

**S&P Dow Jones
Indices**

A Division of **S&P Global**

**S&P/TSX Canadian Dividend
Aristocrats Index
*Methodology***

February 2020

Table of Contents

Introduction	3
Index Objective and Highlights	3
Partnership	3
Supporting Documents	3
Eligibility Criteria	4
Index Eligibility	4
Multiple Classes of Stock	4
Index Construction	5
Constituent Selection	5
Constituent Weightings	5
Index Calculations	6
Index Maintenance	7
Annual Rebalancing	7
Monthly Dividend Review	7
Corporate Actions	8
Index Adjustments	8
Currency of Calculation and Additional Index Return Series	8
Base Date	8
Index Data	9
Calculation Return Types	9
Index Governance	10
Index Committee	10
Index Policy	11
Announcements	11
Holiday Schedule	11
Rebalancing	11
Unexpected Exchange Closures	11
Recalculation Policy	11
Real-Time Calculation	11
Contact Information	11

Index Dissemination	12
Tickers	12
Index Data	12
Appendix	13
Methodology Changes	13
Disclaimer	16

Introduction

Index Objective and Highlights

The S&P/TSX Canadian Dividend Aristocrats® Index is designed to measure the performance of constituents of the S&P Canada Broad Market Index (BMI) (the “Underlying Index”) which have followed a managed-dividends policy of increasing dividends. The index is weighted by indicated annual dividend yield. The Dividend Aristocrats constituent universe is reviewed every January.

The index methodology incorporates concentration limits. Modifications are made to stock weights to ensure no stock represents more than 8% of the index weight and to enhance index basket liquidity at the annual rebalancing.

Partnership

The S&P/TSX indices are calculated and managed by S&P Dow Jones Indices. The TMX Group Inc. (TMX) is the owner and distributor of all S&P/TSX equity index data.

Supporting Documents

This methodology is meant to be read in conjunction with supporting documents providing greater detail with respect to the policies, procedures and calculations described herein. References throughout the methodology direct the reader to the relevant supporting document for further information on a specific topic. The list of the main supplemental documents for this methodology and the hyperlinks to those documents is as follows:

Supporting Document	URL
S&P Dow Jones Indices’ Equity Indices Policies & Practices Methodology	Equity Indices Policies & Practices
S&P Dow Jones Indices’ Index Mathematics Methodology	Index Mathematics Methodology
S&P Dow Jones Indices’ Float Adjustment Methodology	Float Adjustment Methodology

This methodology was created by S&P Dow Jones Indices to achieve the aforementioned objective of measuring the underlying interest of each index governed by this methodology document. Any changes to or deviations from this methodology are made in the sole judgment and discretion of S&P Dow Jones Indices so that the index continues to achieve its objective.

Eligibility Criteria

Index Eligibility

To qualify for membership in the S&P/TSX Canadian Dividend Aristocrats Index, S&P Dow Jones Indices must first consider the company a “Dividend Aristocrat” by satisfying the following criteria:

1. The company's security is a common stock or income trust listed on the Toronto Stock Exchange (TSX) and a constituent of the S&P Canada BMI.
2. The security has increased ordinary cash dividends every year for five years, but can maintain the same dividend for a maximum of two consecutive years within that five year period.
3. The float-adjusted market capitalization of the security, at the time of the review, must be at least C\$ 300 million. The float-adjusted market capitalization is calculated based on the volume weighted average price (VWAP) of the security on the TSX over the last 10 trading days of the month-end prior to the Annual Review.
4. For index additions, the company must have increased dividend in the first year of the prior five years of review for dividend growth. This rule does not apply for current index constituents.

The 12-month period ending December 31 and all dividend ex-dates are used for the dividend analysis, with the data being reviewed every January. In situations where a dividend payment, or payments, deviates from the company's standard dividend payment cycle, S&P Dow Jones Indices will, at its discretion, allocate payments to the appropriate year in order to take a full cycle into account. New members are added to the index on the close of the last business day of January based on a review of the dividend payments of all constituents of the S&P Canada BMI.

Only ordinary dividend payments are considered. Evaluations are made on a best-effort basis using the S&P Canada BMI stock level dividend history.

For spin-offs, the yearly dividend increase history of the parent company is assigned to both the parent and spun-off company on the spin-off effective date. To determine annual dividend payments, the dividends of the parent and spun-off companies are combined until a full annual cycle of dividend payments is available for both post-spin-off companies. Subsequent dividend comparisons are based on the annual dividend amounts of each respective company. For merger and acquisition events, S&P Dow Jones Indices, at its discretion, may retain dividend history for newly formed entities from their predecessor companies.

