#### Form

Unknown document format

tyle="MARGIN-BOTTOM: 12pt; FONT-SIZE: 8pt; FONT-FAMILY: Arial; TEXT-ALIGN: left; MARGIN-LEFT: 36pt; MARGIN-TOP: 6pt">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 Notes 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 Stocks Included in the Underlying Index Are Concentrated in One Sector — All of the stocks included in the XOP's underlying index are issued by companies in the oil and gas exploration and production sector. As a result, the stocks that will determine the performance of the underlying index, which the Underlying seeks to replicate, are ...concentrated in one sector. Although an investment in the Notes will not give holders any ownership or other direct interests in the stocks comprising the underlying index, the return on an investment in the Notes will be subject to certain risks associated with a direct equity investment in companies in the oil and gas exploration and production sector. Accordingly, by investing in the Notes, you will not benefit from the diversification which could result from an investment linked to companies that operate in multiple sectors.

Risks Associated with the Energy Sector — The Underlying invests in companies that develop and produce crude oil and natural gas and provide drilling and other energy resources production and distribution related services. Stock prices for these types of companies are affected by supply and demand both for their specific product or service and for energy products and services in general. The price of oil and gas, exploration and production spending, government regulation, world events and economic conditions will likewise affect the performance of these companies. The stock prices of oil service companies could be subject to wide fluctuations in response to a variety of factors, including the ability of the OPEC to set and maintain production levels and pricing, the level of production in "non-OPEC countries, the demand for oil and gas, which is negatively impacted by economic downturns, the policies of various governments regarding exploration and development of oil and gas reserves, advances in exploration and development technology and the political environment of oil-producing regions. Correspondingly, securities of companies in the energy field are subject to swift price and supply fluctuations caused by events relating to international politics, energy conservation, the success of exploration projects, and tax and other governmental regulatory policies. Weak demand for the companies' products or services or for energy products and services in general, as well as negative developments in these other areas, would adversely impact the performance of the Underlying.

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

Potential Conflicts — We and our affiliates play a variety of roles in connection with the issuance of the Notes, including hedging our obligations under the Notes. 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 Notes. Potentially Inconsistent Research, Opinions or Recommendations by RBCCM, UBS or Their Affiliates — RBCCM,

- ...UBS or their affiliates may publish research, express opinions or provide recommendations as to the Underlying that are inconsistent with investing in or holding the Notes, and which may be revised at any time. Any such research, opinions or recommendations could affect the value of the Underlying, and therefore the market value of the Notes.
- ...Uncertain Tax Treatment Significant aspects of the tax treatment of an investment in the Notes are uncertain. You should consult your tax adviser about your tax situation.
- Potential Royal Bank of Canada and UBS Impact on Price Trading or transactions by Royal Bank of Canada, UBS ...or our respective affiliates in the Underlying of the Underlying Index, or in futures, options, exchange-traded funds or other derivative products on the Underlying or the Underlying Index may adversely affect the market value of the Underlying, the closing price of the Underlying, and, therefore, the market value of the Notes.

The Terms of the Notes at Issuance and Their Market Value Prior to Maturity Will Be Influenced by Many Unpredictable Factors: Many economic and market factors will influence the terms of the Notes at issuance and 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 Notes, including a combination of a bond with one or more options or other derivative instruments. For the market value of the Notes, we expect that, generally, the price of the Underlying on any day will affect the value of the Notes more than any other single factor. However, you should not expect the value of the Notes in the secondary market to vary in proportion to changes in the price of the Underlying. The value of the Notes will be affected by a number of other factors that may either offset or magnify

"the price of the Underlying;

each other, including:

- "the actual and expected volatility of the price of the Underlying;
- "the time remaining to maturity of the Notes;
- "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 Notes: and

"our creditworthiness, including actual or anticipated downgrades in our credit ratings."

Some or all of these factors will influence the terms of the Notes at issuance as well as the price you will receive if you choose to sell the Notes 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 Notes at a substantial discount from the principal amount if, for example, the price of the Underlying is at, below or not sufficiently above, its Downside Threshold.

The Anti-Dilution Protection for the Underlying Is Limited — The calculation agent will make adjustments to the Initial Price, Downside Threshold and Coupon Barrier 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 Notes and the payments on the Notes may be materially and adversely affected.

