

ROYAL BANK OF CANADA  
Form 424B2  
February 08, 2018

---

RBC Capital Markets® Filed Pursuant to Rule 424(b)(2)  
Registration Statement No. 333-208507

This pricing supplement amends and restates the pricing supplement filed on January 28, 2018, solely to correct the security identification (CUSIP) number.

Amendment No. 1  
Dated February 7, 2018  
To the Pricing  
Supplement Dated \$1,538,000  
January 26, 2018, the Direct Investment Notes  
Product Prospectus Linked to 20 Common Equity Securities  
Supplement ERN-ES-1 Selected from the RBC Capital Markets Top 30  
Dated January 14, 2016, Global Ideas for 2018 due February 7, 2019  
Prospectus Supplement Royal Bank of Canada  
Dated January 8, 2016,  
and Prospectus Dated  
January 8, 2016

Royal Bank of Canada is offering the Notes linked 20 common equity securities selected from the RBC Capital Markets Top 30 Global Ideas for 2018 (the “Notes”). These securities will be equally weighted in the basket and are set forth below. The CUSIP number for the Notes is 78013GFR1.

The Notes may pay interest on May 1, 2018, July 31, 2018, October 31, 2018, and the maturity date. The amount of any interest to be paid on the Notes will not be fixed, and will depend upon the total dividends paid on the Reference Stocks during the preceding quarter, as described in more detail below.

On the maturity date, the amount that we will pay to you (the “Redemption Amount”) will depend upon the performance of the Basket over the term of the Notes. As described in more detail below, the Redemption Amount will be less than the price to the public set forth below if the Percentage Amount of the Basket is not at least approximately 102.30%.

We describe in more detail below how the payments on the Notes will be determined.

Issue Date: January 31, 2018

Maturity Date: February 7, 2019

The Notes will not be listed on any securities exchange.

Non-U.S. holders will be subject to withholding on dividend equivalent payments under Section 871(m) of the U.S. Internal Revenue Code. Please see the section below, “Supplemental Discussion of U.S. Federal Income Tax Consequences,” which applies to the Notes.

Investing in the Notes involves a number of risks. See “Risk Factors” beginning on page S-1 of the prospectus supplement dated January 8, 2016, “Risk Factors” beginning on page PS-4 of the product prospectus supplement dated January 14, 2016, and “Selected Risk Considerations” beginning on page P-8 of this pricing supplement.

The Notes will not constitute deposits insured by the Canada Deposit Insurance Corporation, the U.S. Federal Deposit Insurance Corporation or any other Canadian or U.S. government agency or instrumentality.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined that this pricing supplement is truthful or complete. Any representation to the contrary is a criminal offense.

Per Note Total

Edgar Filing: ROYAL BANK OF CANADA - Form 424B2

Price to public	100.00%	\$1,538,000.00
Underwriting discounts and commissions	1.50%	\$23,070.00
Proceeds to Royal Bank of Canada	98.50%	\$1,514,930.00

The initial estimated value of the Notes as of the date of this pricing supplement is \$977.50 per \$1,000 in principal amount, which is less than the price to public. The actual value of the Notes 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 in more detail below.

RBC Capital Markets, LLC, which we refer to as RBCCM, acting as agent for Royal Bank of Canada, received a commission of \$15.00 per \$1,000 in principal amount of the Notes and used a portion of that commission to allow selling concessions to other dealers of up to \$15.00 per \$1,000 in principal amount of the Notes. The other dealers may forgo, in their sole discretion, some or all of their selling concessions. See “Supplemental Plan of Distribution (Conflicts of Interest)” on below.

We may use this pricing supplement in the initial sale of the Notes. In addition, RBCCM or another of our affiliates may use this pricing supplement in a market-making transaction in the Notes after their initial sale. Unless we or our agent informs the purchaser otherwise in the confirmation of sale, this pricing supplement is being used in a market-making transaction.

RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

**SUMMARY**

The information in this “Summary” section is qualified by the more detailed information set forth in this pricing supplement, the product prospectus supplement, the prospectus supplement, and the prospectus.

Issuer: Royal Bank of Canada (“Royal Bank”)

Issue: Senior Global Medium-Term Notes, Series G

Underwriter: RBC Capital Markets, LLC (“RBCCM”)

The Notes are linked to the value of a basket (the “Basket”) consisting of the common equity securities of 20 publicly traded companies indicated on page P-3 (each, a “Reference Stock,” and collectively, the “Reference Stocks”). The Reference Stocks were derived from RBC Capital Markets’ Top 30 Global Ideas for 2018 as indicated on page P-3. A Top 30 Global Idea was identified as of December 20, 2017 as one of the most attractive investment ideas for 2018 and was rated outperform by RBC Capital Markets’ research analysts. The Reference Stocks are the securities included in the 30 Global Ideas for 2018 that have their primary trading market on a U.S. securities exchange. See the section below, “The Basket.”

Currency: U.S. Dollars

Minimum Investment: \$1,000 and minimum denominations of \$1,000 in excess thereof

Pricing Date: January 26, 2018

Issue Date: January 31, 2018

Valuation Date: February 4, 2019

Payment at Maturity (if held to maturity): The amount that you will receive at maturity for each \$1,000 in principal amount of the Notes will depend upon the performance of the Basket and the dividends paid on the Reference Stocks. The Redemption Amount will equal the product of (a) \$977.50 and (b) the Percentage Amount. As discussed in more detail below, the Percentage Amount must exceed approximately 102.30% in order for you to receive a Redemption Amount per \$1,000 in principal amount of the Notes that exceeds the principal amount. In addition, the Redemption Amount could be substantially less than the principal amount of the Notes.

Percentage Amount: The Percentage Amount will equal an amount, expressed as a percentage and rounded to two decimal places, equal to:

Initial Price: The closing price per share of a Reference Stock on the Pricing Date, as determined by the Calculation Agent, as set forth in the table on the next page.

Final Price: The closing price per share of a Reference Stock on the Valuation Date.

