

BZX Information Circular 17-022 BYX Information Circular 17-022 EDGA Information Circular 17-022 EDGX Information Circular 17-022

Date: January 15, 2017

Re: Royal Bank of Canada Exchange Traded Notes

Pursuant to the Rules of Bats BZX Exchange, Inc. ("BZX"), Bats BYX Exchange, Inc. ("BYX"), Bats EDGA Exchange, Inc. ("EDGA") and Bats EDGX Exchange, Inc. ("EDGX", each such exchange referred to hereafter as "Bats" or the "Exchange" and together with BZX, BYX and EDGA, the "Exchange"), this Information Circular is being issued to advise you that the following securities have been approved for trading pursuant to unlisted trading privileges ("UTP") on the Exchange as UTP Derivative Securities pursuant to Chapter XIV of the Exchange's Rules.

Securities (the "Notes") Symbol

Royal Bank of Canada Exchange Traded Notes due June 20, 2036 Linked to the S&P 500 Trend Allocator PR Index TALL

Commencement of Trading on the Exchange: January 16, 2017

Issuer/Trust: RBC Capital Markets, LLC

Primary Listing Exchange: Nasdaq

The purpose of this information circular is to outline various rules and policies that will be applicable to trading in this new product on the Exchange, as well as to provide certain characteristics and features of the Notes.

Background Information on the Notes

As more fully explained in the Pricing Supplement dated June 27, 2016, Product Supplement dated January 8, 2016, and Prospectus dated January 8, 2016 for the Royal Bank of Canada Exchange Traded Notes due June 20, 2036 Linked to the S&P 500 Trend Allocator PR Index (the "ETNs") (File No. 333-208507). The returns of the ETNs are linked to the performance of the performance of the S&P 500 Trend Allocator PR Index (the "Index"). The ETNs do not guarantee any return of principal at maturity. The investor may receive periodic interest payments under the circumstances described in the pricing supplement and a cash payment at maturity or upon early redemption based on the performance of the Index. The ETNs are senior unsecured obligations of Royal Bank of Canada (the "Issuer"), which mature on June 20, 2036.

The Index allocates between the S&P 500 Price Return Index (the "Equity Index") and the Federal Funds Effective Rate (the "Cash Rate"), based on the average of the last 200 historical daily closing values of the S&P 500 Total Return Index (the "Benchmark Index"). Depending on whether the Benchmark Index is in a positive or a negative trend, the Index will allocate between the Equity Index and the Cash Rate. The Index level is calculated based on the performance of either the Equity Index or the Cash Rate, as applicable.

The Index is provided and calculated by S&P Dow Jones Indices LLC. The value of the Index is reported on Bloomberg under ticker symbol "SPTRALUP <Index>".

The ETNs are subject to early redemption or acceleration in whole or in part at any time. Accordingly, an investor should not expect to be able to hold the ETNs to maturity. Additionally, the ETNs do not guarantee any return of principal at, or prior to, maturity or call, or upon early redemption. Instead, at maturity, investors will receive a cash payment, the amount of which will vary depending on the performance of the Index and will be reduced by the accrued fees as of the last Business Day in the measurement period and may be zero.

The ETNs may be redeemed early, at the investor's option, subject to a minimum redemption amount of 50,000 securities. Upon such early redemption, the investor will receive a cash payment that is based on the performance of the Index, less the accrued fees and the redemption fee.

The ETNs' initial indicative value current value on the initial valuation date will equal \$20.00. The Intraday Indicative Value for the ETNs will be disseminated by market data vendors under the symbol TALL.IV.

Additional information regarding the ETNs, including information about redemption procedures, fees, and dividends can be found in the Product Supplement.

Investment Risks

As described in the ETNs' Pricing Supplement, investing in the ETNs involves a number of risks not associated with an investment in conventional debt securities. An investment in the ETNs involves significant risks and is not appropriate for every investor. Investing in the ETNs is not equivalent to investing directly in the Index. Accordingly, the ETNs should be purchased only by knowledgeable investors who understand the terms of the investment in the ETNs and are familiar with the behavior of the Index and financial markets generally.

Interested persons are referred to the Pricing Supplement for a full description of risks associated with an investment in the ETNs. These risks include, but are not limited to, the ETNs do not have a minimum redemption or repurchase amount and the investor may lose all or a significant portion of their investment; the ETNs are subject to the credit risk of the Issuer; there are restrictions on the minimum number of ETNs the investor may offer to the Issuer for repurchase; the holder may not be able to offer ETNs for repurchase because there may be fewer than 50,000 ETNs outstanding at any time; the holder will not know the daily repurchase value or the call settlement value it will receive at the time an election is made to repurchase the ETNs; the Issuer may repurchase the ETNs at its option; the holder is not guaranteed a coupon payment; prior to maturity, the market value of the ETNs may be influenced by many unpredictable factors; and the liquidity of the market for the ETNs may vary materially over time. The ETNs are riskier than ordinary unsecured debt securities.

For a more complete description of the securities and the payment at maturity, valuation, fees and risk factors, consult the ETNs' Pricing Supplement.

Exchange Rules Applicable to Trading in the Notes

Trading in the Notes on Bats is subject to Bats equity trading rules.

Trading Hours

The Notes will trade on Bats between 8:00 a.m. and 5:00 p.m. ET. The Notes will trade on EDGA and EDGX between 8:00 a.m. and 8:00 p.m. ET.

Please note that trading in the Notes during the Exchange's Pre-Opening and After Hours/Post Closing Trading Sessions ("Extended Market Sessions") may result in additional trading risks which include: (1) that the current underlying indicative value may not be updated during the Extended Market Sessions, (2) lower liquidity in the Extended Market Sessions may impact pricing, (3) higher volatility in the Extended Market Sessions may impact pricing, (4) wider spreads may occur in the Extended Market Sessions, and (5) because the indicative value is not calculated or widely disseminated during the Extended Market Sessions, an

investor who is unable to calculate an implied value for the Shares in those sessions may be at a disadvantage to market professionals.

Suitability

Trading in the securities on the Exchange will be subject to the provisions of Exchange Rule 3.7. Members recommending transactions in the securities to customers should make a determination that the recommendation is suitable for the customer. Members should adopt appropriate procedures for the opening and maintaining of accounts, including the maintaining of records prescribed by any applicable regulatory organization and by the rules and regulations of the Commission.

Trading Halts

The Exchange will halt trading in the shares of a security in accordance with Exchange Rules. The grounds for a halt include a halt because the intraday indicative value of the security and/or the value of its underlying index are not being disseminated as required, a halt for other regulatory reasons or due to other conditions or circumstances deemed to be detrimental to the maintenance of a free and orderly market.

This Information Circular is not a statutory prospectus. Members should consult the Prospectus for a security and the security's website for relevant information.

Please contact Listings Services at 913.815.7260 with any inquiries regarding this Information Circular.