#### **Hypothetical Examples**

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

The following examples are hypothetical and provided for illustrative purposes only. They do not purport to be representative of every possible scenario concerning increases or decreases in the price of the Underlying relative to its Initial Price. Royal Bank of Canada cannot predict the Final Price of the Underlying. You should not take these examples as an indication or assurance of the expected performance of the Underlying. The numbers appearing in the examples and tables below have been rounded for ease of analysis. The following examples and tables illustrate the Payment at Maturity or upon an automatic call per Note on a hypothetical offering of the Notes, based on the following hypothetical assumptions (actual terms for the Notes will be set on the Trade Date):

**Principal Amount:** \$10.00

Term: Approximately two years

\$100.00 Hypothetical Initial Price\*:

9.00% per annum (or 2.25% per quarter), which is the low end of the Contingent Contingent Coupon Rate:

Coupon Rate set forth above.

Contingent Coupon\*\*: \$0.225 per quarter

Coupon Observation Dates: Quarterly

Call Observation Dates: Quarterly (callable after 6 months)

Hypothetical Downside \$75.00 (75% of the hypothetical Initial Price), which is the top end of the Downside

Threshold\*: Threshold range set forth above.

Hypothetical Coupon \$75.00 (75% of the hypothetical Initial Price), which is the top end of the Coupon

Barrier\*: Barrier range set forth above.

\* May not be the actual Initial Price, Coupon Barrier or Downside Threshold applicable to the Notes. The actual Initial Price, Coupon Barrier and Downside Threshold will be determined on the Trade Date.

Scenario #1: Notes Are Called on the Second Coupon Observation Date.

**Closing Price** Date Payment (per Note)

First Coupon Observation Date \$105.00 (at or above Coupon Barrier and Initial \$0.225 (Contingent Coupon – not callable)

**Second Coupon Observation** \$110.00 (at or above Coupon Barrier and Initial \$10.225 (Call Settlement Amount)

Price) Date

> **Total Payment:** \$10.45 (4.50% return)

Since the Notes are called on the second Coupon Observation Date, we will pay you on the Call Settlement Date a total of \$10.45 per Note, reflecting your principal amount plus the applicable Contingent Coupon. When added to the Contingent Coupon payment of \$0.225 received in respect of the prior Coupon Observation Date, we will have paid you a total of \$10.45 per Note, for a 4.50% total return on the Notes. No further amount will be owed to you under the Notes.

Scenario #2: Notes Are Called on the Third Coupon Observation Date.

Date **Closing Price** Payment (per Note)

First Coupon Observation \$95.00 (at or above Coupon Barrier; below Initial \$0.225 (Contingent Coupon – not

Date Price) callable)

\$85.50 (at or above Coupon Barrier; below Initial \$0.225 (Contingent Coupon – not Second Coupon Observation

Date Price) called)

Third Coupon Observation

\$105.00 (at or above Initial Price) \$10.225 (Call Settlement Amount) Date

> \$10.675 (6.75% return) **Total Payment:**

Since the Notes are called on the third Coupon Observation Date, we will pay you on the Call Settlement Date a total of \$10.225 per Note, reflecting your principal amount plus the applicable Contingent Coupon. When added to the

<sup>\*\*</sup> Contingent Coupon payments, if payable, will be paid in arrears in equal quarterly installments during the term of the Notes unless earlier called.

Contingent Coupon payments of \$0.45 received in respect of prior Coupon Observation Dates, we will have paid you a total of \$10.675 per Note, for a 6.75% total return on the Notes. No further amount will be owed to you under the Notes.

Scenario #3: Notes Are NOT Called and the Final Price of the Underlying Is at or Above the Downside Threshold.

Beenario #5.1 (otes fire 1 (of Carr	ed did the I mai I nee of the enderlying is at of 1100 t	e the Bewinsiae Timeshera.	
Date	Closing Price	Payment (per Note)	
First Coupon Observation Date	\$95.00 (at or above Coupon Barrier; below Initial Price)	\$0.225 (Contingent Coupon – not callable)	
Second Coupon Observation Date	\$59.50 (below Coupon Barrier)	\$0.00 (not called)	
Third Coupon Observation Date	\$81.00 (at or above Coupon Barrier; below Initial Price)	\$0.225 (Contingent Coupon – not called)	
Fourth Coupon Observation Date	\$83.00 (at or above Coupon Barrier; below Initial Price)	\$0.225 (Contingent Coupon – not called)	
Fifth through Seventh Coupon Observation Dates	Various (each below Coupon Barrier)	\$0.00 (not called)	
Final Valuation Date	\$80.00 (at or above Downside Threshold and Coupon Barrier; below Initial Price)	\$10.225 (Payment at Maturity)	

Total Payment: \$10.90 (9.00% return)

At maturity, we will pay you a total of \$10.225 per Note, reflecting your principal amount plus the applicable Contingent Coupon. When added to the Contingent Coupon payments of \$0.675 received in respect of prior Coupon Observation Dates, we will have paid you a total of \$10.90 per Note, for a 9.00% total return on the Notes.