P-2 RBC Capital Markets, LLC

---

## Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

	Reference Stock Issuer	Ticker	Initial Price	Number of Shares
	Air Lease Corporation	AL	\$50.34	0.9932
	Aptiv PLC	APTV	\$94.48	0.5292
	Broadcom Limited	AVGO	\$250.79	0.1994
	Canadian Natural Resources Limited	CNQ	\$36.03	1.3877
Basket:	Celgene Corporation	CELG	\$105.17	0.4754
	Dollar Tree, Inc.	DLTR	\$115.43	0.4332
	DowDuPont Inc.	DWDP	\$77.02	0.6492
	Facebook, Inc.	FB	\$190.00	0.2632
	Gartner, Inc.	IT	\$142.14	0.3518
	GDS Holdings Limited	GDS	\$27.46	1.8208
	Magna International Inc.	MGA	\$58.98	0.8477
	Netflix, Inc.	NFLX	\$274.60	0.1821
	Parsley Energy, Inc.	PE	\$28.73	1.7403
	Raytheon Company	RTN	\$208.91	0.2393
	ServiceNow, Inc.	NOW	\$149.74	0.3339
	Sun Life Financial Inc.	SLF	\$43.85	1.1403
	The Walt Disney Company	DIS	\$112.19	0.4457
	TransCanada Corporation	TRP	\$46.46	1.0762
	Waste Connections, Inc.	WCN	\$73.22	0.6829
	Xylem Inc.	XYL	\$74.41	0.6720

Component Weights: 1/20 for each Reference Stock (subject to adjustment as provided below).  
Initial Basket Level: The initial level of the Basket shall be deemed to be \$1,000.

The Basket shall initially be deemed to consist of a number of shares of each Reference Stock calculated as follows:

Initial  
Composition of  
the Basket:

- Each Reference Stock shall initially constitute 1/20 of the Basket, with an aggregate value of \$50.00 (\$1,000 divided by 20).
- Accordingly, initially, the number of shares of each Reference Share in the Basket was calculated by dividing \$50.00 by the Initial Price.
- The number of shares of each Reference Share initially included in the Basket was determined on the Pricing Date, and is set forth in the table above.

For example, if the Initial Price of a hypothetical Reference Share is \$25, the Basket will initially be deemed to include 2 shares of that Reference Share (\$50.00 divided by \$25).

P-3 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from the RBC Capital Markets Top 30 Global Ideas for 2018 due February 7, 2019

Final Basket Level:	The value of the shares (and any other assets) in the Basket as of the close of trading on the Valuation Date, as determined by the Calculation Agent, using the Final Price of each Reference Stock.
Adjustments to the Composition of the Basket:	The Calculation Agent will adjust the number of shares of each Reference Stock in the Basket, as may be needed to reflect stock splits, reverse stock splits, stock dividends, and similar transactions, as discussed in the section of the product supplement, "General Terms of the Notes—Anti-Dilution Adjustments Relating to Equity Securities." See "Other Terms of Your Notes" on page P-11 of this document.
Interest Payment Dates:	May 1, 2018, July 31, 2018, October 31, 2018, and February 7, 2019 (the maturity date).
Interest Calculation Dates:	April 26, 2018, July 26, 2018, October 26, 2018, and February 4, 2019 (the Valuation Date).
Calculation of Interest Payments:	The amount of each interest payment, if any, will depend upon the amount of dividends paid on each Reference Stock during the Interest Calculation Period preceding each interest payment date, and will equal, for each \$1,000 in principal amount, 97.75% of the sum of the Dividend Amounts for each of the Reference Stocks.
Interest Calculation Period:	The first Interest Calculation Period will commence on the trading day after the Pricing Date and end on the first Interest Calculation Date. Each subsequent Interest Calculation Period will begin on the trading day following an Interest Calculation Date and end on the next Interest Calculation Date. The final Interest Calculation Date will occur on the Valuation Date.
Dividend Amount:	For each Reference Stock, an amount in U.S. dollars equal to (a) \$1,000 divided by the Initial Price of the applicable Reference Stock multiplied by (b) the applicable Component Weight multiplied by (c) 100% of the gross cash distributions (including ordinary and extraordinary dividends) per share of Reference Stock declared by the applicable Reference Stock Issuer where the date that the applicable Reference Stock has commenced trading ex-dividend on its primary U.S. securities exchange as to each relevant distribution occurs during the relevant Interest Calculation Period, as described in more detail below.
Maturity Date:	February 7, 2019, subject to extension for market and other disruptions, as described in the product prospectus supplement dated January 14, 2016.
Term:	Approximately 53 weeks.
Principal at Risk:	The Notes are NOT principal protected. You may lose all or a substantial portion of your principal amount at maturity if the value of the Basket decreases, or does not increase by at least 2.30%, from the Pricing Date to the Valuation Date.
Calculation Agent:	RBCCM
U.S. Tax Treatment:	By purchasing a Note, each holder agrees (in the absence of a change in law, an administrative determination or a judicial ruling to the contrary) to treat the Note as a pre-paid cash-settled contingent income-bearing derivative contract linked to the Basket for U.S. federal income tax purposes. However, the U.S. federal income tax consequences of your investment in the Notes are uncertain and the Internal Revenue Service could assert that the Notes should be taxed in a manner that is different from that described in the preceding sentence. Please see the section below, "Supplemental Discussion

of U.S. Federal Income Tax Consequences,” which applies to the Notes.

P-4 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

- Secondary Market: RBCCM (or one of its affiliates), though not obligated to do so, plans to maintain a secondary market in the Notes after the Issue Date. The amount that you may receive upon sale of your Notes prior to maturity may be less than the principal amount of your Notes.
- Listing: The Notes will not be listed on any securities exchange.
- Clearance and Settlement: DTC global (including through its indirect participants Euroclear and Clearstream, Luxembourg as described under “Description of Debt Securities—Ownership and Book-Entry Issuance” in the prospectus dated January 8, 2016).
- Events of Default: In case an event of default with respect to the Notes will have occurred and be continuing, the amount declared due and payable on the Notes upon any acceleration will be determined by the Calculation Agent and will be an amount of cash equal to the amount payable as described above under the caption “—Payment at Maturity,” calculated as if the date of acceleration were the Valuation Date. The Dividend Amount for each Reference Stock will only include dividends declared and paid through that date.

P-5 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

ADDITIONAL TERMS OF YOUR NOTES

You should read this pricing supplement together with the prospectus dated January 8, 2016, as supplemented by the prospectus supplement dated January 8, 2016 and the product prospectus supplement dated January 14, 2016, relating to our Senior Global Medium-Term Notes, Series G, of which these Notes are a part. Capitalized terms used but not defined in this pricing supplement will have the meanings given to them in the product prospectus supplement. In the event of any conflict, this pricing supplement will control. The Notes vary from the terms described in the product prospectus supplement in several important ways. You should read this pricing supplement carefully.

