

ROYAL BANK OF CANADA  
Form FWP  
October 04, 2018

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## ISSUER FREE WRITING PROSPECTUS

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Dated October 3, 2018

Royal Bank of Canada Trigger Autocallable Contingent Yield Notes

\$ Notes Linked to the Least Performing Underlying Between the iShare® Russell 2000 ETF and the SPDR® S&P® Bank ETF due on or about October 15, 2021

### Investment Description

Trigger Autocallable Contingent Yield Notes (the “Notes”) are unsecured and unsubordinated debt securities issued by Royal Bank of Canada linked to the performance of the least performing of the iShares® Russell 2000 ETF and the SPDR® S&P® Bank ETF (each, an “Underlying,” and, together, the “Underlyings”). We will pay a quarterly Contingent Coupon payment if the closing prices of both Underlyings on the applicable Coupon Observation Date are equal to or greater than their respective Coupon Barriers. Otherwise, no coupon will be paid for that quarter. We will automatically call the Notes early if the closing prices of both Underlyings on any quarterly Call Observation Date (beginning after six months) are equal to or greater than their respective Initial Prices. If the Notes are called, we will pay you the principal amount of your Notes plus the Contingent Coupon for the applicable quarter, and no further amounts will be owed to you under the Notes. If the Notes are not called prior to maturity and the Final Prices of both Underlyings are equal to or greater than their respective Downside Thresholds (which are the same prices as their respective Coupon Barriers), we will pay you a cash payment at maturity equal to the principal amount of your Notes plus the Contingent Coupon for the final quarter. However, if the Final Price of the Underlying with the lowest percentage change from its Initial Price (the “Least Performing Underlying”) is less than its Downside Threshold, we will pay you less than the full principal amount, if anything, resulting in a loss on your initial investment that is proportionate to the negative performance of the Least Performing Underlying over the term of the Notes, and you may lose up to 100% of your initial investment. The Notes are not subject to conversion into our common shares under subsection 39.2(2.3) of the Canada Deposit Insurance Corporation Act.

Investing in the Notes involves significant risks. You will not receive a coupon for any Coupon Observation Date on which either Underlying closes below its Coupon Barrier. The Notes will not be automatically called if either Underlying closes below its Initial Price on a quarterly Call Observation Date. You may lose some or all of your principal amount if the Least Performing Underlying closes below its Downside Threshold, regardless of the performance of the other Underlying. The contingent repayment of principal only applies if you hold the Notes until maturity. Generally, the higher the Contingent Coupon Rate on a security, the greater the risk of loss. Any payment on the Notes, including any repayment of principal, is subject to our creditworthiness. If we were to default on our payment obligations, you may not receive any amounts owed to you under the Notes and you could lose your entire investment. The Notes will not be listed on any securities exchange.

### Features Key Dates<sup>1</sup>

**Contingent Coupon** — We will pay a quarterly Contingent Coupon payment if the closing prices of both Underlyings on the applicable Coupon Observation Date are equal to or greater than their respective Coupon Barriers. Otherwise, no coupon will be paid for the quarter.

**Automatically Callable** — We will automatically call the Notes and pay you the principal amount of your Notes plus the Contingent Coupon otherwise due for the applicable quarter if the closing prices of both Underlyings on any quarterly Call Observation Date (beginning after six months) are greater than or equal to their respective Initial Prices. If the Notes are not called, investors will have the potential for downside equity market risk at maturity.

**Contingent Repayment of Principal at Maturity** — If by maturity the Notes have not been called and the price of each Underlying does not close below its Downside Threshold on the Final Valuation Date, we will repay your principal amount per Note at maturity. However, if the price of the Least Performing Underlying is less than its Downside Threshold on the Final Valuation Date, we will pay less than the principal amount, if anything, resulting in a loss on

your initial investment that is proportionate to the decline in the price of the Least Performing Underlying from the trade date to the Final Valuation Date. The contingent repayment of principal only applies if you hold the Notes until maturity. Any payment on the Notes, including any repayment of principal, is subject to our creditworthiness.

Trade Date <sup>1</sup>	October 12, 2018
Settlement Date <sup>1</sup>	October 17, 2018
Coupon Observation Dates <sup>2</sup>	Quarterly (see page 6)
Call Observation Dates <sup>2</sup>	Quarterly (callable after six months) (see page 6)
Final Valuation Date <sup>2</sup>	October 12, 2021
Maturity Date <sup>2</sup>	October 15, 2021

Expected. In the event that we make any change to the expected trade date and settlement date, the Coupon Observation Dates, the Call Observation Dates, the Final Valuation Date and/or the maturity date will be changed so that the stated term of the Notes remains approximately the same.

<sup>2</sup> Subject to postponement if a market disruption event occurs, as described under “General Terms of the Notes — Payment at Maturity” in the accompanying product prospectus supplement no. UBS-TACYN-1.

NOTICE TO INVESTORS: THE NOTES ARE SIGNIFICANTLY RISKIER THAN CONVENTIONAL DEBT INSTRUMENTS. THE ISSUER IS NOT NECESSARILY OBLIGATED TO REPAY THE FULL PRINCIPAL AMOUNT OF THE NOTES AT MATURITY, AND THE NOTES CAN HAVE DOWNSIDE MARKET RISK SIMILAR TO THE LEAST PERFORMING UNDERLYING. THIS MARKET RISK IS IN ADDITION TO THE CREDIT RISK INHERENT IN PURCHASING A DEBT OBLIGATION OF ROYAL BANK OF CANADA. YOU SHOULD NOT PURCHASE THE NOTES IF YOU DO NOT UNDERSTAND OR ARE NOT COMFORTABLE WITH THE SIGNIFICANT RISKS INVOLVED IN INVESTING IN THE NOTES. YOU SHOULD CAREFULLY CONSIDER THE RISKS DESCRIBED UNDER “KEY RISKS” BEGINNING ON PAGE 7, THE RISKS DESCRIBED UNDER “RISK FACTORS” BEGINNING ON PAGE PS-5 OF THE PRODUCT PROSPECTUS SUPPLEMENT NO. UBS-TACYN-1 AND UNDER “RISK FACTORS” BEGINNING ON PAGE S-1 OF THE PROSPECTUS SUPPLEMENT BEFORE PURCHASING ANY NOTES. EVENTS RELATING TO ANY OF THOSE RISKS, OR OTHER RISKS AND UNCERTAINTIES, COULD ADVERSELY AFFECT THE MARKET VALUE OF, AND THE RETURN ON, YOUR NOTES. YOU MAY LOSE SOME OR ALL OF YOUR INITIAL INVESTMENT IN THE NOTES.

#### Note Offering

This free writing prospectus relates to Trigger Autocallable Contingent Yield Notes we are offering linked to the least performing Underlying between the iShares<sup>®</sup> Russell 2000 ETF and SPDR<sup>®</sup> S&P<sup>®</sup> Bank ETF. The Contingent Coupon Rate, Initial Prices, the Downside Thresholds and the Coupon Barriers for the Notes will be determined on the trade date. The Notes will be issued in minimum denominations of \$10.00, and integral multiples of \$10.00 in excess thereof, with a minimum investment of \$1,000.00.

Underlyings (Least Performing of)	Tickers	Contingent Coupon Rate	Initial Prices	Downside Thresholds	Coupon Barriers	CUSIP	ISIN
iShares <sup>®</sup> Russell 2000 ETF	IWM	7.00% to 7.60%		70% of its Initial Price	70% of its Initial Price	78014G625	US78014G6254
SPDR <sup>®</sup> S&P <sup>®</sup> Bank ETF	KBE	per annum		70% of its Initial Price	70% of its Initial Price		

See “Additional Information About Royal Bank of Canada and the Notes” in this free writing prospectus. The Notes will have the terms specified in the prospectus dated September 7, 2018, the prospectus supplement dated September 7, 2018, product prospectus supplement no. UBS-TACYN-1 dated October 3, 2018 and this free writing prospectus. Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the Notes or passed upon the accuracy or the adequacy of this free writing prospectus or the accompanying prospectus, prospectus supplement and product prospectus supplement no. UBS-TACYN-1. Any representation to the contrary is a criminal offense.

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Offering of the Notes	Price to Public		Fees and Commissions <sup>(1)</sup>		Proceeds to Us	
	Total	Per Note	Total	Per Note	Total	Per Note
Notes linked to the Least Performing Underlying Between the iShares <sup>®</sup> Russell 2000 ETF and SPDR <sup>®</sup> S&P <sup>®</sup> Bank ETF		\$10.00		\$0.20		\$9.80

<sup>(1)</sup> UBS Financial Services Inc., which we refer to as UBS, will receive a commission that will depend on market conditions on the Trade Date. In no event will the commission received by UBS exceed \$0.20 per \$10 principal amount of the Notes. See “Supplemental Plan of Distribution (Conflicts of Interest)” below.

The initial estimated value of the Notes as of the date of this document is \$9.7583 per \$10 in principal amount, which is less than the price to public. The pricing supplement relating to the Notes will set forth our estimate of the initial value of the Notes as of the Trade Date, which will not be more than \$0.20 less than this amount. 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 under “Key Risks,” “Supplemental Plan of Distribution (Conflicts of Interest)” and “Structuring the Notes” below.