For information on the S&P Canada BMI, please refer to the S&P Global BMI, S&P/IFCI Methodology available at www.spdji.com.

Multiple Classes of Stock

Each company is represented once by the Designated Listing. For more information regarding the treatment of multiple share classes, please refer to Approach B within the Multiple Share Classes section of the S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Index Construction

Constituent Selection

At each rebalancing, companies in the underlying index that meet the *Eligibility Criteria* are selected until a target constituent count of 40 is reached. If there are not 40 eligible constituents, the highest yielding companies with four years of eligible annual dividend growth patterns are used to supplement the index. If the index still does not have 40 constituents, the S&P/TSX Index Committee has the discretion of determining the remaining constituents.

Constituent Weightings

At the annual rebalancing, stocks are weighted based on indicated annual dividend yield and modifications are made to stock weights, if required, to reduce single stock concentration and enhance index basket liquidity as follows:

- No stock can have a weight of more than 8% in the index.
- The minimum initial portfolio size that can be turned over in a single day (based on recent Canadian and U.S. trading volumes) cannot be lower than C\$ 100 million.

Basket liquidity capping sets a minimum portfolio size of C\$ 100 million that must be turned over in a single day, based on the historical average value-traded pattern. The maximum weight parameter is the maximum weight of each stock at the rebalancing. These parameters may be changed depending upon market circumstances.

1. With data as of the rebalancing reference date, each company is weighted by indicated annual dividend yield.
2. If any company has a weight greater than 8% (where 8% is the maximum weight allowed in the index), that company has its weight capped at 8%.
3. All excess weight is proportionally redistributed to all uncapped stocks within the index.
4. After this redistribution, if the weight of any other stock(s), then, breaches 8%, the process is iterated until there are no stocks breaching the 8% weight limit.
5. A basket liquidity maximum weight (BL) for each company is, then, determined by dividing the C\$ three-month average daily value traded using Canadian and U.S. volume by the basket liquidity amount (C\$ 100 million). This weight is the maximum weight allowed for each stock in the index.
6. If any company has a weight greater than its BL maximum weight, that company will have its weight reduced to its BL maximum weight.
7. All excess weight is proportionally redistributed to all uncapped stocks within the index.
8. If, after this redistribution, the weight of any other stock(s) in the index exceeds its BL maximum weight, the process is iterated until no stock breaches its BL maximum weight.

The basket liquidity and maximum weight constraints are subject to change based on market conditions. If the basket liquidity rule cannot be satisfied for all index constituents after all possible iterations are completed, one or more of these constraints may be changed to ensure that the constraint is satisfied for all constituents.

Index Calculations

The index is calculated by means of the divisor method used for all S&P Dow Jones equity indices. The index value is simply the index market value divided by the index divisor.

For more information on index calculation, please refer to the Non-Market Capitalization Weighted section of S&P Dow Jones Indices' Index Mathematics Methodology.

Index Maintenance

Annual Rebalancing

The index undergoes a rebalancing once a year in January. The reference date for such additions and deletions is after the close on the last trading date of December. Index constituent changes occur after the close on the last business day of January, at which date the new constituents are weighted according to their indicated yield as of the last trading date of December.

The following steps are taken during the January rebalancing:

1. All companies in the qualifying universe are ranked in decreasing order of indicated annual dividend yield.
2. The float-adjusted turnover (total number of shares traded in Canada and U.S. in the previous 12 months divided by float-adjusted shares outstanding at the end of the period) must be at least 0.20. For dual-listed stocks, liquidity must also be at least 0.10 when using Canadian volume only.
3. The Canadian and U.S. average daily value traded (ADVT) over the trailing 12-month period must be at least C\$ 2 million for new constituents and C\$ 1 million for existing constituents. For dual-listed stocks, ADVT must also be at least C\$ 1 million for new constituents and C\$ 0.5 million for existing constituents when using Canadian volume only.
4. Index members are weighted according to their indicated yield.

Additions. At each annual rebalancing, a company is added to the index if it is a constituent of the S&P Canada BMI and it meets the other eligibility criteria for this index.

No additions are made to the index between rebalancings.