This pricing supplement, together with the documents listed below, contains the terms of the Notes and supersedes all 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, brochures or other educational materials of ours. You should carefully consider, among other things, the matters set forth in “Risk Factors” in the prospectus supplement dated January 8, 2016 and “Risk Factors” in the product prospectus supplement dated January 14, 2016, as the Notes involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisors before you invest in the Notes. You may access these documents on the Securities and Exchange Commission (the “SEC”) website at [www.sec.gov](http://www.sec.gov) as follows (or if that address has changed, by reviewing our filings for the relevant date on the SEC website):

Prospectus dated January 8, 2016:

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

Prospectus Supplement dated January 8, 2016:

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

Product Prospectus Supplement ERN-ES-1 dated January 14, 2016:

<https://www.sec.gov/Archives/edgar/data/1000275/000114036116047764/form424b5.htm>

Our Central Index Key, or CIK, on the SEC website is 1000275. As used in this pricing supplement, “we,” “us,” or “our” refers to Royal Bank of Canada.

P-6 RBC Capital Markets, LLC

---

## Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

## HYPOTHETICAL RETURNS AT MATURITY

The following hypothetical examples are provided for illustration purposes only and are hypothetical; they do not purport to be representative of every possible scenario concerning increases or decreases in the value of the Basket and the related effect on the Redemption Amount. The following hypothetical examples illustrate the payment you would receive on the maturity date if you purchased \$1,000 in principal amount of the Notes. Numbers appearing in the examples below have been rounded for ease of analysis. This table does not reflect any interest that may be paid on the Notes.

Percentage Amount	Redemption Amount per \$1,000 in Principal Amount	Percentage Gain (or Loss) per \$1,000 in Principal Amount
140.00%	\$1,368.50	36.85%
130.00%	\$1,270.75	27.08%
120.00%	\$1,173.00	17.30%
110.00%	\$1,075.25	7.53%
102.30% <sup>(1)</sup>	\$1,000.00	0.00%
100.00% <sup>(2)</sup>	\$977.50	-2.25%
90.00%	\$879.75	-12.03%
80.00%	\$782.00	-21.80%
70.00%	\$684.25	-31.58%
60.00%	\$586.50	-41.35%
50.00%	\$488.75	-51.13%
40.00%	\$391.00	-60.90%
30.00%	\$293.25	-70.68%
20.00%	\$195.50	-80.45%
10.00%	\$97.75	-90.23%
0.00%	\$0.00	-100.00%

<sup>(1)</sup> Due to the payment formula set forth above, for you to receive a Redemption Amount greater than the principal amount the Notes, the Percentage Amount must be greater than approximately 102.30%.

<sup>(2)</sup> If the Percentage Amount is not at least approximately 102.30%, you will lose some or all of the principal amount of the Notes.

Please see the sections below, “Selected Risk Considerations—Principal at Risk” and “—The Notes Will Not Reflect the Full Performance of the Reference Stocks, Which Will Negatively Impact Your Return on the Notes.”



Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

**SELECTED RISK CONSIDERATIONS**

An investment in the Notes involves significant risks. Investing in the Notes is not equivalent to investing directly in the Reference Stocks. These risks are explained in more detail in the section “Risk Factors” beginning on page PS-4 of the product prospectus supplement. In addition to the risks described in the prospectus supplement and the product prospectus supplement, you should consider the following:

**Principal at Risk** – Investors in the Notes could lose all or a substantial portion of their principal amount if there is a decline in the value of the Basket. Investors will also lose a portion of their principal amount if the Percentage Amount is not at least approximately 102.30%.

**The Notes May Not Pay Interest and Your Return May Be Lower than the Return on a Conventional Debt Security of Comparable Maturity** – There may be no periodic interest payments on the Notes, and any such payments may be less than there would be on a conventional fixed-rate or floating-rate debt security having the same maturity. The amount of each interest payment, if any, will depend upon the amount of dividends paid on each Reference Stock during the Interest Calculation Period preceding each interest payment date. The yield that you will receive on your Notes, which could be negative, may be less than the yield you could earn if you purchased a standard senior debt security of ours with the same maturity date. 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 Notes Will Not Reflect the Full Performance of the Reference Stocks, Which Will Negatively Impact Your Return on the Notes** – Because the calculation of the Redemption Amount for each \$1,000 in principal amount reflects the product of the Percentage Amount and \$977.50, the return, if any, on the Notes will not reflect the full performance of the Reference Stocks. Therefore, the yield to maturity based on the methodology for calculating the Redemption Amount will be less than the yield that would be produced if the Reference Stocks were purchased and held for a similar period. Similarly, the interest payments you receive on the Notes will be less than the applicable Dividend Amounts.

**Changes in the Price of One Reference Stock May Be Offset by Changes in the Price of the Other Reference Stocks** – A change in the price of one Reference Stock may not correlate with changes in the price of the other Reference Stocks. The price of one Reference Stock may increase, while the price of the other Reference Stocks may not increase as much, or may even decrease. Therefore, in determining the Percentage Change, increases in the price of one Reference Stock may be moderated, or wholly offset, by lesser increases or decreases in the prices of the other Reference Stocks.

**Payments on the Notes Are Subject to Our Credit Risk, and Changes in Our Credit Ratings Are Expected to Affect the Market Value of the Notes** – The Notes are Royal Bank’s senior unsecured debt securities. As a result, your receipt of all required payments on the Notes will be dependent upon Royal Bank’s ability to repay its obligations as of the applicable payment date. This will be the case even if the value of the Basket increases after the Pricing Date, or if substantial payments are made on the Reference Stocks. No assurance can be given as to what our financial condition will be at any time during the term of the Notes.

**There May Not Be an Active Trading Market for the Notes—Sales in the Secondary Market May Result in Significant Losses** – There may be little or no secondary market for the Notes. The Notes will not be listed on any securities exchange. RBCCM and other affiliates of Royal Bank may make a market for the Notes; however, they are not required to do so. RBCCM or any other affiliate of Royal Bank may stop any market-making activities at any time. Even if a secondary market for the Notes develops, it may not provide significant liquidity or trade at prices advantageous to you. We expect that transaction costs in any secondary market would be high. As a result, the difference between bid and asked prices for your Notes in any secondary market could be substantial.

You Will Not Have Any Rights to the Reference Stocks – As a holder of the Notes, you will not have voting rights or other rights that holders of the Reference Stocks would have. You will have no right to receive shares of the Reference Stocks.

The Historical Performance of the Reference Stocks Should Not Be Taken as an Indication of Their Future Performance – The Final Prices of the Reference Stocks will determine the Redemption Amount. The historical

P-8 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from the RBC Capital Markets Top 30 Global Ideas for 2018 due February 7, 2019

performance of the Reference Stocks does not necessarily give an indication of their future performance. As a result, it is impossible to predict whether the prices of the Reference Stocks will rise or fall during the term of the Notes. The prices of the Reference Stocks will be influenced by complex and interrelated political, economic, financial and other factors.