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

UBS Financial Services Inc. RBC Capital Markets, LLC

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### Additional Information About Royal Bank of Canada and the Notes

Royal Bank of Canada has filed a registration statement (including a prospectus) with the Securities and Exchange Commission, or SEC, for the offering to which this free writing prospectus relates. Before you invest, you should read the prospectus in that registration statement and the other documents relating to this offering that Royal Bank of Canada has filed with the SEC for more complete information about Royal Bank of Canada and this offering. You may obtain these documents without cost by visiting EDGAR on the SEC website at [www.sec.gov](http://www.sec.gov). Alternatively, Royal Bank of Canada, any agent or any dealer participating in this offering will arrange to send you the prospectus, the prospectus supplement, product prospectus supplement no. UBS-TACYN-1 and this free writing prospectus if you so request by calling toll-free 1-877-688-2301.

You may revoke your offer to purchase the Notes at any time prior to the time at which we accept such offer by notifying the applicable agent. We reserve the right to change the terms of, or reject any offer to purchase, the Notes prior to their issuance. In the event of any changes to the terms of the Notes, we will notify you and you will be asked to accept such changes in connection with your purchase. You may also choose to reject such changes, in which case we may reject your offer to purchase.

You should read this free writing prospectus together with the prospectus dated September 7, 2018, as supplemented by the prospectus supplement dated September 7, 2018, relating to our Series H medium-term notes of which these Notes are a part, and the more detailed information contained in product prospectus supplement no. UBS-TACYN-1 dated October 3, 2018. This free writing prospectus, together with the documents listed below, contains the terms of the Notes and supersedes all other prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, fact sheets, brochures or other educational materials of ours. You should carefully consider, among other things, the matters set forth in “Risk Factors” in the accompanying product prospectus supplement no. UBS-TACYN-1, as the Notes involve risks not associated with conventional debt securities.

If the terms discussed in this free writing prospectus differ from those discussed in the product prospectus supplement no. UBS-TACYN-1, the prospectus supplement, or the prospectus, the terms discussed herein will control.

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

..Product prospectus supplement no. UBS-TACYN-1 dated October 3, 2018:

<https://www.sec.gov/Archives/edgar/data/1000275/000114036118040006/form424b5.htm>

..Prospectus supplement dated September 7, 2018:

<https://www.sec.gov/Archives/edgar/data/1000275/000121465918005975/f97180424b3.htm>

..Prospectus dated September 7, 2018:

<https://www.sec.gov/Archives/edgar/data/1000275/000121465918005973/l96181424b3.htm>

As used in this free writing prospectus, “we,” “us” or “our” refers to Royal Bank of Canada.

### Investor Suitability

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

.. You fully understand the risks inherent in an investment in the Notes, including the risk of loss of your entire initial investment.

You can tolerate a loss of all or a substantial portion of your investment and are willing to make an investment that may have the same downside market risk as an investment in the securities composing the Least Performing Underlying.

.. You believe the closing prices of both Underlyings will be equal to or greater than their respective Coupon Barriers on most or all of the Coupon Observation Dates (including the Final Valuation Date).

.. You are willing to make an investment whose return is limited to the applicable Contingent Coupon payments, regardless of any potential appreciation of the Underlyings, which could be significant.

.. You do not seek guaranteed current income from this investment and are willing to forgo the dividends paid on the equity securities held by the Underlyings.

.. You can tolerate fluctuations in the price of the Notes prior to maturity that may be similar to or exceed the downside price fluctuations of the Underlyings.

You are willing to invest in Notes for which there may be little or no secondary market and you accept that the secondary market will depend in large part on the price, if any, at which RBC Capital Markets, LLC, which we refer to as "RBCCM," is willing to purchase the Notes.

.. You would be willing to invest in the Notes if the Contingent Coupon Rate is set to the low end of the range specified on the cover page of this free writing prospectus.

.. You are willing to accept individual exposure to each Underlying and that the performance of the Least Performing Underlying will not be offset or mitigated by the performance of the other Underlying.

.. You understand and accept the risks associated with the Underlyings.

.. You are willing to invest in securities that may be called early and you are otherwise willing to hold such securities to maturity.

.. You are willing to assume our credit risk for all payments under the Notes, and understand that if we default on our obligations, you may not receive any amounts due to you, including any repayment of principal.

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

.. You do not fully understand the risks inherent in an investment in the Notes, including the risk of loss of your entire initial investment.

.. You cannot tolerate a loss on your investment and require an investment designed to provide a full return of principal at maturity.

.. You are not willing to make an investment that may have the same downside market risk as an investment in the Least Performing Underlying.

You believe that the price of either Underlying will decline during the term of the Notes and is likely to close below its Coupon Barrier on most or all of the Coupon Observation Dates and below its Downside Threshold on the Final Valuation Date.

.. You seek an investment that participates in the full appreciation in the prices of the Underlyings or that has unlimited return potential.

.. You cannot tolerate fluctuations in the price of the Notes prior to maturity that may be similar to or exceed the downside price fluctuations of the Least Performing Underlying.

.. You would be unwilling to invest in the Notes if the Contingent Coupon Rate is set to the low end of the range specified on the cover page of this free writing prospectus.

.. You do not understand or accept the risks associated with the Underlyings.

.. You are unwilling to accept individual exposure to each Underlying and that the performance of the Least Performing Underlying will not be offset or mitigated by the performance of the other Underlying.

.. You seek guaranteed current income from this investment or prefer to receive the dividends paid on the Underlyings.

You are unable or unwilling to hold securities that may be called early, or you are otherwise unable or unwilling to hold such securities to maturity or you seek an investment for which there will be an active secondary market for the Notes.

“You are not willing to assume our credit risk for all payments under the Notes, including any repayment of principal.

The suitability considerations identified above are not exhaustive. Whether or not the Notes are a suitable investment for you will depend on your individual circumstances, and you should reach an investment decision only after you and your investment, legal, tax, accounting, and other advisers have carefully considered the suitability of an investment in the Notes in light of your particular circumstances. You should also review carefully the “Key Risks” below and “Risk Factors” in the accompanying product prospectus supplement no. UBS-TACYN-1 for risks related to an investment in the Notes. In addition, you should review carefully “Information About the Underlyings” below for more information about the Underlyings.

Indicative Terms of the Notes<sup>1</sup>

Issuer: Royal Bank of Canada

Principal

Amount per Note: \$10 per Note

Note:

Term:<sup>2</sup> Approximately three years, if not previously called

Underlyings: The iShares<sup>®</sup> Russell 2000 ETF (“IWM”) and the SPDR<sup>®</sup>S&P<sup>®</sup> Bank ETF (“KBE”) (each, an “Underlying”)

Closing Price: With respect to each Underlying, on any trading day, the last reported sale price on the principal national securities exchange in the U.S. on which it is listed for trading, as determined by the calculation agent.

Initial Price: With respect to each Underlying, its closing price on the trade date.

Final Price: With respect to each Underlying, its closing price on the Final Valuation Date.

If the closing prices of both Underlyings are equal to or greater than their respective Coupon Barriers on any Coupon Observation Date, we will pay you the Contingent Coupon applicable to that Coupon Observation Date.

Contingent Coupon: If the closing price of either Underlying is less than its Coupon Barrier on any Coupon Observation Date, the Contingent Coupon applicable to that Coupon Observation Date

will not accrue or be payable, and we will not make any payment to you on the relevant Contingent Coupon Payment Date.

The Contingent Coupon will be a fixed amount based upon equal quarterly installments at the Contingent Coupon Rate, which will be a per annum rate as set forth below.

Contingent Coupon payments on the Notes are not guaranteed. We will not pay you the Contingent Coupon for any Coupon Observation Date on which the closing price of either Underlying is less than its Coupon Barrier.

Contingent Coupon Rate: 7.00% to 7.60% per annum (or 1.75% to 1.90% per quarter). The actual Contingent Coupon Rate will be determined on the Trade Date.

Coupon Barrier: With respect to each Underlying, 70% of its Initial Price (as may be adjusted in the case of certain adjustment events as described under “General Terms of the Notes — Anti-dilution Adjustments” in the product prospectus supplement). The Coupon Barrier equals the Downside Threshold.

Downside Threshold: With respect to each Underlying, 70% of its Initial Price (as may be adjusted in the case of certain adjustment events as described under “General Terms of the Notes — Anti-dilution Adjustments” in the product prospectus supplement). The Downside Threshold equals the Coupon Barrier.

Automatic Call Feature: The Notes will be called automatically if the closing prices of both Underlyings on any Call Observation Date (beginning after six months and set forth on page 6) are greater than or

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

<sup>2</sup> In the event we make any change to the expected trade date and settlement date, the Observation Dates, maturity date and other dates will be changed.

equal to their respective Initial Prices.

If the Notes are called, we will pay you on the corresponding Coupon Payment Date (which will be the “Call Settlement Date”) a cash payment per Note equal to the principal amount per Note plus the applicable Contingent Coupon payment otherwise due on that day (the “Call Settlement Amount”). No further amounts will be owed to you under the Notes.