Scenario #4: Notes Are NOT Called and the Final Price of the Underlying Is Below the Downside Threshold

section #4. Notes Are NOT Caned and the Final Free of the Orderrying is below the Downside Threshold					
Date	Closing Price	Payment (per Note)			
First Coupon Observation Date	\$95.00 (at or above Coupon Barrier; below Initial Price)	\$0.225 (Contingent Coupon– not callable)			
Second Coupon Observation Date	\$85.50 (at or above Coupon Barrier; below Initial Price)	\$0.225 (Contingent Coupon – not called)			
Third Coupon Observation Date	\$81.50 (at or above Coupon Barrier; below Initial Price)	\$0.225 (Contingent Coupon – not called)			
Fourth through Seventh Coupon Observation Dates	Various (each below Coupon Barrier)	\$0.00 (not called)			
Final Valuation Date	\$40.00 (below Downside Threshold and Coupon Barrier)	\$10.00 + [\$10.00 × underlying return] = \$10.00 + [\$10.00 × -60%] = \$10.00 - \$6.00 = \$4.00 (Payment at Maturity)			

Total Payment: \$4.675 (-53.25\% return)

Since the Notes are not called and the Final Price of the Underlying is below the Downside Threshold, we will pay you at maturity \$4.00 per Note. When added to the Contingent Coupon payments of \$0.675 received in respect of prior Coupon Observation Dates, we will have paid you \$4.675 per Note, for a loss on the Notes of 53.25%. The Notes differ from ordinary debt securities in that, among other features, we are not necessarily obligated to repay the full amount of your initial investment. If the Notes are not called on any Call Observation Date, you may lose some or all of your initial investment. Specifically, if the Notes are not called and the Final Price is less than the Downside Threshold, you will lose 1% (or a fraction thereof) of your principal amount for each 1% (or a fraction thereof) that the underlying return is less than zero.

Any payment on the Notes, including payments in respect of an automatic call, Contingent Coupon or any repayment of principal provided at maturity, is dependent on our ability to satisfy our obligations when they come due. If we are unable to meet our obligations, you may not receive any amounts due to you under the Notes.

What Are the Tax Consequences of the Notes?

U.S. Federal Income Tax Consequences

The following, together with the discussion of U.S. federal income tax in the accompanying product prospectus supplement, prospectus supplement, and prospectus, is a general description of the material U.S. federal income tax consequences relating to an investment in the Notes. The following summary is not complete and is qualified in its entirety by the discussion under the section entitled "Supplemental Discussion of U.S. Federal Income Tax Consequences" in the accompanying product prospectus supplement no. UBS-TPAOS-2, 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 Notes. The discussions below and in the accompanying product prospectus supplement, prospectus supplement, and prospectus, do not address the tax consequences applicable to holders subject to Section 451(b) of the Internal Revenue Code. In the opinion of our counsel, Morrison & Foerster LLP, it would generally be reasonable to treat the Notes as a callable pre-paid cash-settled contingent income-bearing derivative contract linked to the Underlying 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. Although the U.S. federal income tax treatment of the Contingent Coupons is uncertain, we intend to take the position, and the following discussion assumes, that such Contingent Coupons (including any coupon paid on or with respect to the call or maturity date) constitute taxable ordinary income to a U.S. holder at the time received or accrued in accordance with the holder's regular method of accounting. If the Notes are treated as described above, subject to the potential application of the "constructive ownership" rules under Section 1260 of the Internal Revenue Code, a U.S. holder should generally recognize capital gain or loss upon the call, sale or maturity of the Notes in an amount equal to the difference between the amount a holder receives at such time (other than amounts properly attributable to any Contingent Coupon, which would be taxed, as described above, as ordinary income) and the holder's tax basis in the Notes. 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 Notes. According to the notice, the Internal Revenue Service and the 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. 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 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 Notes.