**· Holders of the Reference Stocks Are Only Entitled to Receive Those Dividends as Each Issuer's Board of Directors May Declare out of Funds Legally Available –** Although dividends and distributions on one or more of the Reference Stocks may have historically been declared by the applicable board of directors, they are not required to do so and may reduce or eliminate those dividends in the future. The Dividend Amount of one or more of the Reference Stocks during the term of the Notes may be zero. If the dividends paid on the Reference Stocks are not significant, any interest payments that you receive on the Notes may not be sufficient to provide you with your desired return on the Notes.

**The Initial Estimated Value of the Notes Is Less than the Price to the Public –** The initial estimated value set forth on the cover page of this pricing supplement does not represent a minimum price at which we, RBCCM or any of our affiliates would be willing to purchase the Notes in any secondary market (if any exists) at any time. If you attempt to sell the Notes 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 value of the Basket, the borrowing rate we pay to issue securities of this kind, and the inclusion in the price to the public of the underwriting discount and the estimated costs relating to our hedging of the Notes. 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. Assuming no change in market conditions or any other relevant factors, the price, if any, at which you may be able to sell your Notes prior to maturity may be less than your original purchase price, as any such sale price would not be expected to include the underwriting discount and the hedging costs relating to the Notes. In addition to bid-ask spreads, the value of the Notes determined for any secondary market price is expected to be based on the secondary rate rather than the internal funding rate used to price the Notes and determine the initial estimated value. As a result, the secondary price will be less than if the internal funding rate was used. The Notes are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your Notes to maturity.

**The Initial Estimated Value of the Notes on the Cover Page Is an Estimate Only, Calculated as of the Time the Terms of the Notes Were Set –** The initial estimated value of the Notes is based on the value of our obligation to make the payments on the Notes, together with the mid-market value of the derivative embedded in the terms of the Notes. See "Structuring the Notes" 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 Notes. These assumptions are based on certain forecasts about future events, which may prove to be incorrect. Other entities may value the Notes or similar securities at a price that is significantly different than we do.

The value of the Notes at any time after the Pricing 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 Notes in any secondary market, if any, should be expected to differ materially from the initial estimated value of the Notes.

**· Our Business Activities May Create Conflicts of Interest –** We and our affiliates expect to engage in trading activities related to the Reference Stocks that are not for the account of holders of the Notes or on their behalf. These trading activities may present a conflict between the holders' interests in the Notes and the interests we and our affiliates will have in their proprietary accounts, in facilitating transactions, including options and other derivatives transactions, for their customers and in accounts under their management. These trading activities, if they influence the prices of the

Reference Stocks, could be adverse to the interests of the holders of the Notes. We and one or more of our affiliates may, at present or in the future, engage in business with the issuers of the Reference Stocks, including making loans to or providing advisory services. These services could include investment banking and merger and acquisition advisory services. These activities may present a conflict between our or one or more of our affiliates' obligations and your interests as a holder of the Notes. Any of these activities by us or one or more of our affiliates may affect the value of the Reference Stocks, and, therefore, the market value of the Notes.

You Must Rely on Your Own Evaluation of the Merits of an Investment Linked to the Reference Stocks – In the ordinary course of their business, RBCCM and our other affiliates have expressed views on the value of the Reference Stocks and/or expected movements in their prices, and may do so in the future. These views or reports may be

P-9 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from the RBC Capital Markets Top 30 Global Ideas for 2018 due February 7, 2019

communicated to clients of our affiliates. However, these views are subject to change from time to time. Moreover, other professionals who transact business in markets relating to any Reference Stock may at any time have significantly different views from those of our affiliates. For these reasons, you are encouraged to derive information concerning the Reference Stocks from multiple sources, and you should not rely solely on views expressed by us or our affiliates.

**Some Reference Stocks Have Limited Historical Information** – Because three of the Reference Stocks have a limited trading history, your investment in the Notes may involve a greater risk than investing in securities linked to one or more equity securities with more established records of performance.

**The Inclusion of the Reference Stocks in the Basket Does Not Guarantee a Positive Return on the Notes** – There can be no assurance that any Reference Stock, or the Basket in its entirety, will increase in value. The performance of the Reference Stocks may be less than the performance of the equities markets generally, and less than the performance of specific sectors of the equity markets, or other securities in which you may choose to invest. As of the date of this document, the Equity Research Department of RBCCM believes that the prices of the Reference Stocks have the potential to increase during the term of the Notes. However, there can be no assurance that they will in fact do so. Although RBCCM has expressed a positive view as to the Reference Stocks prior to the date of this pricing supplement, its views may change significantly during the term of the Notes. In addition, any positive views of RBCCM's research divisions are separate and apart from the offering of the Notes, and do not constitute investment advice. Our offering of the Notes does not constitute our recommendation or the recommendation of RBCCM or our other affiliates to invest in the Notes or in the Reference Stocks.

**The Reference Stocks Represent Do Not Represent All of the Top 30 Global Ideas** — The 20 Reference Stocks were selected from the Top 30 Global Ideas. These 20 Reference Stocks are the Top Global Ideas that have their primary listing on a U.S. stock exchange. These 20 Reference Stocks may or may not perform as well as the Top 30 Global Ideas in the aggregate, and/or the Top 30 Global Ideas that were not selected as Reference Stocks.

**An Investment in the Notes Is Subject to Risks Relating to Foreign Securities Markets** – Eight of the Reference Stocks are organized outside of the U.S. An investment linked to companies of this type involves particular risks. For example, the relevant foreign markets may be more volatile than the U.S. markets, and market developments may affect these markets differently from the U.S. or other securities markets. Direct or indirect government intervention to stabilize the securities markets outside the U.S., as well as cross-shareholdings in certain companies, may affect trading prices and trading volumes in those markets.

**As Calculation Agent, RBCCM Will Have the Authority to Make Determinations that Could Affect the Value of Your Notes and Your Payment at Maturity** – As calculation agent for your Notes, RBCCM will have discretion in making various determinations that affect your Notes, including determining the Final Prices, the Percentage Amount, the Redemption Amount, the amounts of any interest payments on the Notes, and whether any market disruption events have occurred. The Calculation Agent also has discretion in making certain adjustments relating to mergers and certain other corporate transactions that an issuer of a Reference Stock may undertake. The exercise of this discretion by RBCCM could adversely affect the value of your Notes and may present RBCCM, which is our wholly owned subsidiary, with a conflict of interest.

**Market Disruption Events and Adjustments** – The payments on the Notes are subject to adjustment as described in this pricing supplement and the product prospectus supplement. For a description of what constitutes a market disruption event as well as the consequences of that market disruption event, see “General Terms of the Notes—Market Disruption Events” in the product prospectus supplement.



Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

**OTHER TERMS OF YOUR NOTES**

**Certain Reorganization Events**

If an issuer of a Reference Stock undergoes a Reorganization Event, as described on PS-16 of the product prospectus supplement dated January 14, 2016 (for example, if it merges with another entity and is not the surviving company), that Reference Stock may be removed from the Basket by the Calculation Agent following the effective date of the Reorganization Event, with the Component Weights of the remaining Reference Stocks increasing proportionately to reflect the relevant weightings of those remaining Reference Stocks at the time of the Reorganization Event.

In order to accomplish the foregoing, the Calculation Agent will determine the value of the shares of the Reference Stock in the Basket that is subject to the Reorganization Event, and will add to the Basket a number of shares of each other Reference Stock that is proportionate to the relative weightings of the Reference Stocks at the time of the Reorganization Event.

In the event of a Reorganization Event, The Calculation Agent will have sole discretion in determining the distribution of shares. In order to determine the value of the Reference Stock that is subject to the Reorganization Event, the Calculation Agent may use its closing price on the last trading day on which it trades prior to the effective date of the relevant transaction, the terms of the transaction that is the subject of the Reorganization Event, or such other commercially reasonable method as it may determine to be appropriate at that time. The weightings of the remaining Reference Stocks at that time, and the number of shares of each to be added to the Basket, will be determined by the Calculation Agent based upon the percentage of the Basket value that they constitute, from their respective closing prices.

**Additional Anti-Dilution Adjustments**

The Calculation Agent will adjust the number of shares of each Reference Stock in the Basket, as it determines may be needed to reflect stock splits, reverse stock splits, stock dividends, and other corporate transactions, which are discussed in the section of the product supplement, “General Terms of the Notes—Anti-Dilution Adjustments Relating to Equity Securities.” For example, if a Reference Stock is subject to a 2-for-1 stock split, the Calculation Agent may determine that, upon the applicable effective date, each one share of that Reference Stock in the Basket shall be deemed to thereafter to represent two shares.

P-11 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

**INFORMATION REGARDING THE ISSUERS OF THE REFERENCE STOCKS**

The issuer of each Reference Stock is registered under the Securities Exchange Act of 1934, as amended (“Exchange Act”). Companies with securities registered under the Exchange Act are required to periodically file financial and other information required by the Securities and Exchange Commission (“SEC”). This information is filed with the SEC and can be inspected and copied by you at the SEC’s Public Reference Room located at 100 F Street, N.E., Washington, D.C. 20549 at prescribed rates. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. In addition, information filed by the issuers of the Reference Stocks with the SEC electronically is available to the public over the Internet at the SEC’s website at <http://www.sec.gov>.

**The Selection of the Basket**

The Reference Stocks were selected from the “Top 30 Global Ideas for 2018” as discussed in the “Summary” above. The Top 30 Global Ideas were selected as of December 20, 2017, and were intended to identify the most attractive investment ideas informed by the views of RBCCM’s macro strategists. However, we note that the selection of the Top 30 Global Ideas are only research views based on currently available information. There is no assurance that any particular company will be successful, or that the investment thesis underlying these research views will come to pass. Moreover, the business, results of operations, and prospects of these companies and the growth and health of each issuer of the Reference Stocks are subject to conditions outside of the control of the Global Equity Research Department, such as general economic conditions.

Additional information regarding RBCCM research analyst ratings is available at

<https://www.rbccm.com/equityresearch/cid-203939.html>. Information on that website is not included or incorporated by reference in this document. A rating is subject to downward revision at any time, and a broker-dealer may cease to cover a particular security at any time, including during the term of the Notes.

Neither we nor our affiliates makes any representation as to the future performance of any Reference Stock or the Basket.

**Description of the Reference Stock Issuers**

The following information regarding each issuer of the Reference Stocks is derived from publicly available information and we have not independently verified it.

Air Lease Corporation is an aircraft leasing company. The company is principally engaged in purchasing commercial aircraft and leasing to airlines in regions that include Asia, the Pacific Rim, Latin America, the Middle East and Eastern Europe. Its common stock trades on the New York Stock Exchange (the “NYSE”) under the symbol “AL.” Aptiv PLC manufactures vehicle components. The company produces electronic safety for automobile and commercial vehicle manufacturers. The company supplies original equipment manufacturers throughout the world. Its common stock trades on the NYSE under the symbol “APH.”

Broadcom Limited designs, develops, and supplies semiconductors and integrated circuits. The company offers products such as broadband carrier access, cables, switches, network processors, and wireless connectors. Its class A common stock trades on the Nasdaq Global Select Market under the symbol “AVGO.”

Canadian Natural Resources Ltd. acquires, explores for, develops, and produces natural gas, crude oil, and related products. The company operates in the Canadian provinces of Alberta, northeastern British Columbia and Saskatchewan. The company also operates in areas which have access for exploration activities and where pipeline systems already exist. Its common stock trades on the NYSE under the symbol “CNQ.”

Celgene Corporation is a global biopharmaceutical company. The company focuses on the discovery, development, and commercialization of therapies designed to treat cancer and immune-inflammatory related diseases. Its common

stock trades on the Nasdaq Global Select Market under the symbol “CELG.”

Dollar Tree, Inc. operates a discount variety store chain in the United States. The company sells an assortment of everyday general merchandise. Its common stock trades on the Nasdaq Global Select Market under the symbol “DLTR.”

DowDuPont Inc. is a diversified chemical company that provides chemical, plastic, and agricultural products and services to various essential consumer markets. The company serves customers in countries around the world in markets such as food, transportation, health and medicine, personal care, and construction. Its common stock trades on the NYSE under the symbol “DWDP.”

P-12 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

Facebook, Inc. operates a social networking website. The company website allows people to communicate with their family, friends, and co-workers. The company develops technologies that facilitate the sharing of information, photographs, website links, and videos. Facebook users have the ability to share and restrict information based on their own specific criteria. Its common stock trades on the Nasdaq Global Select Market under the symbol "FB." This Reference Stock commenced trading in May 2012.

Gartner, Inc. provides research and analysis on the computer hardware, software, communications, and related information technology industries. The company's business segments include research, consulting, measurement, events and executive programs. Its common stock trades on the NYSE under the symbol "IT."

GDS Holdings Limited develops and operates data centers in China. The company, through its subsidiaries, provides colocation, managed hosting, and managed cloud services. The company mainly provides services to customers in the Internet and banking industries. Its American Depository Shares trade on the Nasdaq Global Market under the symbol "GDS." This Reference Stock commenced trading in November 2016.