Deletions. Index constituents may be deleted from the index for the following reasons:

- During the annual rebalancing:
 - If the company's calendar year dividends decreased from the previous calendar year.
 - If the company's year-end dividend payment remains flat for more than two consecutive years within the five year period.
- During the monthly dividend review:
 - If the company has reduced its calendar year dividend amount and will no longer qualify for index inclusion at the subsequent annual rebalancing.
- Between rebalancings:
 - If the stock is removed from the S&P Canada BMI.

Monthly Dividend Review

S&P Dow Jones Indices reviews index constituents on a monthly basis. If S&P Dow Jones Indices determines an index constituent has eliminated or suspended its dividend, omitted a payment, or reduced its calendar year dividend amount and will no longer qualify for the index at the subsequent reconstitution, it will be removed from the index effective prior to the open of the first business day of the following month and not replaced until the following reconstitution. Any changes are announced five business days prior to month end. The determination of qualifying for the index at the subsequent annual reconstitution is done

at the discretion of the Index Committee. The decision to remove an index constituent due to dividend elimination, suspension, omission, or reduction is based on information publicly announced by the company as of seven business days prior to month-end.

Corporate Actions

Spin-offs. The spun-off company is added to all the indices of which the parent is a constituent, at a zero price at the market close of the day before the ex-date (with no divisor adjustment). If a spun-off company is determined to be ineligible for continued index inclusion, it is removed after at least one day of regular way trading (with a divisor adjustment).

For further information, please refer to the Treatment of Spin-offs and Corporate Actions in S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Index Adjustments

Security action	Adjustment made to Aristocrats	Divisor adjustment for Aristocrats
Deletion from the S&P Canada BMI	If the constituent being deleted from the S&P Canada BMI is a member of the Aristocrats, then it is removed from the Aristocrats index as well.	A divisor adjustment is made to ensure the index level after the deletion is equal to the index level before the deletion.
Share changes between quarterly share adjustments	None.	None.
Quarterly share changes	There is no direct adjustment.	None.

Currency of Calculation and Additional Index Return Series

The S&P/TSX Canadian indices are calculated in Canadian dollars.

In addition to the indices detailed in this methodology, additional return series versions of the indices may be available, including, but not limited to: currency, currency hedged, decrement, fair value, inverse, leveraged, and risk control versions. For a list of available indices, please refer to [S&P DJI's All Indices by Methodology Report](#).

For information on the calculation of different types of indices, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.

Base Date

Daily returns are available from December 21, 2001. The base value for both the price return and total return series starting on that date is 1000. The index is calculated on a real time basis.

Index Data

Calculation Return Types

S&P Dow Jones Indices calculates multiple return types which vary based on the treatment of regular cash dividends. The classification of regular cash dividends is determined by S&P Dow Jones Indices.

- Price Return (PR) versions are calculated without adjustments for regular cash dividends.
- Gross Total Return (TR) versions reinvest regular cash dividends at the close on the ex-date without consideration for withholding taxes.
- Net Total Return (NTR) versions, if available, reinvest regular cash dividends at the close on the ex-date after the deduction of applicable withholding taxes.

In the event there are no regular cash dividends on the ex-date, the daily performance of all three indices will be identical.

For a complete list of indices available, please refer to the daily index levels file (“.SDL”).

For more information on the classification of regular versus special cash dividends as well as the tax rates used in the calculation of net return, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

For more information on the calculation of return types, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.

Index Governance

Index Committee

The S&P/TSX Canadian indices are maintained by the S&P/TSX Canadian Index Committee. The Index Committee is comprised of four members representing S&P Dow Jones Indices and three members representing the Toronto Stock Exchange ("TSX"). The Index Committee is chaired by a member designated by S&P Dow Jones Indices. Meetings are held regularly.

The Index Committee is responsible for setting rules and policies for the S&P/TSX Canadian Indices, determining the composition of the Indices and administering the methodology. In fulfilling its responsibilities, the Index Committee has full and complete discretion to amend, apply or exempt the application of the methodology and other index policies as circumstances may require, and add, remove or by-pass any security in determining the composition of any of the indices.

The Index Committee may rely on any information or documentation submitted to or gathered by it that the Index Committee believes to be accurate. Where a public document used by the Index Committee is available in both official languages, the Index Committee may assume that the contents of both versions are identical. The Index Committee reserves the right to reinterpret publicly available information and to make changes to the index based on a new interpretation of that information at its sole and absolute discretion.

