should not be taken as an indication of its future performance. We cannot give you assurance that the performance of the Underlying will result in the return of any of your initial investment.

Quarter Begin	Quarter End	Quarterly Closing High	Quarterly Closing Low	Quarterly Period-End Close
1/1/2008	3/31/2008	\$23.95	\$19.00	\$20.18
4/1/2008	6/30/2008	\$22.47	\$16.40	\$16.40
7/1/2008	9/30/2008	\$18.38	\$13.95	\$16.21
10/1/2008	12/31/2008	\$16.71	\$7.62	\$10.25
1/1/2009	3/31/2009	\$10.30	\$5.03	\$7.15
4/1/2009	6/30/2009	\$10.57	\$7.36	\$9.72
7/1/2009	9/30/2009	\$12.46	\$9.01	\$12.13
10/1/2009	12/31/2009	\$12.76	\$11.38	\$11.68
1/1/2010	3/31/2010	\$13.01	\$11.09	\$12.97
4/1/2010	6/30/2010	\$13.84	\$11.21	\$11.21
7/1/2010	9/30/2010	\$12.25	\$10.91	\$11.65
10/1/2010	12/31/2010	\$13.00	\$11.64	\$12.95
1/1/2011	3/31/2011	\$13.97	\$12.92	\$13.33
4/1/2011	6/30/2011	\$13.56	\$11.94	\$12.45
7/1/2011	9/30/2011	\$12.71	\$9.36	\$9.61
10/1/2011	12/31/2011	\$11.41	\$9.16	\$10.56
1/1/2012	3/31/2012	\$12.97	\$10.80	\$12.81
4/1/2012	6/30/2012	\$12.92	\$10.86	\$11.87
7/1/2012	9/30/2012	\$13.22	\$11.55	\$12.67
10/1/2012	12/31/2012	\$13.55	\$12.31	\$13.32
1/1/2013	3/31/2013	\$15.00	\$13.68	\$14.77
4/1/2013	6/30/2013	\$16.38	\$14.48	\$15.83
7/1/2013	9/30/2013	\$16.95	\$15.76	\$16.18
10/1/2013	12/31/2013	\$17.75	\$15.89	\$17.75
1/1/2014	3/31/2014	\$18.25	\$16.67	\$18.14
4/1/2014	6/30/2014	\$18.60	\$17.28	\$18.47
7/1/2014	9/30/2014	\$19.33	\$17.99	\$18.81
10/1/2014	12/31/2014	\$20.33	\$17.90	\$20.08
1/1/2015	3/31/2015	\$20.08	\$18.68	\$19.58
4/1/2015	6/30/2015	\$20.52	\$19.56	\$19.80
7/1/2015	9/30/2015	\$20.77	\$18.09	\$18.40
10/1/2015	12/31/2015	\$20.16	\$18.41	\$19.31
1/1/2016	3/31/2016	\$19.05	\$15.99	\$18.28
4/1/2016	6/30/2016	\$19.36	\$17.42	\$18.54
7/1/2016	9/30/2016	\$19.95	\$18.17	\$19.30
10/1/2016	12/31/2016	\$23.75	\$19.21	\$23.25
1/1/2017	3/31/2017	\$25.24	\$22.95	\$23.73
4/1/2017	6/30/2017	\$24.69	\$22.90	\$24.67
7/1/2017	7/26/2017*	\$25.22	\$24.80	\$25.05

\* This pricing supplement includes information for the third calendar quarter of 2017 for the period from July 1, 2017 through July 26, 2017. Accordingly, the “Quarterly Closing High,” “Quarterly Closing Low” and “Quarterly Period-End Close” data indicated are for this shortened period only and do not reflect complete data for the third calendar quarter of 2017.

The graph below illustrates the performance of the Underlying from January 1, 2008 to July 26, 2017.

HISTORIC PERFORMANCE IS NOT AN INDICATION OF FUTURE PERFORMANCE.

Source: Bloomberg L.P. We have not independently verified the accuracy or completeness of the information obtained from Bloomberg Financial Markets.

#### Supplemental Plan of Distribution (Conflicts of Interest)

We have agreed to indemnify UBS and RBCCM against liabilities under the Securities Act of 1933, as amended, or to contribute payments that UBS and RBCCM may be required to make relating to these liabilities as described in the prospectus supplement and the prospectus. We have agreed that UBS may sell all or a part of the Securities that it will purchase from us to investors or its affiliates at the price indicated on the cover of this pricing supplement.

UBS may allow a concession not in excess of the underwriting discount set forth on the cover of this pricing supplement to its affiliates for distribution of the Securities.

Subject to regulatory constraints and market conditions, RBCCM intends to offer to purchase the Securities in the secondary market, but it is not required to do so.

We or our affiliates may enter into swap agreements or related hedge transactions with one of our other affiliates or unaffiliated counterparties in connection with the sale of the Securities and RBCCM and/or an affiliate may earn additional income as a result of payments pursuant to the swap or related hedge transactions. See “Use of Proceeds and Hedging” beginning on page PS-13 of the accompanying product prospectus supplement no. UBS-EQUITY-1.