Under Section 871(m) of the Internal Revenue 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, the IRS has issued guidance that states that the U.S. Treasury Department and the IRS 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. Based on our determination that the Notes are not delta-one instruments, non-U.S. holders should not be subject

to withholding on dividend equivalent payments, if any, under the Notes. However, it is possible that the Notes could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting the Underlying or the Notes, and following such occurrence the Notes could be treated as subject to withholding on dividend equivalent payments. Non-U.S. holders that enter, or have entered, into other transactions in respect of the Underlying or the Notes should consult their tax advisors as to the application of the dividend equivalent withholding tax in the context of the Notes and their other transactions. If any payments are treated as dividend equivalents subject to withholding, we (or the applicable withholding agent) would be entitled to withhold taxes without being required to pay any additional amounts with respect to amounts so withheld.

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 the underwriters will not make offers of the Notes to any such investor. Canadian Federal Income Tax Consequences

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

#### 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 website 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 free writing prospectus or any accompanying prospectus or prospectus supplement. We have not independently verified the accuracy or completeness of the information contained in outside sources.

# SPDR S&P® Oil & Gas Exploration & Production ETF

We have derived the following information regarding the Underlying from publicly available documents. We have not independently verified the accuracy or completeness of the following information. We are not affiliated with the Underlying and the Underlying will have no obligations with respect to the Notes. This pricing supplement relates only to the Notes and does not relate to the shares of the Underlying or any securities held by the underlying index. Neither we nor our affiliates participate in the preparation of the publicly available documents described below. Neither we nor our affiliates have made any due diligence inquiry with respect to the Underlying in connection with the offering of the Notes. There can be no assurance that all events occurring prior to the date of this free writing prospectus, including events that would affect the accuracy or completeness of the publicly available documents described below, that would affect the trading price of the shares of the Underlying have been or will be publicly disclosed. Subsequent disclosure of any events or the disclosure of or failure to disclose material future events concerning the Underlying could affect the price of the shares of the Underlying after the pricing date, and therefore could affect the payment at maturity.

The selection of the Underlying is not a recommendation to buy or sell the shares of the Underlying. Neither we nor any of our affiliates make any representation to you as to the performance of the shares of the Underlying. The SPDR S&P® Oil & Gas Exploration & Production ETF

The Underlying is an investment portfolio maintained and managed by SSFM. The Underlying trades on the NYSE Arca under the ticker symbol "XOP." The inception date of the Underlying is June 19, 2006. Prior to January 8, 2007, the Underlying was known as the SPDR® Oil & Gas Exploration & Production ETF.

The Underlying seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the underlying index. The underlying index represents the oil and gas exploration and production sub-industry portion of the S&P Total Market Index ("S&P TMI"), an index that measures the performance of the U.S. equity market. The Underlying is composed of companies that are in the oil and gas sector exploration and production.

The Underlying utilizes a "replication" investment approach in attempting to track the performance of the underlying index. The Underlying typically invests in substantially all of the securities which comprise the underlying index in approximately the same proportions as the underlying index. The Underlying will normally invest at least 80% of its total assets in common stocks that comprise the underlying index.

The information above was compiled from the SPDR® website. We have not independently investigated the accuracy of that information. Information contained in the SPDR® website is not incorporated by reference in, and should not be considered a part of, this document.

S&P® Oil & Gas Exploration & Production Select Industry® Index

We have derived all information contained in this document regarding the underlying index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information. Such information reflects the policies of, and is subject to change by, S&P.

The underlying index is an equal-weighted index that is designed to measure the performance of the oil and gas exploration and production sub-industry portion of the S&P TMI. The S&P TMI includes all U.S. common equities listed on the NYSE (including NYSE Arca), the NYSE American, the Nasdaq Global Select Market, and the Nasdaq Capital Market. Each of the component stocks in the underlying index is a constituent company within the oil and gas exploration and production sub-industry portion of the S&P TMI.

To be eligible for inclusion in the underlying index, companies must be in the S&P TMI and must be included in the relevant Global Industry Classification Standard (GICS) sub-industry. The GICS was developed to establish a global standard for categorizing companies into sectors and industries. In addition to the above, companies must satisfy one of the two following combined size and liquidity criteria:

- float-adjusted market capitalization above US\$500 million and float-adjusted liquidity ratio above 90%; or
- float-adjusted market capitalization above US\$400 million and float-adjusted liquidity ratio above 150%.