Index corrections and changes to index composition are implemented at such time and in such manner, as the Index Committee deems appropriate. The timing of any index change made in response to a correction shall be at the sole and absolute discretion of the Index Committee.

Stock prices, VWAPs, and prices used to calculate QMV are prices determined by trading on the TSX. Canadian and U.S. trading volume is determined using the composite volume. Canadian trading volume includes trading on the TSX, Aequitas (Lit and Neo), Alpha, CSE (Pure Trading), Instinet Canada, Liquidnet Canada, Lynx, Nasdaq CXC, Nasdaq CXD, Nasdaq CX2, Omega and TriAct Match Now. If a company has a CAD and a USD denominated security listed on the TSX, the volume of both the CAD and USD securities listed on the TSX will be taken into account when calculating the total trading volume. U.S. volume will include trading volume on OTC markets only if the company is dual-listed on a U.S. exchange.

S&P Dow Jones Indices considers information about changes to its Canadian indices and related matters to be potentially market moving and material. Therefore, all Index Committee discussions are confidential.

S&P Dow Jones Indices' Index Committees reserve the right to make exceptions when applying the methodology if the need arises. In any scenario where the treatment differs from the general rules stated in this document or supplemental documents, clients will receive sufficient notice, whenever possible.

In addition to the daily governance of indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews the methodology to ensure the indices continue to achieve the stated objectives, and that the data and methodology remain effective. In certain instances, S&P Dow Jones Indices may publish a consultation inviting comments from external parties.

For information on Quality Assurance and Internal Reviews of Methodology, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Index Policy

Announcements

Whenever possible, announcements of additions or deletions of stocks or other index adjustments are made five trading days before the adjustments are implemented. In those cases when it is not possible to trade a stock five days after an announcement, the announcement period may be shortened. However, the implementation of an index adjustment is never earlier than the market close of the day following the announcement.

Announcements of additions and deletions for the S&P/TSX Canadian indices are generally made after market close. Press releases are released to major news services.

In addition, TMX Datalinx offers a fee-based subscription to Index Notices. The Index Notices provide the most detailed and comprehensive coverage of index changes. Complete data for index replication (including share counts, tickers and data on index levels and returns) are also available through TMX Datalinx. In order to subscribe, contact TMX Datalinx by phone at +1.416.947.4778 or by email at marketdata@tmx.com.

Holiday Schedule

The S&P/TSX Canadian indices are calculated when the Canadian equity market is open.

A complete holiday schedule for the year is available on the TMX Web site at www.tmx.com.

Rebalancing

The Index Committee may change the date of a given rebalancing for reasons including market holidays occurring on or around the scheduled rebalancing date. Any such change will be announced with proper advance notice where possible.

Unexpected Exchange Closures

For information on Unexpected Exchange Closures, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Recalculation Policy

For information on the recalculation policy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Real-Time Calculation

Real-time, intra-day, index calculations are executed for certain indices whenever any of their primary exchanges are open. Real-time indices are not restated.

For information on Calculations and Pricing Disruptions, Expert Judgment and Data Hierarchy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Contact Information

For any questions regarding an index, please contact: index_services@spglobal.com.

Index Dissemination

The TMX Group Inc. (TMX) serves as the distributor of both real-time and historical index data. In addition, index levels are available on S&P Dow Jones Indices Web site at www.spdji.com, through major quote vendors (see codes below), through numerous investment oriented Web sites and various print and electronic media.

Tickers

The table below lists headline indices covered by this document. All versions of the below indices that may exist are also covered by this document. Please refer to [S&P DJI's All Indices by Methodology Report](#) for a complete list of indices covered by this document.

Index	Bloomberg	Reuters
S&P/TSX Canadian Dividend Aristocrats Index	SPTXDV	.GSPTXDV
S&P/TSX Canadian Dividend Aristocrats Index (TR)	SPTXDVT	.TRGSPTXDV
S&P/TSX Canadian Dividend Aristocrats Index (USD)	TXDVU	.GSPTXDVU
S&P/TSX Canadian Dividend Aristocrats Index (USD) TR	TXDVUT	.TRGSPTXDVU

Index Data

Daily constituent and index level data are available from the Toronto Stock Exchange on subscription. Please contact Market Data at 416-947-4778 or, by email, at marketdata@tmx.com.

For further information, please refer to the TMX Web site at www.tmx.com.