Payment at Maturity: If the Notes are not called and the Final Prices of both Underlyings are equal to or greater than their respective Downside Thresholds and the Coupon Barriers, we will pay you a cash payment per Note on

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the maturity date equal to \$10 plus the Contingent Coupon otherwise due on the maturity date. If the Notes are not called and the Final Price of the Least Performing Underlying is less than its Downside Threshold, we will pay you a cash payment on the maturity date of less than the principal amount, if anything, resulting in a loss on your initial investment that is proportionate to the negative Underlying Return of the Least Performing Underlying, equal to:  
 $\$10.00 + (\$10.00 \times \text{Underlying Return of the Least Performing Underlying})$

Least Performing Underlying: The Underlying with the lowest Underlying Return.  
Underlying Return: With respect to each Underlying,  
 $\frac{\text{Final Price} - \text{Initial Price}}{\text{Initial Price}}$



Investment Timeline

Trade Date The Initial Price, Downside Threshold and Coupon Barrier of each Underlying are determined.

Quarterly  
(beginning  
after six  
months):

If the closing prices of both Underlyings are equal to or greater than their respective Coupon Barriers on any Coupon Observation Date, we will pay you a Contingent Coupon payment on the applicable Coupon Payment Date.

The Notes will be called if the closing prices of both Underlyings on any Call Observation Date (beginning after six months) are equal to or greater than their respective Initial Prices. If the Notes are called, we will pay you a cash payment per Note equal to \$10 plus the Contingent Coupon otherwise due on that date.

Maturity  
Date:

The Final Price of each Underlying is observed on the Final Valuation Date.

If the Notes have not been called and the Final Prices of both Underlyings are equal to or greater than their respective Downside Thresholds (and their respective Coupon Barriers), we will repay the principal amount equal to \$10 per Note plus the Contingent Coupon otherwise due on the maturity date.

If the Notes have not been called and the Final Price of the Least Performing Underlying is less than its Downside Threshold, we will pay less than the principal amount, if anything, resulting in a loss on your initial investment proportionate to the decline of the Least Performing Underlying, for an amount equal to:

$\$10 + (\$10 \times \text{Underlying Return of the Least Performing Underlying})$  per Note

INVESTING IN THE NOTES INVOLVES SIGNIFICANT RISKS. YOU MAY LOSE SOME OR ALL OF YOUR PRINCIPAL AMOUNT. YOU WILL BE EXPOSED TO THE MARKET RISK OF EACH UNDERLYING ON EACH COUPON OBSERVATION DATE AND ON THE FINAL VALUATION DATE, AND ANY DECLINE IN THE PRICE OF ONE UNDERLYING MAY NEGATIVELY AFFECT YOUR RETURN AND WILL NOT BE OFFSET OR MITIGATED BY A LESSER DECLINE OR ANY POTENTIAL INCREASE IN THE PRICE OF THE OTHER UNDERLYING. ANY PAYMENT ON THE NOTES, INCLUDING ANY REPAYMENT OF PRINCIPAL, IS SUBJECT TO OUR CREDITWORTHINESS. IF WE WERE TO DEFAULT ON OUR PAYMENT OBLIGATIONS, YOU MAY NOT RECEIVE ANY AMOUNTS OWED TO YOU UNDER THE NOTES AND YOU COULD LOSE YOUR ENTIRE INVESTMENT.

Coupon Observation Dates and Coupon Payment Dates\*

Coupon Observation Dates	Coupon Payment Dates
January 14, 2019	January 16, 2019
April 12, 2019 <sup>(1)</sup>	April 16, 2019 <sup>(2)</sup>
July 12, 2019 <sup>(1)</sup>	July 16, 2019 <sup>(2)</sup>
October 14, 2019 <sup>(1)</sup>	October 17, 2019 <sup>(2)</sup>
January 13, 2020 <sup>(1)</sup>	January 15, 2020 <sup>(2)</sup>
April 14, 2020 <sup>(1)</sup>	April 16, 2020 <sup>(2)</sup>
July 13, 2020 <sup>(1)</sup>	July 15, 2020 <sup>(2)</sup>
October 13, 2020 <sup>(1)</sup>	October 15, 2020 <sup>(2)</sup>
January 12, 2021 <sup>(1)</sup>	January 14, 2021 <sup>(2)</sup>
April 12, 2021 <sup>(1)</sup>	April 14, 2021 <sup>(2)</sup>
July 12, 2021 <sup>(1)</sup>	July 14, 2021 <sup>(2)</sup>
October 12, 2021 <sup>(3)</sup>	October 15, 2021 <sup>(4)</sup>

(1) These Coupon Observation Dates are also Call Observation Dates.

(2) These Coupon Payment Dates are also Call Settlement Dates.

(3) This is also the Final Valuation Date.

(4) This is also the maturity date.

\* Expected. Subject to postponement if a market disruption event occurs, as described under “General Terms of the Notes — Payment at Maturity” in the accompanying product prospectus supplement no. UBS-TACYN-1.

## Key Risks

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

### Risks Relating to the Notes Generally

**Risk of Loss at Maturity** — The Notes differ from ordinary debt securities in that we will not necessarily repay the full principal amount of the Notes at maturity. If the Notes are not called, we will repay you the principal amount of your Notes in cash only if the Final Price of each Underlying is greater than or equal to its Downside Threshold, and we will only make that payment at maturity. If the Notes are not called and the Final Price of the Least Performing Underlying is less than its Downside Threshold, you will lose some or all of your initial investment in an amount proportionate to the decline in the price of the Least Performing Underlying.

**The Contingent Repayment of Principal Applies Only at Maturity** — If the Notes are not automatically called, you should be willing to hold your Notes to maturity. If you are able to sell your Notes prior to maturity in the secondary market, if any, you may have to do so at a loss relative to your initial investment, even if the prices of both Underlyings are above their respective Downside Thresholds.

**You May Not Receive any Contingent Coupons** — Royal Bank of Canada will not necessarily make periodic Contingent Coupon payments on the Notes. If the closing prices of both Underlyings on a Coupon Observation Date are less than their respective Coupon Barriers, we will not pay you the Contingent Coupon applicable to that Coupon Observation Date. If the closing prices of both Underlyings are less than their respective Coupon Barriers on each of the Coupon Observation Dates, we will not pay you any Contingent Coupons during the term of, and you will not receive a positive return on, your Notes. Generally, this non-payment of the Contingent Coupon coincides with a period of greater risk of principal loss on your Notes. Accordingly, if we do not pay the Contingent Coupon on the maturity date, you will incur a loss of principal, because the Final Price of the Least Performing Underlying will be less than its Downside Threshold.

**The Call Feature and the Contingent Coupon Feature Limit Your Potential Return** — The return potential of the Notes is limited to the pre-specified Contingent Coupon Rate, regardless of the appreciation of the Underlyings. In addition, the total return on the Notes will vary based on the number of Coupon Observation Dates on which the Contingent Coupon becomes payable prior to maturity or an automatic call. Further, if the Notes are called due to the automatic call feature, you will not receive any Contingent Coupons or any other payment in respect of any Coupon Observation Dates after the applicable Call Settlement Date. Since the Notes could be called as early as the first Call Observation Date, the total return on the Notes could be limited to six months. If the Notes are not called, you may be subject to the full downside performance of the Least Performing Underlying, even though your potential return is limited to the Contingent Coupon Rate. Generally, the longer the Notes are outstanding, the less likely it is that they will be automatically called due to the decline in the prices of the Underlyings and the shorter time remaining for the prices of the Underlyings to recover. As a result, the return on an investment in the Notes could be less than the return on a direct investment in the Underlyings or on a similar security that allows you to participate in the appreciation of the prices of the Underlyings.

**The Contingent Coupon Rate Per Annum Payable on the Notes Will Reflect in Part the Volatility of the Underlyings, and May Not Be Sufficient to Compensate You for the Risk of Loss at Maturity** — “Volatility” refers to the frequency and magnitude of changes in the prices of the Underlyings. The greater the volatility of the Underlyings, the more likely it is that the price of either Underlying could close below its Downside Threshold on the Final Valuation Date. This risk will generally be reflected in a higher Contingent Coupon Rate for the Notes than the interest rate payable on our conventional debt securities with a comparable term. In addition, lower correlation between the Underlyings can also indicate a greater likelihood of one Underlying closing below its Coupon Barrier or Downside Threshold on a Coupon Observation Date or Final Valuation Date. This greater risk will also be reflected in a higher Contingent Coupon Rate than on a security linked to Underlyings with a greater degree of correlation. However, while the Contingent Coupon Rate is set on the trade date, the Underlyings’ volatility correlate and correlation can change significantly over the term of the Notes, and may increase. The prices of one or both of the Underlyings could fall sharply as of the Final Valuation Date, which could result in missed Contingent Coupon payments and a significant

loss of your principal.

**Reinvestment Risk** — The Notes will be called automatically if the closing prices of both Underlyings are equal to or greater than their respective Initial Prices on any Call Observation Date. In the event that the Notes are called prior to maturity, there is no guarantee that you will be able to reinvest the proceeds from an investment in the Notes at a comparable rate of return for a similar level of risk. To the extent you are able to reinvest your proceeds in an investment comparable to the Notes, you will incur transaction costs and the original issue price for such an investment is likely to include certain built in costs such as dealer discounts and hedging costs.