All U.S. companies satisfying these requirements are included in the underlying index. The total number of companies in the underlying index should be at least 35. If there are fewer than 35 stocks, stocks from a supplementary list of highly correlated sub-industries that meet the market capitalization and liquidity thresholds above are included in order of their float-adjusted market capitalization to reach 35 constituents. Minimum market capitalization requirements may be relaxed to ensure there are at least 22 companies in the underlying index as of each rebalancing effective date.

Eligibility factors include:

Market Capitalization: Float-adjusted market capitalization should be at least US\$400 million for inclusion in the underlying index. Existing index components must have a float-adjusted market capitalization of US\$300 million to remain in the underlying index at each rebalancing.

Liquidity: The liquidity measurement used is a liquidity ratio, defined as dollar value traded over the previous \$\dagger2\$-months divided by the float-adjusted market capitalization as of the underlying index rebalancing reference date. Stocks having a float-adjusted market

capitalization above US\$500 million must have a liquidity ratio greater than 90% to be eligible for addition to the underlying index. Stocks having a float-adjusted market capitalization between US\$400 and US\$500 million must have a liquidity ratio greater than 150% to be eligible for addition to the underlying index. Existing index constituents must have a liquidity ratio greater than 50% to remain in the underlying index at the quarterly rebalancing. The length of time to evaluate liquidity is reduced to the available trading period for IPOs or spin-offs that do not have 12 months of trading history.

Takeover Restrictions: At the discretion of S&P, constituents with shareholder ownership restrictions defined in company bylaws may be deemed ineligible for inclusion in the underlying index. Ownership restrictions preventing entities from replicating the index weight of a company may be excluded from the eligible universe or removed from the underlying index.

Turnover: S&P believes turnover in index membership should be avoided when possible. At times, a company may appear to temporarily violate one or more of the addition criteria. However, the addition criteria are for addition to the underlying index, not for continued membership. As a result, an index constituent that appears to violate the criteria for addition to the underlying index will not be deleted unless ongoing conditions warrant a change in the composition of the underlying index.

## **Historical Information**

The following table sets forth the quarterly high, low and period-end closing prices for the Underlying, based on daily closing prices, as reported by Bloomberg L.P. The historical performance of the Underlying should not be taken as an indication of its future performance during the term of the Notes.

Overten Design	Overter Fred	Outside Clasina III ala	Overtente Clesias I em	Quarterly Period-End
Quarter Begin	Quarter End	Quarterly Closing High	Quarterly Closing Low	Close
1/1/2008	3/31/2008	\$55.83	\$44.79	\$53.73
4/1/2008	6/30/2008	\$71.31	\$54.44	\$70.15
7/1/2008	9/30/2008	\$70.93	\$42.68	\$44.83
10/1/2008	12/31/2008	\$43.38	\$22.97	\$29.64
1/1/2009	3/31/2009	\$33.48	\$23.41	\$26.60
4/1/2009	6/30/2009	\$38.25	\$27.54	\$31.72
7/1/2009	9/30/2009	\$39.61	\$28.51	\$38.62
10/1/2009	12/31/2009	\$43.36	\$36.91	\$41.21
1/1/2010	3/31/2010	\$44.07	\$39.22	\$42.13
4/1/2010	6/30/2010	\$45.82	\$38.57	\$38.99
7/1/2010	9/30/2010	\$42.85	\$38.05	\$42.26
10/1/2010	12/31/2010	\$52.71	\$42.18	\$52.69
1/1/2011	3/31/2011	\$64.50	\$52.75	\$64.50
4/1/2011	6/30/2011	\$64.97	\$54.71	\$58.78
7/1/2011	9/30/2011	\$65.24	\$42.80	\$42.80
10/1/2011	12/31/2011	\$57.56	\$39.99	\$52.69
1/1/2012	3/31/2012	\$61.34	\$52.67	\$56.91
4/1/2012	6/30/2012	\$57.85	\$45.20	\$50.40
7/1/2012	9/30/2012	\$59.35	\$48.73	\$55.69
10/1/2012	12/31/2012	\$57.38	\$50.69	\$54.07
1/1/2013	3/31/2013	\$62.10	\$55.10	\$60.49
4/1/2013	6/30/2013	\$62.61	\$54.71	\$58.18
7/1/2013	9/30/2013	\$66.47	\$58.62	\$65.89
10/1/2013	12/31/2013	\$72.74	\$65.02	\$68.53
1/1/2014	3/31/2014	\$71.83	\$64.04	\$71.83
4/1/2014	6/30/2014	\$83.45	\$71.19	\$82.28
7/1/2014	9/30/2014	\$82.08	\$68.83	\$68.83
10/1/2014	12/31/2014	\$66.84	\$42.75	\$47.86
1/1/2015	3/31/2015	\$53.94	\$42.55	\$51.66
4/1/2015	6/30/2015	\$55.63	\$46.43	\$46.66
7/1/2015	9/30/2015	\$45.22	\$31.71	\$32.84
10/1/2015	12/31/2015	\$40.53	\$28.64	\$30.22
1/1/2016	3/31/2016	\$30.96	\$23.60	\$30.35
4/1/2016	6/30/2016	\$37.50	\$29.23	\$34.81
7/1/2016	9/30/2016	\$39.12	\$32.75	\$38.46
10/1/2016	12/31/2016	\$43.42	\$34.73	\$41.42
1/1/2017	3/31/2017	\$42.21	\$35.17	\$37.44
4/1/2017	6/30/2017	\$37.89	\$30.17	\$31.92
7/1/2017	9/30/2017	\$34.37	\$29.09	\$34.09
10/1/2017	12/31/2017	\$37.64	\$32.25	\$37.18
1/1/2018	3/31/2018	\$39.85	\$32.38	\$35.22
4/1/2018	4/16/2018*	\$37.65	\$34.03	\$37.65