Magna International Inc. designs, develops, and manufactures automotive systems, assemblies and components, and engineers and assembles complete vehicles. The company sells its products primarily to original equipment manufacturers. Its common stock trades on the NYSE under the symbol "MGA."

Netflix Inc. is an Internet subscription service for watching television shows and movies. Subscribers can watch unlimited television shows and movies streamed over the Internet to their televisions, computers, and mobile devices and in the United States, subscribers can receive standard definition DVDs and Blu-ray Discs delivered to their homes. Its common stock trades on the Nasdaq Global Select Market under the symbol "NFLX."

Parsley Energy, Inc. is an oil and natural gas company. The company focused on the acquisition, development, and exploitation of unconventional oil and natural gas reserves. Parsley Energy serves customers in the State of Texas. Its common stock trades on the NYSE under the symbol "PE." This Reference Stock commenced trading in May 2014.

Raytheon Company is a technology company specializing in defense, homeland security, and other government markets throughout the world. The company provides electronics, mission systems integration, and other capabilities in the areas of sensing, effects, and command, control, communications and intelligence systems, as well as mission support services. Its common stock trades on the NYSE under the symbol "RTN."

ServiceNow, Inc. provides enterprise information technology (IT) management software. The company designs, develops, and produces prepackaged computer software, cloud services, and IT service management platform. Its common stock trades on the NYSE under the symbol "NOW."

Sun Life Financial Inc. is an international financial services organization providing a diverse range of wealth accumulation and protection products and services. The company provides insurance, mutual funds, annuities, pensions, investment management, trust services, and banking services. Its common stock trades on the NYSE under the symbol "SLF."

The Walt Disney Company is an entertainment company that conducts operations in media networks, studio entertainment, theme parks and resorts, consumer products, and interactive media. The company produces motion pictures, television programs, and musical recordings, as well as books and magazines. Its common stock trades on the NYSE under the symbol "DIS."

TransCanada Corporation is focused on natural gas transmission and power services. The company's network of pipeline transports the majority of Western Canada's natural gas production to markets in Canada and the United States. The company also has interests in power plants in Canada and the United States. Its common stock trades on the NYSE under the symbol "TRP."

Waste Connections, Inc. provides non-hazardous solid waste collection services for commercial, industrial and residential customers. The company offers collection, landfill disposal, and recycling services for various recyclable

materials, including compost, cardboard, office paper, plastic containers, glass bottles, and ferrous and aluminum metals. Its common stock trades on the NYSE under the symbol "WCN."

Xylem, Inc. is a designer, manufacturer, equipment, and service provider for water and wastewater applications addressing collection, distribution, and use to the return of water to the environment. The company's products include water and wastewater pumps, treatment and testing equipment, industrial pumps, valves, heat exchangers, and dispensing equipment. Its common stock trades on the NYSE under the symbol "XYL."

P-13 RBC Capital Markets, LLC

---

#### Direct Investment Notes

Linked to 20 Common Equity Securities Selected from the RBC Capital Markets Top 30 Global Ideas for 2018 due February 7, 2019

#### Additional Information

Please note that the selection of the Reference Stocks was based only on research views, based on information that was available through December 20, 2017. There is no assurance that any particular company will be successful, or that the investment thesis underlying these research views will come to pass. Moreover, the business, results of operations, and prospects of these companies and the growth and health of each issuer of the Reference Stocks are subject to conditions outside of the control of the Equity Research Department, such as general economic conditions. Additional information regarding RBCCM research analyst ratings is available at <https://www.rbccm.com/equityresearch/cid-203939.html>. Information on that website is not included or incorporated by reference in this document. A rating is subject to downward revision at any time, and a broker-dealer may cease to cover a particular security at any time, including during the term of the Notes. Neither we nor our affiliates make any representation as to the future performance of any Reference Stock or the Basket.

#### Hypothetical Performance of the Basket

While actual historical information on the Basket did not exist before the Pricing Date, the following graph sets forth the hypothetical daily performance of the Basket from November 2, 2016 (the date on which the Reference Stock with the most limited trading history, GDS Holdings Limited, began trading) through January 26, 2018. The graph is based upon actual daily historical closing prices of the Reference Stocks and a hypothetical basket level of 100.00 as of November 2, 2016. This hypothetical data on the Basket is not necessarily indicative of the future performance of the Basket or what the value of the Notes may be. Any hypothetical upward or downward trend in the level of the Basket shown below is not an indication that the level of the Basket is more or less likely to increase or decrease at any time over the term of the Notes.

P-14 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

SUPPLEMENTAL PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

Delivery of the Notes will be made against payment for the Notes on January 31, 2018, which is the third (3rd) business day following the Pricing Date (this settlement cycle being referred to as “T+3”). See “Plan of Distribution” in the prospectus dated January 8, 2016. 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.

We will deliver the Notes on a date that is greater than two business days following the Pricing Date. Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade the Notes more than two business days prior to the original Issue Date will be required to specify alternative settlement arrangements to prevent a failed settlement.

The value of the Notes shown on your account statement may be based on RBCCM’s estimate of the value of the Notes if RBCCM or another of our affiliates were to make a market in the Notes (which it is not obligated to do). That estimate will be based upon the price that RBCCM may pay for the Notes in light of then prevailing market conditions, our creditworthiness and transaction costs. For a period of approximately three months after the Issue Date of the Notes, the value of the Notes that may be shown on your account statement is expected to be higher than RBCCM’s estimated value of the Notes at that time. This is because the estimated value of the Notes will not include the underwriting discount and our hedging costs and profits; however, the value of the Notes shown on your account statement during that period may be a higher amount, reflecting the addition of RBCCM’s underwriting discount and our estimated costs and profits from hedging the Notes. This excess is expected to decrease over time until the end of this period. After this period, if RBCCM repurchases your Notes, it expects to do so at prices that reflect their estimated value.

No Prospectus (as defined in Directive 2003/71/EC (as amended, the “Prospectus Directive”)) will be prepared in connection with these Notes. Accordingly, these Notes may not be offered to the public in any member state of the European Economic Area (the “EEA”), and any purchaser of these Notes who subsequently sells any of these Notes in any EEA member state must do so only in accordance with the requirements of the Prospectus Directive, as implemented in that member state.

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, 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 the Notes, and a “retail investor” means a person who is one (or more) of: (a) a retail client, as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, “MiFID II”); or (b) a customer, within the meaning of Insurance Distribution Directive 2016/97/EU, as amended, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (c) 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.

P-15 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

STRUCTURING THE NOTES

The Notes are our debt securities, the return on which is linked to the performance of the Reference Stocks. As is the case for all of our debt securities, including our structured notes, the economic terms of the Notes 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 Notes 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 reduced the initial estimated value of the Notes at the time their terms were set. Unlike the estimated value included in this pricing supplement, any value of the Notes determined for purposes of a secondary market transaction may be based on a different funding rate, which may result in a lower value for the Notes than if our initial internal funding rate were used.