**The Notes Are Subject to Our Credit Risk** — The Notes are subject to our credit risk, and our credit ratings and credit spreads may adversely affect the market value of the Notes. Investors are dependent on our ability to pay all amounts due on the Notes, and therefore investors are subject to our credit risk and to changes in the market's view of our creditworthiness. Any decline in our credit ratings or increase in the credit spreads charged by the market for taking our credit risk is likely to adversely affect the value of the Notes. If we were to default on our payment obligations, you may not receive any amounts owed to you under the Notes and you could lose your entire investment.

**The Notes Will be Subject to Risks, Including Non-Payment in Full, Under Canadian Bank Resolution Powers** — Under Canadian bank resolution powers, the Canada Deposit Insurance Corporation ("CDIC") may, in circumstances where we have ceased, or are about to cease, to be viable, assume temporary control or ownership over us and may be granted broad powers by one or more orders of the Governor in Council (Canada), including the power to sell or dispose of all or a part of our assets, and the power to carry out or cause us to carry out a transaction or a series of transactions the purpose of which is to restructure our business of the Bank. As See "Description of Debt Securities Canadian Bank Resolution Powers" in the accompanying prospectus for a description of the Canadian bank resolution powers, including the bail-in regime. If the CDIC were to take action under the Canadian bank resolution powers with respect to us, this could result in holders of the Notes being exposed to losses.

**The Initial Estimated Value of the Notes Will Be Less than the Price to the Public** — The initial estimated value for the Notes that is set forth on the cover page of this document, and that will be set forth in the final pricing supplement for the Notes, will be less than the public offering price you pay for the Notes and does not represent a minimum price at which we, RBCCM or any of our other 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 prices of the Underlyings, the borrowing rate we pay to issue securities of this kind, and the inclusion in the price to public of the underwriting discount, and our estimated profit and the costs relating to our hedging of the 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 the price to public, as any such sale price would not be expected to include the underwriting discount and our estimated profit and the costs relating to our hedging of the Notes. In addition, any price at which you may sell the Notes is likely to reflect customary bid-ask spreads for similar trades. In addition to bid-ask spreads, the value of the Notes determined for any secondary market price is expected to be based on a secondary market rate rather than the internal borrowing rate used to price the Notes and determine the initial estimated value. As a result, the secondary market price will be less than if the internal borrowing rate was used. The Notes are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your Notes to maturity.

**Our Initial Estimated Value of the Notes Is an Estimate Only, Calculated as of the Time the Terms of the Notes Are 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 trade date will vary based on many factors, including changes in market conditions, and cannot be predicted with accuracy. As a result, the actual value you would receive if you sold the Notes in any secondary market, if any, should be expected to differ materially from the initial estimated value of your Notes and the amount that may be paid at maturity.

**Owning the Notes Is Not the Same as Owning an Underlying or the Stocks Comprising an Underlying’s Underlying Index** — The return on your Notes may not reflect the return you would realize if you actually owned an Underlying or ..stocks included in an Underlying’s underlying index. As a holder of the Notes, you will not have voting rights or rights to receive dividends or other distributions or other rights that holders of an Underlying or these stocks would have, and any such dividends will not be incorporated in the determination of the Underlying Return for either Underlying.

**You Will Not Have Any Shareholder Rights and Will Have No Right to Receive Any Shares of the Underlyings at ..Maturity** — Investing in the Notes will not make you a holder of any shares of the Underlyings or any securities held by the Underlyings. Neither you nor any other holder or owner of the Notes will have any voting rights, any right to receive dividends or other distributions, or any other rights with respect to the Underlyings or such other securities.

**Changes That Affect the Underlying Indices Will Affect the Market Value of the Notes and the Amount You Will Receive at Maturity** — The policies of the index sponsors concerning the calculation of the underlying indices, additions, deletions or substitutions of the components of the underlying indices and the manner in which changes affecting those components, such as stock dividends, reorganizations or mergers, may be reflected in the underlying ..indices and, therefore, could affect the share prices of the Underlyings, the amount payable on the Notes, and the market value of the Notes prior to maturity. The amount payable on the Notes and their market value could also be affected if an index sponsor changes these policies, for example, by changing the manner in which it calculates the applicable underlying index, or if an index sponsor discontinues or suspends the calculation or publication of the applicable underlying index.

**We Have No Affiliation with Any Index Sponsor and Will Not Be Responsible for Its Actions** — The index sponsors are not affiliates of ours and will not be involved in the offering of the Notes in any way. Consequently, we have no control over the actions of the index sponsors, including any actions of the type that would require the calculation ..agent to adjust the payment to you at maturity. The index sponsors have no obligation of any sort with respect to the Notes. Thus, the index sponsors have no obligation to take your interests into consideration for any reason, including in taking any actions that might affect the value of the Notes. None of our proceeds from the issuance of the Notes will be delivered to the index sponsors.

**Adjustments to an Underlying Could Adversely Affect the Notes** — Blackrock, Inc. (“Blackrock”), in its role as the sponsor of the Underlyings, is responsible for calculating and maintaining the Underlyings. Blackrock can add, delete or substitute the stocks comprising the Underlyings or make other methodological changes that could change the share prices of the Underlyings at any time. If one or more of these events occurs, the calculation of the amount payable at maturity may be adjusted to reflect such event or events. Consequently, any of these actions could

adversely affect the amounts payable on the Notes and/or the market value of the Notes.

**We and Our Affiliates Do Not Have Any Affiliation With the Investment Advisor of the Underlyings and Are Not Responsible for Its Public Disclosure of Information** — We and our affiliates are not affiliated with Blackrock in any way and have no ability to control or predict its actions, including any errors in or discontinuance of disclosure regarding its methods or policies relating to the Underlyings. Blackrock is not involved in the offering of the Notes in any way and has no obligation to consider your interests as an owner of the Notes in taking any actions relating to the Underlyings that might affect the value of the Notes. Neither we nor any of our affiliates has independently verified the adequacy or accuracy of the information about Blackrock or the Underlyings contained in any public disclosure of information. You, as an investor in the Notes, should make your own investigation into the Underlyings.

**The Correlation Between the Performance of Each Underlying and the Performance of its Respective Underlying Index May Be Imperfect** — The performance of an Underlying is linked principally to the performance of its underlying index. However, because of the potential discrepancies identified in more detail in the product prospectus supplement, the return on each Underlying may correlate imperfectly with the return on its underlying index. Further, the performance of an Underlying may not exactly replicate the performance of its underlying index, because an Underlying will reflect transaction costs and fees that are not included in the calculation of its underlying index. During periods of market volatility, securities underlying an Underlying may be unavailable in the secondary market, market participants may be unable to calculate accurately the net asset value per share of an Underlying and the liquidity of an Underlying may be adversely affected. This kind of market volatility may also disrupt the ability of market participants to create and redeem shares of an Underlying. Further, market volatility may adversely affect, sometimes materially, the prices at which market participants are willing to buy and sell shares of an Underlying. As a result, under these circumstances, the market value of shares of an Underlying may vary substantially from the net asset value per share of that Underlying. For all of the foregoing reasons, the performance of an Underlying may not correlate with the performance of its underlying index as well as its net asset value per share, which could materially and adversely affect the value of the Notes in the secondary market and/or reduce your payment at maturity.

**Historical Prices of any Underlying Should Not Be Taken as an Indication of its Future Price During the Term of the Notes** — The trading prices of the Underlyings will determine the value of the Notes at any given time. As it is impossible to predict whether the price of any Underlying will rise or fall, and trading prices of the common stocks held by the Underlyings will be influenced by complex and interrelated political, economic, financial and other factors that can affect the issuers of those stocks, and therefore, the value of the Underlyings.

**Management Risk** — The Underlyings are 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, these Underlyings, utilizing a “passive” or indexing investment approach, attempt to approximate the investment performance of its respective underlying index by investing in a portfolio of securities that generally replicate its underlying index. Therefore, unless a specific security is removed from its underlying index, these Underlyings generally would not sell a security because the security’s issuer was in financial trouble. In addition, the Underlyings are subject to the risk that the investment strategy of their respective investment advisors may not produce the intended results.

**Your Return on the Notes Is Not Linked to a Basket Consisting of the Underlyings. Rather, It Will Be Contingent Upon the Performance of Each Individual Underlying** — Unlike an instrument with a return linked to a basket of Underlyings or other underlying assets, in which risk is mitigated and diversified among all of the components of the basket, you will be exposed equally to the risks related to both of the Underlyings. Poor performance by either one of the Underlyings over the term of the Notes may negatively affect your return and will not be offset or mitigated by a positive performance by the other Underlying. For the Notes to be automatically called or to receive any Contingent Coupon payment or contingent repayment of principal at maturity from us, both Underlyings must close above their Initial Prices, Coupon Barriers and Downside Thresholds, respectively, on the applicable Coupon Observation Date. In addition, if not called prior to maturity, you may incur a loss proportionate to the negative return of the Least Performing Underlying. Accordingly, your investment is subject to the market risk of each Underlying, which results in a higher risk of your not receiving Contingent Coupon payments and incurring a loss at maturity.