Appendix

Methodology Changes

Methodology changes since January 1, 2015 are as follows:

Change	Effective Date (After Close)	Previous	Methodology Updated
Clarification to the Treatment of Spin-offs	31-Jan-20	Not specified.	For spin-offs, the yearly dividend increase history of the parent company is assigned to both the parent and spun-off company on the spin-off effective date. To determine annual dividend payments, the dividends of the parent and spun-off companies are combined until a full annual cycle of dividend payments is available for both post-spin-off companies. Subsequent dividend comparisons are based on the annual dividend amounts of each respective company.
Monthly Dividend Review	19-Apr-19	<p>S&P Dow Jones Indices reviews index constituents on a monthly basis. If S&P Dow Jones Indices determines an index constituent has eliminated, suspended its dividend or omitted a payment, it will be removed from the Index effective prior to the open of the first business day of the following month.</p> <p>In addition, constituent stocks are reviewed on a monthly basis for dividend cuts. Constituent stocks may, at the discretion of the Index Committee, be removed effective prior to the open of the first business day of the following month if the constituent company lowers but does not eliminate its dividend, and its new yield is significantly lower than the lowest yielding constituent and the index committee can determine based on current information that the company will not qualify for inclusion at the next rebalance.</p> <p>The determination of qualifying for the index at the subsequent annual reconstitution is done at the discretion of the Index Committee. The decision to remove an index constituent due to dividend elimination, suspension, omission, or reduction is based on information publicly announced by the company as of five business days prior to month-end. The index constituents removed as part of the monthly dividend review process are not replaced until the following annual reconstitution.</p>	<p>S&P Dow Jones Indices reviews index constituents on a monthly basis. If S&P Dow Jones Indices determines that an index constituent has eliminated or suspended its dividend, omitted a payment, or reduced its calendar year dividend amount and will no longer qualify for the index at the subsequent reconstitution, it will be removed from the index effective prior to the open of the first business day of the following month and not replaced until the following reconstitution. Any changes are announced five business days prior to month-end. The determination of qualifying for the index at the subsequent reconstitution is at the discretion of the Index Committee. The decision to remove an index constituent due to dividend elimination, suspension, omission, or reduction is based on information publicly announced by the company as of seven business days prior to month-end.</p>

Change	Effective Date (After Close)	Methodology	
		Previous	Updated
Trading Volume for Liquidity Calculation	31-Jul-18	Canadian trading volume includes trading volume at the TSX, Aequitas (Lit and Neo), Alpha, CSE (Pure Trading), Lynx, Nasdaq CXC, Nasdaq CX2 and Omega. U.S. trading volume is determined using the composite volume.	Canadian and U.S. trading volume is determined using the composite volume. Canadian trading volume includes trading on the TSX, Aequitas (Lit and Neo), Alpha, CSE (Pure Trading), Instinet Canada, Liquidnet Canada, Lynx, Nasdaq CXC, Nasdaq CXD, Nasdaq CX2, Omega and TriAct Match Now.
Monthly Dividend Review	31-Jul-18	If S&P Dow Jones Indices determines that the company has reduced its calendar year dividend amount and will no longer qualify for index inclusion at the subsequent annual rebalancing, then at the discretion of the Index Committee, a company may be removed after close on the last business day of April, July, and October	<p>S&P Dow Jones Indices reviews index constituents on a monthly basis. If S&P Dow Jones Indices determines an index constituent has eliminated, suspended its dividend or omitted a payment, it will be removed from the Index effective prior to the open of the first business day of the following month.</p> <p>In addition, constituent stocks are reviewed on a monthly basis for dividend cuts. Constituent stocks may, at the discretion of the Index Committee, be removed effective prior to the open of the first business day of the following month if the constituent company lowers but does not eliminate its dividend, and its new yield is significantly lower than the lowest yielding constituent and the index committee can determine based on current information that the company will not qualify for inclusion at the next rebalance.</p> <p>The determination of qualifying for the index at the subsequent annual reconstitution is done at the discretion of the Index Committee. The decision to remove an index constituent due to dividend elimination, suspension, omission, or reduction is based on information publicly announced by the company as of five business days prior to month-end. The index constituents removed as part of the monthly dividend review process are not replaced until the following annual reconstitution.</p>
Volume Weighted Average Price (VWAP) Period	30-Oct-17	Market capitalization is calculated based on the VWAP of the security on the Toronto Stock Exchange over the last three trading days of the month-end prior to the Annual Review.	Market capitalization is calculated based on the VWAP of the security on the Toronto Stock Exchange over the last 10 trading days of the month-end prior to the Annual Review.
Trading Volume for Liquidity Calculation	04-Aug-17	Only trading volume from the TSX, Aequitas (Lit and Neo), Alpha, CSE (Pure Trading), Lynx, Nasdaq CXC, Nasdaq CX2 and Omega was included.	Trading volume from TSX, Aequitas (Lit and Neo), Alpha, CSE (Pure Trading), Lynx, Nasdaq CXC, Nasdaq CX2 and Omega and U.S. exchanges are included.