In order to satisfy our payment obligations under the Notes, we may choose to enter into certain hedging arrangements (which may include call options, put options, other derivatives or trading in shares of any Reference Stock) on the Issue Date with RBCCM, one of our other subsidiaries or any third-party hedge provider. The terms of these hedging arrangements take into account a number of factors, including our creditworthiness, interest rate movements, the volatility of the Reference Stocks, and the tenor of the Notes. The economic terms of the Notes and their initial estimated value depend in part on the terms of these hedging arrangements.

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

P-16 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

Supplemental Discussion of  
U.S. Federal Income Tax Consequences

The following is a general description of the material U.S. tax considerations relating to the Notes. It does not purport to be a complete analysis of all tax considerations relating to the Notes. Prospective purchasers of the Notes should consult their tax advisors as to the consequences under the tax laws of the country of which they are resident for tax purposes and the tax laws of the U.S. of acquiring, holding and disposing of the Notes and receiving payments under the Notes. This summary is based upon the law as in effect on the date of this document and is subject to any change in law that may take effect after such date.

The following section supplements the discussion of U.S. federal income taxation in the accompanying prospectus and prospectus supplement and it supersedes the discussion of U.S. federal income taxation in the accompanying product prospectus supplement. It applies only to those holders who are not excluded from the discussion of U.S. federal income taxation in the accompanying prospectus. This discussion applies only to holders that will purchase the Notes upon original issuance and will hold the Notes as capital assets for U.S. federal income tax purposes. In addition, the discussion below assumes that an investor in the Notes will be subject to a significant risk that it will lose a significant amount of its investment in the Notes.

You should consult your tax advisor concerning the U.S. federal income tax and other tax consequences of your investment in the Notes in your particular circumstances, including the application of state, local or other tax laws and the possible effects of changes in federal or other tax laws.

**NO STATUTORY, JUDICIAL OR ADMINISTRATIVE AUTHORITY DIRECTLY DISCUSSES HOW THE NOTES SHOULD BE TREATED FOR U.S. FEDERAL INCOME TAX PURPOSES. AS A RESULT, THE U.S. FEDERAL INCOME TAX CONSEQUENCES OF AN INVESTMENT IN THE NOTES ARE UNCERTAIN. BECAUSE OF THE UNCERTAINTY, YOU SHOULD CONSULT YOUR TAX ADVISOR IN DETERMINING THE U.S. FEDERAL INCOME TAX AND OTHER TAX CONSEQUENCES OF YOUR INVESTMENT IN THE NOTES, INCLUDING THE APPLICATION OF STATE, LOCAL OR OTHER TAX LAWS AND THE POSSIBLE EFFECTS OF CHANGES IN FEDERAL OR OTHER TAX LAWS.**

We will not attempt to ascertain whether any of the entities whose stock is included in the Basket would be treated as a “passive foreign investment company” within the meaning of Section 1297 of the Code, or a “U.S. real property holding corporation,” within the meaning of Section 897 of the Code. If any of the entities whose stock is included in the Basket were so treated, certain adverse U.S. federal income tax consequences could possibly apply to a holder. You should refer to any available information filed with the SEC and other authorities by the entities whose stock is included in the Basket and consult your tax advisor regarding the possible consequences to you in this regard, if any. In the opinion of our counsel, Morrison & Foerster LLP, it would generally be reasonable to treat a note with terms described in this document as a pre-paid cash-settled contingent income-bearing derivative contract linked to the Basket for U.S. federal income tax purposes, and the terms of the Notes 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 Notes for all tax purposes in accordance with such characterization. In addition, we intend to treat the contingent coupons as U.S. source income for U.S. federal income tax purposes. The following discussion assumes that the treatment described in this paragraph is proper and will be respected.

Although the U.S. federal income tax treatment of the contingent quarterly coupon is uncertain, we intend to take the position, and the following discussion assumes, that such contingent quarterly coupon (including any contingent quarterly coupon paid on or with respect to the maturity date) constitutes taxable ordinary income to a U.S. holder at the time received or accrued in accordance with the holder’s regular method of tax accounting. If the Notes are treated as described above, a U.S. holder should generally recognize capital gain or loss upon the sale or maturity of the Notes

in an amount equal to the difference between the cash amount a holder receives at such time (other than amounts properly attributable to any contingent quarterly coupon, which would be taxed, as described above, as ordinary income) and the holder's tax basis in the Notes. In general, a U.S. holder's tax basis in the Notes will be equal to the price the holder paid for the Notes. Capital gain recognized by an

P-17 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

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 ordinary income treatment of the contingent quarterly coupons, in conjunction with the capital loss treatment of any loss recognized upon the sale, exchange or maturity of the Notes, could result in adverse tax consequences to a holder because the deductibility of capital losses is subject to limitations.

While the matter is not entirely clear, to the extent a Reference Stock is the type of financial asset described under Section 1260 of the Code (including, among others, any equity interest in pass-thru entities such as regulated investment companies (including certain exchange traded funds), real estate investment trusts, partnerships, trusts and passive foreign investment companies), an investment in the Notes will likely, in whole or in part, be treated as a “constructive ownership transaction” to which Section 1260 of the Code applies. If Section 1260 of the Code applies, all or a portion of any long-term capital gain recognized by a U.S. holder in respect of the Notes will be recharacterized as ordinary income (the “Excess Gain”). In addition, an interest charge will also apply to any deemed underpayment of tax in respect of any Excess Gain to the extent such gain would have resulted in gross income inclusion for the U.S. holder in taxable years prior to the taxable year of the sale, exchange or maturity (assuming such income accrued at a constant rate equal to the applicable federal rate as of the date of sale, exchange or maturity). If an investment in the Notes is treated as a constructive ownership transaction, it is not clear how the net underlying long-term capital gain would be computed and to what extent any long-term capital gain of a United States holder in respect of the Notes will be recharacterized as ordinary income. Unless otherwise established by clear and convincing evidence, the net underlying long-term capital gain is treated as zero. U.S. holders should consult their tax advisors regarding the potential application of Section 1260 of the Code to an investment in the Notes.