**Because the Notes Are Linked to the Individual Performance of More than One Underlying, It Is More Likely that One of the Underlyings Will Decrease in Value Below its Coupon Barrier and its Downside Threshold, Increasing the Probability That You Will Not Receive the Contingent Coupons and that You Will Lose Some or All of Your Initial Investment** — The risk that you will not receive the Contingent Coupons and that you will lose some or all of your initial investment in the Notes is greater if you invest in the Notes as opposed to securities that are linked to the performance of a single Underlying if their terms are otherwise substantially similar. With a greater total number of Underlyings, it is more likely that an Underlying will be below its Coupon Barrier or Downside Threshold on a Coupon Observation Date or the Final Valuation Date, and therefore it is more likely that you will not receive the Contingent Coupons and that at maturity you will receive an amount in cash which is worth less than your principal amount. In addition, the performances of a pair of Underlyings may be positively or negatively correlated, or may not be correlated at all. If the Underlyings are not correlated to each other or are negatively correlated, there is a greater potential for one of those Underlyings to close below its Coupon Barrier or Downside Threshold or on the Final Valuation Date, respectively, and therefore the risk of missing a Contingent Coupon payment and that you will lose a portion of your principal at maturity.

It is impossible to predict what the correlations between the Underlyings will be over the term of the Notes. The Underlyings represent different equity markets and these different equity markets may not perform similarly over the term of the Notes. Although the correlation of the Underlyings' performance may change over the term of the Notes, the Contingent Coupon Rate is determined, in part, based on the Underlyings' performance calculated using our internal models at the time when the terms of the Notes are determined. As stated earlier, a higher Contingent Coupon Rate is generally associated with lower correlation of the Underlyings, which reflects a greater potential for missed Contingent Coupons and for a loss on your investment at maturity. See “Correlation of the Underlyings” below.

**An Investment in Notes Linked to IWM Is Subject to Risks Associated with an Investment in Stocks with a Small Market Capitalization** — The IWM is linked to stocks issued by companies with relatively small market capitalizations. These companies often have greater stock price volatility, lower trading volume and less liquidity than large-capitalization companies. As a result, the share price of the IWM may be more volatile than that of a market measure that does not track solely small-capitalization stocks. Stock prices of small-capitalization companies are also often more vulnerable than those of large-capitalization companies to adverse business and economic developments, and the stocks of small-capitalization companies may be thinly traded, and be less attractive to many investors if they do not pay dividends. In addition, small capitalization companies are often less well-established and less stable financially than large-capitalization companies and may depend on a small number of key personnel, making them more vulnerable to loss of those individuals. Small capitalization companies

tend to have lower revenues, less diverse product lines, smaller shares of their target markets, fewer financial resources and fewer competitive strengths than large-capitalization companies. These companies may also be more susceptible to adverse developments related to their products or services.

**The Stocks Included in the KBE Are Concentrated in One Sector** — All of the stocks included in the KBE's underlying index are issued by companies in the banking 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 banking 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 Banking Sector** — Stock prices for banking companies are affected by extensive governmental regulation which may limit both the amounts and types of loans and other financial commitments those companies can make, the interest rates and fees they can charge and the amount of capital they must maintain.

Profitability for banking companies is largely dependent on the availability and cost of capital funds and can fluctuate significantly when interest rates change. Credit losses resulting from financial difficulties of borrowers can negatively impact banking companies. Banks may also be subject to severe price competition, as competition is high among banking companies and failure to maintain or increase market share may result in lost market value. In addition, changes in governmental regulation and oversight of financial institutions such as banks and broker-dealers may have an adverse effect on the financial condition of a financial institution and changes in the creditworthiness of financial institutions may adversely affect the values of instruments of issuers in financial industries.

**No Assurance that the Investment View Implicit in the Notes Will Be Successful** — It is impossible to predict whether and the extent to which the prices of the Underlyings will rise or fall. The closing prices of the Underlyings will be influenced by complex and interrelated political, economic, financial and other factors that affect the Underlyings.

You should be willing to accept the downside risks of owning equities in general and the Underlyings in particular, and the risk of losing some or all of your initial investment.

**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 Underlyings 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 Underlyings, 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 one or both of the Underlyings or the securities included in an Underlying's underlying index, or in futures, options, exchange-traded funds or other derivative products on the Underlyings or those securities may adversely affect the market value of the Underlyings or the closing prices of the Underlyings, 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 Underlyings 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 prices of the Underlyings. The value of the Notes will be affected by a number of economic and market factors that may either offset or magnify each other, including:

- the price of each Underlying;
- the actual and expected volatility of the price of each Underlying;
  - the expected correlation of the Underlyings;
- the time remaining to maturity of the Notes;
- the dividend rates on the securities held by the Underlyings;
- interest and yield rates in the market generally, as well as in each of the markets of the securities held by the Underlyings;
- a variety of economic, financial, political, regulatory or judicial events;
- the occurrence of certain events with respect to the Underlyings 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 one or both of the Underlyings is at, or not sufficiently above, its Downside Threshold.

The Anti-Dilution Protection for Each Underlying Is Limited — The calculation agent will make adjustments to the Initial Price, Downside Threshold and Coupon Barrier of each Underlying for certain events affecting the shares of the Underlyings. However, the calculation agent will not be required to make an adjustment in response to all events that could affect an 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 either Underlying relative to its Initial Price. We cannot predict the Final Price of any Underlying. You should not take these examples as an indication or assurance of the expected performance of either 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 Initial Prices, Contingent Coupon Rate, Coupon Barriers and Downside Thresholds will be set forth in the final pricing supplement):

Principal Amount:	\$10.00
Term:	Approximately three years
Hypothetical Initial Price*:	\$100.00
Hypothetical Contingent Coupon Rate:	7.00% per annum (or 1.75% per quarter)(the low end of the Contingent Coupon Rate set forth above)
Hypothetical Contingent Coupon**:	\$0.175 per quarter
Coupon Observation Dates:	Quarterly
Call Observation Dates:	Quarterly (callable after six months)
Hypothetical Initial Prices*:	
Underlying A:	\$100.00
Underlying B:	\$100.00
Hypothetical Coupon Barriers*:	
Underlying A:	\$70.00 (which is 70% of its Initial Price)
Underlying B:	\$70.00 (which is 70% of its Initial Price)
Hypothetical Downside Thresholds*:	
Underlying A:	\$70.00 (which is 70% of its Initial Price)
Underlying B:	\$70.00 (which is 70% of its Initial Price)

\* Will 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 set forth on the cover page of the pricing supplement relating to this offering.

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

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

Date	Closing Price	Payment (per Note)
First Coupon Observation Date	Underlying A: \$100.00 (at or above Initial Price) Underlying B: \$110.00 (at or above Initial Price)	\$0.175 (Contingent Coupon – not callable)
Second Coupon Observation Date	Underlying A: \$95.00 (at or above Coupon Barrier; below Initial Price) Underlying B: \$60.00 (below Coupon Barrier)	\$0.00 (Notes are not called)
Third Coupon Observation Date	Underlying A: \$95.00 (at or above Coupon Barrier; below Initial Price) Underlying B: \$60.00 (below Coupon Barrier)	\$0.00 (Notes are not called)
Fourth Coupon Observation	Underlying A: \$110.00 (at or above Initial Price)	\$10.175 (settlement amount)

Date

Underlying B: \$115.00 (at or above Initial Price)

Total Payment: \$10.35 (3.50% return)

Since the Notes are called on the fourth Coupon Observation Date, we will pay you on the Call Settlement Date a total of \$10.175 per Note, reflecting your principal amount plus the applicable Contingent Coupon. When added to the Contingent Coupon payment of \$0.175 received in respect of a prior Coupon Observation Date, we will have paid you a total of \$10.35 per Note, for a 3.50% total return on the Notes. No further amount will be owed to you under the Notes.

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Scenario #2: Notes Are NOT Called and the Final Prices of Both Underlyings Are at or Above Their Respective Downside Thresholds.

Date	Closing Price	Payment (per Note)
First Coupon Observation Date	Underlying A: \$110.00 (at or above Coupon Barrier; below Initial Price) Underlying B: \$80.00 (at or above Coupon Barrier; below Initial Price)	\$0.175 (Contingent Coupon – not callable)
Second Coupon Observation Date	Underlying A: \$50.00 (below Coupon Barrier) Underlying B: \$90.00 (at or above Coupon Barrier; below Initial Price)	\$0.00 (Notes are not called)
Third Coupon Observation Date	Underlying A: \$95.00 (at or above Coupon Barrier; below Initial Price) Underlying B: \$40.00 (below Coupon Barrier)	\$0.00 (Notes are not called)
Fourth Coupon Observation Date	Underlying A: \$95.00 (at or above Coupon Barrier; below Initial Price) Underlying B: \$60.00 (below Coupon Barrier)	\$0.00 (Notes are not called)
Fifth through Eleventh Coupon Observation Dates	Underlying A: Various (below Coupon Barrier) Underlying B: Various (above Initial Price)	\$0.00 (Notes are not called)
Final Valuation Date	Underlying A: \$90.00 (at or above Downside Threshold and Coupon Barrier; below Initial Price) Underlying B: \$115.00 (at or above Downside Threshold, Coupon Barrier and Initial Price) Total Payment:	\$10.175 (Payment at Maturity)  \$10.35 (3.50% return)

At maturity, we will pay you a total of \$10.175 per Note, reflecting your principal amount plus the applicable Contingent Coupon. When added to the Contingent Coupon payment of \$0.175 received in respect of a prior Coupon Observation Date, we will have paid you a total of \$10.35 per Note, for a 3.50% total return on the Notes.