<sup>\*</sup> This document includes information for the second calendar quarter of 2018 for the period from April 1, 2018 through April 16, 2018. 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 second calendar quarter

of 2018.

The graph below illustrates the performance of the Underlying from April 16, 2008 to April 16, 2018, assuming an Initial Price of \$37.65, which was its closing price on April 16, 2018. The solid line represents a hypothetical Coupon Barrier and Downside Threshold of \$28.24, which is equal to 75.00% of the closing price on April 16, 2018 (rounded to two decimal places). The actual Coupon Barrier and Downside Threshold will be based on the closing price of the Underlying on the Trade Date.

n Coupon Barrier / Downside Threshold = 75.00%

## 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 will agree that UBS Financial Services Inc. may sell all or a part of the Notes that it will purchase from us to investors at the price to public or to its affiliates at the price indicated on the cover of the pricing supplement, the document that will be filed under Rule 424(b)(2) containing the final pricing terms of the Notes.

Subject to regulatory constraints and market conditions, RBCCM intends to offer to purchase the Notes 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 Notes 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" in the accompanying product prospectus supplement no. UBS-TPAOS-2.

We expect to deliver the Notes on a date that is greater than two business days following the trade 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. If so specified in the pricing supplement related to the Notes, for a period of approximately 6 months after the issue date of the Notes, the value of the Notes that may be shown on your account statement may 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, potentially reflecting the addition of the underwriting discount and our estimated costs and profits from hedging the Notes. Any such 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. This period may be reduced at RBCCM's discretion based on a variety of factors, including but not limited to, the amount of the Notes 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.

No Prospectus (as defined in Directive 2003/71/EC (as amended, the "Prospectus Directive")) will be prepared in connection with the Notes. Accordingly, the 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.

#### Structuring the Notes

The Notes 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 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 is likely to result in a higher initial estimated value of the Notes 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 or in the final pricing supplement relating to the Notes, any value of the Notes 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 Notes than if our initial internal borrowing 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 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 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 result in the initial estimated value for the Notes on the Trade Date being less than their public offering price. See "Key Risks—The Initial Estimated Value of the Notes Will Be Less than the Price to the Public" above.

## Terms Incorporated in Master Note

The terms appearing above under the caption "Indicative Terms of the Notes" and the provisions in the accompanying product prospectus supplement no. UBS-TPAOS-2 dated January 20, 2016 under the caption "General Terms of the Securities" are incorporated into the master note issued to DTC, the registered holder of the Notes. In addition to those terms, the following two sentences are also incorporated into the master note: RBC confirms that it fully understands and is able to calculate the effective annual rate of interest applicable to the Notes based on the methodology for calculating per annum rates provided for in the Notes. RBC irrevocably agrees not to plead or assert Section 4 of the Interest Act (Canada), whether by way of defense or otherwise, in any proceeding relating to the Notes.