Change	Effective Date (After Close)	Methodology	
		Previous	Updated
Liquidity Criteria	04-Aug-17	<p>Float-adjusted turnover, as measured by comparing the 12-month volume relative to the current float-adjusted shares, must be at least 0.20.</p> <p>Average daily value traded over the trailing 12-month period must be at least C\$ 2 million for new constituents and C\$ 1 million for existing constituents.</p>	<p>The float-adjusted turnover (total number of shares traded in Canada and U.S. in the previous 12 months divided by float adjusted shares outstanding at the end of the period) must be at least 0.20. For dual-listed stocks, liquidity must also be at least 0.10 when using Canadian volume only.</p> <p>The Canadian and U.S. average daily value traded (ADVT) over the trailing 12-month period must be at least C\$ 2 million for new constituents and C\$ 1 million for existing constituents. For dual-listed stocks, ADVT must also be at least C\$ 1 million for new constituents and C\$ 0.5 million for existing constituents when using Canadian volume only.</p>
Multiple Share Class Lines	20-Aug-15	Companies that have more than one class of common stock outstanding were represented only once in the index. The stock price was based on one class, and the share count was based on the total shares outstanding of all classes.	Each company is represented once by the primary listing, which is generally the most liquid share line.
Trading Volume Marketplaces	20-Aug-15	TSX and other Canadian trading venues which make the data available in a timely fashion.	TSX, Aequitas (Lit and Neo), Alpha, Chi-X, CSE (Pure Trading), CX2, Lynx, TMX Select (Excluded after September 2016 review) and Omega.
Rebalancing Frequency	22-Jun-15	Major rebalancing in January and minor rebalancings (reweighting) in April, July and October.	Annual rebalancing in January. No minor rebalancings (reweighting).
Constituent Weight Capping	22-Jun-15	Stocks are capped at 8% of the index weight.	In addition to the single stock weight capping of 8%, index basket liquidity capping is introduced.

Disclaimer

Copyright © 2020 S&P Dow Jones Indices LLC. All rights reserved. STANDARD & POOR'S, S&P, S&P 500, S&P 500 LOW VOLATILITY INDEX, S&P 100, S&P COMPOSITE 1500, S&P MIDCAP 400, S&P SMALLCAP 600, S&P GIVI, GLOBAL TITANS, DIVIDEND ARISTOCRATS, S&P TARGET DATE INDICES, GICS, SPIVA, SPDR and INDEXOLOGY are registered trademarks of Standard & Poor's Financial Services LLC ("S&P"). DOW JONES, DJ, DJIA and DOW JONES INDUSTRIAL AVERAGE are registered trademarks of Dow Jones Trademark Holdings LLC ("Dow Jones"). These trademarks together with others have been licensed to S&P Dow Jones Indices LLC. Redistribution or reproduction in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, S&P, Dow Jones or their respective affiliates (collectively "S&P Dow Jones Indices") do not have the necessary licenses. Except for certain custom index calculation services, all information provided by S&P Dow Jones Indices is impersonal and not tailored to the needs of any person, entity or group of persons. S&P Dow Jones Indices receives compensation in connection with licensing its indices to third parties and providing custom calculation services. Past performance of an index is not an indication or guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index may be available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor, and S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. Prospective investors are advised to make an investment in any such fund or other vehicle only after carefully considering the risks associated with investing in such funds, as detailed in an offering memorandum or similar document that is prepared by or on behalf of the issuer of the investment fund or other investment product or vehicle. S&P Dow Jones Indices LLC is not a tax advisor. A tax advisor should be consulted to evaluate the impact of any tax-exempt securities on portfolios and the tax consequences of making any particular investment decision. Inclusion of a security within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof ("Content") may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be

liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Global keeps certain activities of its various divisions and business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions and business units of S&P Global may have information that is not available to other business units. S&P Global has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.

TSX is a trademark of TSX, Inc. and has been licensed for use by S&P Dow Jones Indices.