Scenario #3: Notes Are NOT Called and the Final Price of One Underlying Is Below its Downside Threshold

Date	Closing Price	Payment (per Note)
First Coupon Observation Date	Underlying A: \$85.00 (at or above Coupon Barrier; below Initial Price) Underlying B: \$120.00 (above Initial Price)	\$0.175 (Contingent Coupon – not callable)
Second Coupon Observation Date	Underlying A: \$90.00 (at or above Coupon Barrier; below Initial Price) Underlying B: \$80.00 (at or above Coupon Barrier; below Initial Price)	\$0.175 (Contingent Coupon – not called)
Third Coupon Observation Date	Underlying A: \$220.00 (above Initial Price) Underlying B: \$80.00 (at or above Coupon Barrier; below Initial Price)	\$0.175 (Contingent Coupon – not called)
Fourth Coupon Observation Date	Underlying A: \$95.00 (at or above Coupon Barrier; below Initial Price) Underlying B: \$60.00 (below Coupon Barrier)	\$0.00 (Notes are not called)
Fifth through Eleventh Coupon Observation Dates	Underlying A: Various (below Coupon Barrier) Underlying B: Various (above Initial Price)	\$0.00 (Notes are not called)
Final Valuation Date	Underlying A: \$50.00 (below Downside Threshold and Coupon Barrier) Underlying B: \$130.00 (above Initial Price) Total Payment:	\$10.00 + [\$10.00 × Underlying Return] = \$10.00 + [\$10.00 × -50%] = \$10.00 - \$5.00 = \$5.00 (Payment at Maturity) \$5.525 (-44.75% return)

Since the Notes are not called and the Final Price of the Least Performing Underlying is below the Downside Threshold, we will pay you at maturity \$5.00 per Note. When added to the Contingent Coupon payments of \$0.525

received in respect of prior Coupon Observation Dates, we will have paid you \$5.525 per Note, for a loss on the Notes of 44.75%.

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 of one or both of the Underlyings is less than its 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 of the Least Performing Underlying 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-TACYN-1, 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.

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 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, 2021. 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 Underlyings

We have derived the following information regarding each of the applicable Underlyings from publicly available documents. We have not independently verified the accuracy or completeness of the following information. We are not affiliated with any of the Underlyings and the Underlyings will have no obligations with respect to the Notes. This document relates only to the Notes and does not relate to the shares of any of the Underlying or any securities included in any of the underlying indices of the Underlyings. Neither we nor any of our affiliates participates in the preparation of the publicly available documents described below. Neither we nor any of our affiliates has made any due diligence inquiry with respect to any of the Underlyings in connection with the offering of any of the Notes. There can be no assurance that all events occurring prior to the date of this document, including events that would affect the accuracy or completeness of the publicly available documents described below, that would affect the trading prices of the shares of any of the Underlyings have been or will be publicly disclosed. Subsequent disclosure of any events or the disclosure of or failure to disclose material future events concerning any of the Underlyings could affect the price of the shares of the applicable Underlying after the trade date, and therefore could affect the payment at maturity. The selection of the Underlyings relating to the Notes is not a recommendation to buy or sell the shares of any of the Underlyings. Neither we nor any of our affiliates make any representation to you as to the performance of the shares of any of the Underlyings. Information provided to or filed with the SEC under the Securities Exchange Act of 1934 and the Investment Company Act of 1940 relating to each Underlying may be obtained through the SEC's website at <http://www.sec.gov>.

#### The iShares® Russell 2000 ETF

The IWM seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the Russell 2000® Index. The shares of this underlying trade on the NYSE Arca, Inc. under the symbol "IWM."

#### Russell 2000® Index

The Russell 2000® Index (Bloomberg L.P. index symbol "RTY") was developed by Russell Investments ("Russell") before FTSE International Limited ("FTSE") and Russell combined in 2015 to create FTSE Russell, which is wholly owned by London Stock Exchange Group. Russell began dissemination of the RTY on January 1, 1984. FTSE Russell calculates and publishes the RTY. The RTY was set to 135 as of the close of business on December 31, 1986. The RTY is designed to track the performance of the small capitalization segment of the U.S. equity market. As a subset of the Russell 3000® Index, the RTY consists of the smallest 2,000 companies included in the Russell 3000® Index. The Russell 3000® Index measures the performance of the largest 3,000 U.S. companies, representing approximately 98% of the investable U.S. equity market. The RTY is determined, comprised, and calculated by FTSE Russell without regard to the Notes.

#### Selection of Stocks Comprising the RTY

All companies eligible for inclusion in the RTY must be classified as a U.S. company under the index sponsor's country-assignment methodology. If a company is incorporated, has a stated headquarters location, and trades in the same country (American Depositary Receipts and American Depositary Shares are not eligible), then the company is assigned to its country of incorporation. If any of the three factors are not the same, the index sponsor defines three Home Country Indicators ("HCIs"): country of incorporation, country of headquarters, and country of the most liquid exchange (as defined by a two-year average daily dollar trading volume) ("ADDTV") from all exchanges within a country. Using the HCIs, the index sponsor compares the primary location of the company's assets with the three HCIs. If the primary location of its assets matches any of the HCIs, then the company is assigned to the primary location of its assets. If there is insufficient information to determine the country in which the company's assets are primarily located, the index sponsor will use the primary country from which the company's revenues are primarily derived for the comparison with the three HCIs in a similar manner. The index sponsor uses the average of two years of assets or revenues data to reduce potential turnover. If conclusive country details cannot be derived from assets or revenues data, the index sponsor will assign the company to the country of its headquarters, which is defined as the address of the company's principal executive offices, unless that country is a Benefit Driven Incorporation "BDI" country, in which case the company will be assigned to the country of its most liquid stock exchange. BDI countries include: Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bonaire, British Virgin Islands, Cayman Islands, Channel Islands, Cook Islands, Curacao, Faroe Islands, Gibraltar, Guernsey, Isle of Man,



Jersey, Liberia, Marshall Islands, Panama, Saba, Sint Eustatius, Sint Maarten, and Turks and Caicos Islands. For any companies incorporated or headquartered in a U.S. territory, including countries such as Puerto Rico, Guam, and U.S. Virgin Islands, a U.S. HCI is assigned.

All securities eligible for inclusion in the RTY must trade on a major U.S. exchange. Stocks must have a closing price at or above \$1.00 on their primary exchange on the last rank day in May to be eligible for inclusion during annual reconstitution. However, in order to reduce unnecessary turnover, if an existing member's closing price is less than \$1.00 on the last day of May, it will be considered eligible if the average of the daily closing prices (from its primary exchange) during the month of May is equal to or greater than \$1.00. Initial public offerings are added each quarter and must have a closing price at or above \$1.00 on the last day of their eligibility period in order to qualify for index inclusion. If an existing stock does not trade on the "rank day" (typically the last trading day in May, but a confirmed timetable is announced each spring), but does have a closing price at or above \$1.00 on another eligible U.S. exchange, that stock will be eligible for inclusion.

An important criterion used to determine the list of securities eligible for the RTY is total market capitalization, which is defined as the market price as of the rank day in May for those securities being considered at annual reconstitution times the total number of shares outstanding. Where applicable, common stock, non-restricted exchangeable shares and partnership units/membership interests are used to determine market capitalization. Any other form of shares such as preferred stock, convertible preferred stock, redeemable shares, participating preferred stock, warrants, rights, installment receipts or trust receipts, are excluded from the calculation. If multiple share classes of common stock exist, they are combined to determine total shares outstanding. In cases where the common stock share classes act independently of each other (e.g., tracking stocks), each class is considered for inclusion separately. If multiple share classes exist, the pricing vehicle will be designated as the share class with the highest two-year trading volume as of the rank day in May.

Companies with a total market capitalization of less than \$30 million are not eligible for the RTY. Similarly, companies with only 5% or less of their shares available in the marketplace are not eligible for the RTY. Royalty trusts, limited liability companies, closed-end investment companies (companies that are required to report Acquired Fund Fees and Expenses, as defined by the SEC, including business development companies), blank check companies, special purpose acquisition companies, and limited partnerships are also ineligible for inclusion. Exchange traded funds and mutual funds are also excluded. Bulletin board, pink-sheets and over-the-counter ("OTC") traded securities are not eligible for inclusion.

Annual reconstitution is a process by which the RTY is completely rebuilt. Based on closing levels of the company's common stock on its primary exchange on the rank day of May of each year, FTSE Russell reconstitutes the composition of the RTY using the then existing market capitalizations of eligible companies. Reconstitution of the RTY occurs on the last Friday in June or, when the last Friday in June is the 29th or 30th, reconstitution occurs on the prior Friday. In addition, the index sponsor adds initial public offerings to the RTY on a quarterly basis based on total market capitalization ranking within the market-adjusted capitalization breaks established during the most recent reconstitution.