**Alternative Treatments.** Alternative tax treatments of the Notes are also possible and the Internal Revenue Service might assert that a treatment other than that described above is more appropriate. For example, it is possible to treat the Notes, and the Internal Revenue Service might assert that the Notes should be treated, as a single debt instrument. Because the Notes have a term that exceeds one year, such debt instrument would be subject to the special tax rules governing contingent payment debt instruments. If the Notes are so treated, a holder would generally be required to accrue interest income over the term of the securities based upon the yield at which we would issue a non-contingent fixed-rate debt instrument with other terms and conditions similar to the Notes. In addition, any gain a holder might recognize upon the sale or maturity of the Notes would be ordinary income and any loss recognized by a holder at such time would generally be ordinary loss to the extent of interest that same holder included in income in the current or previous taxable years in respect of the Notes, and thereafter, would be capital loss.

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

The Internal Revenue Service has released a notice that may affect the taxation of holders of the Notes. According to the notice, the Internal Revenue Service and the U.S. Treasury Department are actively considering whether the holder of an instrument such as the Notes should be required to accrue ordinary income on a current basis irrespective of any contingent quarterly coupons. 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 Notes will ultimately be required to accrue income currently irrespective of any contingent quarterly coupons and this could be applied on a retroactive basis. The Internal Revenue Service and the U.S. 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 Code, which very generally can operate to recharacterize certain long-term capital gains as ordinary income and impose an interest charge, 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. We intend to treat the Notes for U.S. federal income tax purposes in accordance with the

P-18 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

treatment described in this document unless and until such time as the U.S. Treasury Department and Internal Revenue Service determine that some other treatment is more appropriate.

**Backup Withholding and Information Reporting.** Payments made with respect to the Notes and proceeds from the sale or exchange 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 Internal Revenue Service or allowed as a credit against the holder's U.S. federal income tax liability, provided the holder makes a timely filing of an appropriate tax return or refund claim to the Internal Revenue Service.

Reports will be made to the Internal Revenue Service and to holders that are not exempted from the reporting requirements.

**Non-U.S. holders.** The Notes are not intended for purchase by any investor that is not a United States person, as that term is defined for U.S. federal income tax purposes, and RBCCM will not make offers of the Notes to any such investor. Notwithstanding this intended restriction on purchases, the following discussion applies to non-U.S. holders of the Notes. A non-U.S. holder is a beneficial owner of a Note that, for U.S. federal income tax purposes, is a non-resident alien individual, a foreign corporation, or a foreign estate or trust.

We will treat the contingent quarterly coupons as consisting of (i) a "dividend equivalent" payment portion and (ii) a fixed, determinable, annual, or periodical income portion, and therefore we (or the applicable withholding agent) will withhold U.S. federal income tax at a 30% rate in respect of the entire amount of the contingent quarterly coupons paid to a non-U.S. holder unless such coupons 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.

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. Although the Internal Revenue Service has issued guidance that states that the U.S. Treasury Department and the Internal Revenue Service intend to amend the effective dates of the U.S. Treasury Department 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, 2019, those regulations will not apply because we have determined that the Notes are delta-one instruments. Although unlikely, the potential exists for dividend equivalent payments on the Notes to exceed the contingent quarterly coupons paid. If that were the case, U.S. federal income tax at a 30% rate may be withheld in respect of other payments on the Notes and a non-U.S. holder of the Notes may be liable for additional U.S. federal income tax at a 30% rate on the difference between the dividend equivalent payments and the contingent quarterly coupon. We (or the applicable withholding agent) are entitled to withhold taxes on any payments treated as dividend equivalents without being required to pay any additional amounts with respect to amounts so withheld.

Except as discussed above and below, a non-U.S. holder will generally not be subject to U.S. federal income or withholding tax on any gain (not including, for the avoidance of doubt, any amounts properly attributable to any contingent quarterly coupon which would be subject to the rules discussed above) upon the sale or maturity of the Notes, provided that (i) the holder complies with any applicable certification requirements (which certification may generally be made on a Form W-8BEN or W-8BEN-E, or a substitute or successor form), (ii) the payment is not effectively connected with the conduct by the holder of a U.S. trade or business, and (iii) if the holder is a non-resident alien individual, such holder is not present in the U.S. for 183 days or more during the taxable year of the sale or

maturity of the Notes. In the case of (ii) above, the holder generally would be subject to U.S. federal income tax with respect to any income or gain in the same manner as if the holder were a U.S. holder and, in the case of a holder that is a corporation, the holder may also be subject to a branch profits tax equal to 30% (or such lower rate provided by an applicable U.S. income 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. Payments made to a non-U.S.

P-19 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

holder may be subject to information reporting and to backup withholding unless the holder complies with applicable certification and identification requirements as to its foreign status.

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, we will withhold tax at the applicable statutory rate. The Internal Revenue Service has also indicated that it is considering whether income in respect of instruments such as the Notes should be subject to withholding tax. We will not be required to pay any additional amounts in respect of such withholding.

Non-U.S. holders are urged to consult with their tax advisors concerning the dividend equivalent rules discussed above and the application of any treaty benefits (including their potential right to claim a refund), foreign tax credits, and the U.S. federal income tax considerations relating to the Notes.

Foreign Account Tax Compliance Act. The Foreign Account Tax Compliance Act (“FATCA”), imposes a 30% U.S. withholding tax on certain U.S. source payments of interest (and OID), dividends, or other fixed or determinable annual or periodical gain, profits, and income, and on the gross proceeds from a disposition of property (including payments at maturity, or upon a redemption or sale) 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 your behalf) unless such institution enters into an agreement with the U.S. Treasury Department to collect and provide to the U.S. Treasury Department certain information regarding U.S. 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. The legislation also generally imposes a withholding tax of 30% on withholdable payments made to a non-financial foreign entity, unless that 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.

The U.S. Treasury Department and the Internal Revenue Service 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. We will not pay additional amounts with respect to any FATCA withholding. Therefore, if such withholding applies, any payments on the Notes will be significantly less than what you would have otherwise received. Depending on your circumstances, these amounts withheld may be creditable or refundable to you. 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. You are urged to consult with your own tax advisor regarding the possible implications of FATCA on your investment in the Notes.

P-20 RBC Capital Markets, LLC

---

Direct Investment Notes

Linked to 20 Common Equity Securities Selected from  
the RBC Capital Markets Top 30 Global Ideas for  
2018 due February 7, 2019

VALIDITY OF THE NOTES

In the opinion of Norton Rose Fulbright Canada LLP, the issue and sale of the Notes has been duly authorized by all necessary corporate action of the Bank in conformity with the Indenture, and when the Notes have been duly executed, authenticated and issued in accordance with the Indenture and delivered against payment therefor, the Notes will be validly issued and, to the extent validity of the Notes 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 Notes 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 Notes have been duly completed in accordance with the Indenture and issued and sold as contemplated by the prospectus supplement and the prospectus, the Notes 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.

P-21 RBC Capital Markets, LLC

---