The value of the Securities shown on your account statement may be based on RBCCM’s estimate of the value of the Securities if RBCCM or another of our affiliates were to make a market in the Securities (which it is not obligated to do). That estimate will be based upon the price that RBCCM may pay for the Securities in light of then prevailing market conditions, our creditworthiness and transaction costs. For a period of approximately eight months after the issue date of the Securities, the value of the Securities that may be shown on your account statement may be higher than RBCCM’s estimated value of the Securities at that time. This is because the estimated value of the Securities will not include the underwriting discount and our hedging costs and profits; however, the value of the Securities shown on your account statement during that period may be a higher amount, reflecting the addition of the underwriting discount and our estimated costs and profits from hedging the Securities. Any such excess is expected to decrease over time until the end of this period. After this period, if RBCCM repurchases your Securities, it expects to do so at prices that reflect their estimated value. This period may be reduced at RBCCM’s discretion based on a variety of factors, including but not limited to, the amount of the Securities that we repurchase and our negotiated arrangements from time to time with UBS.

For additional information as to the relationship between us and RBCCM, please see the section “Plan of Distribution—Conflicts of Interest” in the prospectus dated January 8, 2016.

#### Structuring the Securities

The Securities are our debt securities, the return on which is linked to the performance of the Underlying. As is the case for all of our debt securities, including our structured notes, the economic terms of the Securities reflect our actual or perceived creditworthiness at the time of pricing. In addition, because structured notes result in increased operational, funding and liability management costs to us, we typically borrow the funds under these Securities at a rate that is more favorable to us than the rate that we might pay for a conventional fixed or floating rate debt security of comparable maturity. Using this relatively lower implied borrowing rate rather than the secondary market rate is a factor that resulted in a higher initial estimated value of the Securities at the time their terms are set than if the secondary market rate was used. Unlike the estimated value included on the cover of this document, any value of the Securities determined for purposes of a secondary market transaction may be based on a different borrowing rate, which may result in a lower value for the Securities than if our initial internal borrowing rate were used.

In order to satisfy our payment obligations under the Securities, we may choose to enter into certain hedging arrangements (which may include call options, put options or other derivatives) on the issue date with RBCCM or one of our other subsidiaries. The terms of these hedging arrangements take into account a number of factors, including our creditworthiness, interest rate movements, the volatility of the Underlying, and the tenor of the Securities. The economic terms of the Securities and their initial estimated value depend in part on the terms of these hedging arrangements.

The lower implied borrowing rate is a factor that reduced the economic terms of the Securities to you. The initial offering price of the Securities also reflects the underwriting commission and our estimated hedging costs. These factors resulted in the initial estimated value for the Securities on the Trade Date being less than their public offering price. See “Key Risks—The Initial Estimated Value of the Securities Is Less than the Price to the Public” above.

Terms Incorporated in Master Note

The terms appearing above under the caption “Final Terms of the Securities” and the provisions in the accompanying product prospectus supplement no. UBS-EQUITY-1 dated January 4, 2017 under the caption “General Terms of the Securities,” are incorporated into the master note issued to DTC, the registered holder of the Securities.

#### Validity of the Securities

In the opinion of Norton Rose Fulbright Canada LLP, the issue and sale of the Securities has been duly authorized by all necessary corporate action of the Bank in conformity with the Indenture, and when the Securities have been duly executed, authenticated and issued in accordance with the Indenture and delivered against payment therefor, the Securities will be validly issued and, to the extent validity of the Securities is a matter governed by the laws of the Province of Ontario or Québec, or the laws of Canada applicable therein, and will be valid obligations of the Bank, subject to equitable remedies which may only be granted at the discretion of a court of competent authority, subject to applicable bankruptcy, to rights to indemnity and contribution under the Securities or the Indenture which may be limited by applicable law; to insolvency and other laws of general application affecting creditors’ rights, to limitations under applicable limitations statutes, and to limitations as to the currency in which judgments in Canada may be rendered, as prescribed by the Currency Act (Canada). This opinion is given as of the date hereof and is limited to the laws of the Provinces of Ontario and Québec and the federal laws of Canada applicable thereto. In addition, this opinion is subject to customary assumptions about the Trustee’s authorization, execution and delivery of the Indenture and the genuineness of signatures and certain factual matters, all as stated in the letter of such counsel dated January 8, 2016, which has been filed as Exhibit 5.1 to Royal Bank’s Form 6-K filed with the SEC dated January 8, 2016.

In the opinion of Morrison & Foerster LLP, when the Securities have been duly completed in accordance with the Indenture and issued and sold as contemplated by the prospectus supplement and the prospectus, the Securities will be valid, binding and enforceable obligations of Royal Bank, entitled to the benefits of the Indenture, subject to applicable bankruptcy, insolvency and similar laws affecting creditors’ rights generally, concepts of reasonableness and equitable principles of general applicability (including, without limitation, concepts of good faith, fair dealing and the lack of bad faith). This opinion is given as of the date hereof and is limited to the laws of the State of New York. This opinion is subject to customary assumptions about the Trustee’s

authorization, execution and delivery of the Indenture and the genuineness of signatures and to such counsel's reliance on the Bank and other sources as to certain factual matters, all as stated in the legal opinion dated January 8, 2016, which has been filed as Exhibit 5.2 to the Bank's Form 6-K dated January 8, 2016.