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After membership is determined, a security's shares are adjusted to include only those shares available to the public. This is often referred to as "free float." The purpose of the adjustment is to exclude from market calculations the capitalization that is not available for purchase and is not part of the investable opportunity set.

Historical Information

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

Quarter Begin	Quarter End	Quarterly Closing High	Quarterly Closing Low	Quarterly Period-End Close
1/1/2008	3/31/2008	\$75.12	\$64.30	\$68.51
4/1/2008	6/30/2008	\$76.17	\$68.47	\$69.03
7/1/2008	9/30/2008	\$75.20	\$65.50	\$68.39
10/1/2008	12/31/2008	\$67.02	\$38.58	\$49.27
1/1/2009	3/31/2009	\$51.27	\$34.36	\$41.94
4/1/2009	6/30/2009	\$53.19	\$42.82	\$50.96
7/1/2009	9/30/2009	\$62.02	\$47.87	\$60.23
10/1/2009	12/31/2009	\$63.36	\$56.22	\$62.26
1/1/2010	3/31/2010	\$69.25	\$58.68	\$67.81
4/1/2010	6/30/2010	\$74.14	\$61.08	\$61.08
7/1/2010	9/30/2010	\$67.67	\$59.04	\$67.47
10/1/2010	12/31/2010	\$79.22	\$66.94	\$78.23
1/1/2011	3/31/2011	\$84.17	\$77.18	\$84.17
4/1/2011	6/30/2011	\$86.37	\$77.77	\$82.80
7/1/2011	9/30/2011	\$85.65	\$64.25	\$64.25
10/1/2011	12/31/2011	\$76.45	\$60.97	\$73.69
1/1/2012	3/31/2012	\$84.41	\$74.56	\$82.85
4/1/2012	6/30/2012	\$83.79	\$73.64	\$79.65
7/1/2012	9/30/2012	\$86.40	\$76.68	\$83.46
10/1/2012	12/31/2012	\$84.69	\$76.88	\$84.29
1/1/2013	3/31/2013	\$94.80	\$86.65	\$94.26
4/1/2013	6/30/2013	\$99.51	\$89.58	\$97.16
7/1/2013	9/30/2013	\$107.10	\$98.08	\$106.62
10/1/2013	12/31/2013	\$115.31	\$103.67	\$115.31
1/1/2014	3/31/2014	\$119.83	\$108.64	\$116.34
4/1/2014	6/30/2014	\$118.81	\$108.88	\$118.81
7/1/2014	9/30/2014	\$120.02	\$109.35	\$109.35
10/1/2014	12/31/2014	\$121.08	\$104.30	\$119.67
1/1/2015	3/31/2015	\$126.03	\$114.69	\$124.35
4/1/2015	6/30/2015	\$129.01	\$120.85	\$124.86
7/1/2015	9/30/2015	\$126.31	\$107.53	\$109.20
10/1/2015	12/31/2015	\$119.85	\$109.01	\$112.51
1/1/2016	3/31/2016	\$110.62	\$94.80	\$110.62
4/1/2016	6/30/2016	\$118.43	\$108.69	\$114.97
7/1/2016	9/30/2016	\$125.70	\$113.69	\$124.21
10/1/2016	12/31/2016	\$138.31	\$115.00	\$134.85
1/1/2017	3/31/2017	\$140.36	\$133.75	\$137.48
4/1/2017	5/3/2017	\$142.10	\$133.72	\$140.92
7/1/2017	9/30/2017	\$148.18	\$134.83	\$148.18
10/1/2017	12/31/2017	\$154.30	\$145.63	\$152.46
1/1/2018	3/31/2018	\$159.96	\$145.44	\$151.83

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4/1/2018	6/30/2018	\$169.97	\$148.13	\$163.77
7/1/2018	9/30/2018	\$173.02	\$164.20	\$168.55
10/1/2018	10/1/2018*	\$166.33	\$166.33	\$166.33

\* This document includes information for the fourth calendar quarter of 2018 for the period from October 1, 2018 through October 1, 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 fourth calendar quarter of 2018.

The graph below illustrates the performance of the IWM from October 1, 2008 to October 1, 2018, assuming an Initial Price of \$166.33, which was its closing price on October 1, 2018. The solid line represents a hypothetical Downside Threshold and Coupon Barrier of \$116.43 (rounded to two decimal places), which is equal to 70% of its closing price on October 1, 2018. The actual Coupon Barrier and Downside Threshold will be based on the closing price of IWM on the trade date.

n Hypothetical Coupon Barrier / Downside Threshold = 70.00%

**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.

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### The SPDR® S&P® Bank ETF

The shares of the SPDR® S&P® Bank ETF (the “ETF”) are issued by the SPDRSeries Trust (the “trust”), a registered investment company. The Underlying seeks investment results that, before fees and expenses, correspond generally to the total return performance of the S&P Banks Select Industry Index (the “index”). The Underlying trades on the NYSE Arca under the ticker symbol “KBE”. SSGA Funds Management, Inc. (“SSGA”) currently serves as the investment advisor to the Underlying. We obtained the following information in this section from the SPDR® website and the reports referenced below, in each case, without independent verification.

For additional information regarding the trust or SSGA, please consult the reports and other information the trust files with the SEC. Information provided to or filed with the SEC can be inspected and copied at the public reference facilities maintained by the SEC or through the SEC’s website at [sec.gov](http://sec.gov). In addition, information regarding the Underlying, including its top portfolio holdings and the performance of the Underlying and the underlying index, may be obtained from other sources including, but not limited to, press releases, newspaper articles, other publicly available documents, and the SPDR® website at [spdrs.com/product/fund.seam?ticker=KBE](http://spdrs.com/product/fund.seam?ticker=KBE). We are not incorporating by reference the website, the sources listed above or any material they include in this document.

### Investment Objective and Strategy

The KBE seeks to provide investment results that correspond generally to the total return performance, before fees and expenses, of the S&P Banks Select Industry Index (the “index”).

The KBE uses a representative sampling strategy to try to achieve its investment objective, which means that the KBE is not required to purchase all of the securities represented in the underlying index. Instead, the KBE may purchase a subset of the securities in the underlying index in an effort to hold a portfolio of securities with generally the same risk and return characteristics of the underlying index. Under normal market conditions, the KBE generally invests substantially all, but at least 80%, of its total assets in the securities comprising the underlying index. The KBE will provide shareholders with at least 60 days’ notice prior to any change in this 80% investment policy. In addition, the KBE may invest in equity securities not included in the underlying index, cash and cash equivalents or money market instruments, such as repurchase agreements and money market funds (including money market funds advised by SSGA).

In certain situations or market conditions, the KBE may temporarily depart from its normal investment policies and strategies provided that the alternative is consistent with the KBE’s investment objective and is in the best interest of the KBE. For example, the KBE may make larger than normal investments in derivatives to maintain exposure to the underlying index if it is unable to invest directly in a component security.

The board may change the KBE’s investment strategy, index and other policies without shareholder approval. The board may also change the KBE’s investment objective without shareholder approval.

Notwithstanding the KBE’s investment objective, the return on your notes will not reflect any dividends paid on the KBE shares, on the securities purchased by the KBE or on the securities that comprise the underlying index.

### The S&P® Banks Select Industry™ Index

The S&P Banks Select Industry Index (Bloomberg symbol, “SPSIBK Index”) is managed by S&P Dow Jones Indices LLC (“S&P”) and is an equal-weighted index that is designed to measure the performance of stocks in the S&P Total Market Index that both (i) are classified under the Global Industry Classification Standard (“GICS®”) in the asset management & custody banks, diversified banks, regional banks, other diversified financial services and thrifts & mortgage finance sub-industries and (ii) satisfy certain liquidity and market capitalization requirements. The S&P Total Market Index tracks all U.S. common stocks with a primary listing on the NYSE, NYSE Arca, NYSE American, Nasdaq Global Select Market, Nasdaq Select Market, Nasdaq Capital Market, Bats BZX, Bats BYX, Bats EDGA, Bats EDGX and IEX exchanges. The index is one of the 21 sub-industry sector indices S&P maintains that are derived from a portion of the stocks comprising the S&P Total Market Index. An equal-weighted index is one where every stock has the same weight in the underlying index. As such, the underlying index must be rebalanced from time to time to re-establish the proper weighting.

### Eligibility for Inclusion in the Index

Selection for the underlying index is based on a company’s GICS® classification, as well as liquidity and market capitalization requirements. In addition, only U.S. companies are eligible for inclusion in the underlying index. GICS® classifications are determined by S&P using criteria it has selected or developed. Index and classification system sponsors may use very different standards for determining sector designations. In addition, many companies operate in

a number of sectors, but are listed only in one sector. As a result, sector comparisons between indices with different sponsors may reflect differences in methodology as well as actual differences in the sector composition of the indices. To be eligible for inclusion in the underlying index, stocks must be in the S&P Total Market Index and have a float-adjusted market capitalization above \$2 billion with a float-adjusted liquidity ratio above 100%. The float-adjusted liquidity ratio is defined as the dollar value traded over the previous 12 months divided by the float-adjusted market capitalization as of the underlying index's rebalancing reference date. All stocks in the related GICS® sub-industries satisfying the above requirements are included in the underlying index and the total number of stocks in the underlying index should be at least 35. If there are fewer than 35 stocks in the underlying index, the market capitalization requirements may be relaxed to reach at least 22 stocks. With respect to liquidity, the length of time to evaluate liquidity is reduced to the available trading period for companies that recently became public or companies that were spun-off from other companies, the stocks of which therefore do not have 12 months of trading history.

#### Calculation of the Total Return of the Index

The price return index is calculated as the underlying index market value divided by the divisor. The total return calculation begins with the price return of the underlying index. Given the underlying index is an equal-weighted index, the market capitalization of each stock used in the calculation of the underlying index market value is redefined so that each stock has an equal weight in the underlying index on each rebalancing date. The adjusted market capitalization for each stock in the underlying index is calculated as the product of the stock price, the number of shares outstanding, the stock's float factor and the adjustment factor.

A stock's float factor refers to the number of shares outstanding that are available to investors. S&P indices exclude shares closely held by control groups from the underlying index calculation because such shares are not available to investors. For each stock, S&P calculates an Investable Weight Factor (IWF) which is the percentage of total shares outstanding that are included in the underlying index calculation.

The adjustment factor for each stock is assigned at each rebalancing date and is calculated by dividing a specific constant set for the purpose of deriving the adjustment factor (often referred to as modified index shares) by the number of stocks in the underlying index multiplied by the float adjusted market value of such stock on such rebalancing date.

Adjustments are also made to ensure that no stock in the underlying index will have a weight that exceeds the value that can be traded in a single day for a theoretical portfolio of \$2 billion. Theoretical portfolio values are reviewed annually and any updates are made at the discretion of the underlying index committee, as defined below.

The maximum basket liquidity weight for each stock in the underlying index will be calculated using the ratio of its three-month median daily value traded to the theoretical portfolio value of \$2 billion. Each stock's weight in the index is then compared to its maximum basket liquidity weight and is set to the lesser of (1) its maximum basket liquidity weight or (2) its initial equal weight. All excess weight is redistributed across the underlying index to the uncapped stocks. If necessary, a final adjustment is made to ensure that no stock in the underlying index has a weight greater than 4.5%. No further adjustments are made if the latter step would force the weight of those stocks limited to their maximum basket liquidity weight to exceed that weight. If the underlying index contains exactly 22 stocks as of the rebalancing effective date, the underlying index will be equally weighted without basket liquidity constraints.

If a company has more than one share class line in the S&P Total Market Index, such company will be represented once by the primary listing (generally the most liquid share line). In the event that a company issues a secondary share class to the index share class holders by means of a mandatory distribution, the newly issued share class line will be added to the underlying index on the distribution ex-date, provided that the distributed class is not considered to be de minimis. Both share class lines will then remain in the underlying index until the next rebalancing, at which time only the primary share class line will be considered for continued inclusion.

The index is calculated by using the divisor methodology used in all S&P equity indices. The initial divisor was set to have a base value of 1,000 on June 20, 2003. The index level is the index market value divided by the index divisor. In order to maintain index series continuity, it is also necessary to adjust the divisor at each rebalancing. Therefore, the divisor (after rebalancing) equals the index market value (after rebalancing) divided by the index value before rebalancing. The divisor keeps the underlying index comparable over time and is one manipulation point for adjustments to the index, which we refer to as maintenance of the index.

Once the price return index has been calculated, the total return index is calculated. First, the total daily dividend for each stock in the underlying index is calculated by multiplying the per share dividend by the number of shares included in the index. Then the index dividend is calculated by aggregating the total daily dividends for each of the index stocks (which may be zero for some stocks) and dividing by the divisor for that day. Next the daily total return of the index is calculated as a fraction minus 1, the numerator of which is the sum of the index level plus the index dividend and the denominator of which is the index level on the previous day. Finally, the total return index for that day is calculated as the product of the value of the total return index on the previous day times the sum of 1 plus the index daily total return for that day.

#### Maintenance of the Index

The composition of the underlying index is reviewed quarterly. Rebalancing occurs after the closing of the relevant U.S. trading markets on the third Friday of the month ending that quarter. The reference date for float-adjusted market capitalization and the float-adjusted liquidity ratio is after the closing of the last trading day of the previous month. The reference date for GICS® classification is as of the rebalancing effective date. Existing stocks in the index are removed at the quarterly rebalancing if either their float-adjusted capitalization falls below \$1 billion or their float-adjusted liquidity ratio falls below 50%. A company will also be deleted from the index if the S&P Total Market Index deletes that company. Companies are added between rebalancings only if a company deletion causes the number of companies in the index to fall below 22. The newly added company will be added to the index at the weight of the deleted company. If the stock was deleted at \$0.00, the newly added stock will be added at the deleted stock's previous day's closing value (or the most immediate prior business day that the deleted stock was not valued at \$0.00) and an adjustment to the divisor will be made (only in the case of stocks removed at \$0.00). At the next rebalancing, the index will be rebalanced based on the eligibility requirements and equal-weight methodology discussed above. In the case of GICS® changes, where a stock no longer qualifies to belong to the index after the classification change, it is removed from the index on the next rebalancing date. In the case of a spin-off, the spin-off company will be added to the index at a zero price after the close of the trading on the day before the ex-date. In general and subject to certain exceptions, both the parent company and spin-off companies will remain in the index until the next index rebalancing. In the case of mergers involving two index constituents, the merged entity will remain in the index provided that it meets all general eligibility requirements. The merged entity will be added to the index at the weight of the stock deemed to be the surviving stock in the transaction. The surviving stock will not experience a weight change and its

subsequent weight will not be equal to that of the pre-merger weight of the merged entities.

Adjustments are made to the index in the event of certain corporate actions relating to the stocks included in the index, such as spin off, rights offerings, stock splits and special dividends.

#### Index Committee

The Americas Thematic and Strategy Index Committee (the “index committee”) maintains the index and consists of full-time professional members of S&P staff. At monthly meetings, the index committee reviews pending corporate actions that may affect index constituents, statistics comparing the composition of the indices to the market, companies that are being considered as candidates for additions to the index and any significant market events. The index committee may also revise index policy, such as the rules for selecting constituents, the treatment of dividends, share counts or other matters.

#### Unscheduled Market Closures

In situations where an exchange is forced to close early due to unforeseen events, such as computer or electric power failures, weather conditions or other events, S&P will calculate the closing price of the stocks in the index based on (1) the closing prices published by the exchange, or (2) if no closing price is available, the last regular trade reported before the exchange closed. In all cases, the prices will be from the primary exchange for each stock in the index. If an exchange for a stock fails to open due to unforeseen circumstances, S&P will use the prior day’s closing prices for such stock. If all exchanges fail to open, S&P may determine not to publish the index for that day.



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Historical Information

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

Quarter Begin	Quarter End	Quarterly Closing High (\$)	Quarterly Closing Low (\$)	Quarterly Period-End Close (\$)
1/1/2008	3/31/2008	\$47.34	\$37.42	\$38.85
4/1/2008	6/30/2008	\$42.66	\$28.59	\$28.59
7/1/2008	9/30/2008	\$39.75	\$23.92	\$33.49
10/1/2008	12/31/2008	\$35.86	\$18.30	\$21.89
1/1/2009	3/31/2009	\$22.34	\$9.31	\$13.86
4/1/2009	6/30/2009	\$21.56	\$14.00	\$18.05
7/1/2009	9/30/2009	\$24.08	\$16.91	\$23.33
10/1/2009	12/31/2009	\$24.44	\$20.68	\$21.17
1/1/2010	3/31/2010	\$26.07	\$21.71	\$25.81
4/1/2010	6/30/2010	\$28.72	\$22.89	\$22.89
7/1/2010	9/30/2010	\$25.29	\$21.39	\$22.95
10/1/2010	12/31/2010	\$26.10	\$22.10	\$25.91
1/1/2011	3/31/2011	\$27.64	\$25.30	\$25.82
4/1/2011	6/30/2011	\$26.43	\$22.99	\$23.99
7/1/2011	9/30/2011	\$24.44	\$17.09	\$17.54
10/1/2011	12/31/2011	\$20.49	\$16.73	\$19.83
1/1/2012	3/31/2012	\$24.44	\$20.29	\$23.85
4/1/2012	6/30/2012	\$24.10	\$20.25	\$22.04
7/1/2012	9/30/2012	\$24.63	\$21.12	\$23.48
10/1/2012	12/31/2012	\$24.40	\$22.29	\$23.83
1/1/2013	3/31/2013	\$27.23	\$24.57	\$26.92
4/1/2013	6/30/2013	\$28.84	\$25.47	\$28.72
7/1/2013	9/30/2013	\$31.98	\$29.09	\$30.03
10/1/2013	12/31/2013	\$33.18	\$29.54	\$33.17
1/1/2014	3/31/2014	\$34.67	\$30.78	\$34.04
4/1/2014	6/30/2014	\$34.50	\$31.03	\$33.42
7/1/2014				