

Guideline relating to

Solactive Canadian Bond Universe TR Index
Solactive Short-Term Canadian Bond Universe TR Index

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This document contains the underlying principles and regulations regarding the structure and the operating of the Solactive Canadian Bond Universe TR Index and its sub-indices. Solactive AG shall make every effort to implement regulations. Solactive AG does not offer any explicit or tacit guarantee or assurance, neither pertaining to the results from the use of the index nor the index value at any certain point in time nor in any other respect. The Solactive Canadian Bond Universe TR Index and its sub-indices are the sole property of Solactive AG. Solactive AG strives to the best of its ability to ensure the correctness of the calculation. There is no obligation for Solactive AG – irrespective of possible obligations to issuers – to advise third parties, including investors and/or financial intermediaries, of any errors in the index. The calculation and publication of the indices by Solactive AG is no recommendation for capital investment and does not contain any assurance or opinion of Solactive AG regarding a possible investment in a financial instrument based on this index.

Introduction

This document is to be used as a guideline with regard to the composition, calculation and management of the Solactive Canadian Bond Universe TR Index and its sub-indices. Any changes made to the guideline are initiated by the Committee specified in section 1.6. The Solactive Canadian Bond Universe TR Index and its sub-indices are the sole property of Solactive AG. The Solactive Canadian Bond Universe TR Index and its sub-indices are calculated and published by Solactive AG. The name “Solactive” is copyrighted.

1 Index specifications

The Solactive Canadian Bond Universe TR Index is designed to track the performance of the bonds denominated in Canadian Dollars (CAD) that are issued in the Canadian market. The index seeks to provide a broad measure of the Canadian investment-grade fixed income market, covering government, quasi-government and corporate bonds. The index is rebalanced on a quarterly basis but considers new issuances as soon as available.

The Solactive Short-Term Canadian Bond Universe TR Index is a maturity sub-index of the Solactive Canadian Bond Universe TR Index. The Index is designed to replicate the 1 to 5 year maturity band of the broad Canadian investment-grade fixed income market.

1.1 Name and ISIN

The indices are distributed under the following identifier:

Name	ISIN	WKN	Reuters RIC	Bloomberg Ticker
Solactive Canadian Bond Universe TR Index	DE000SLA25Z8	SLA25Z	.SOLCAUTR	SOLCAUTR Index
Solactive Short-Term Canadian Bond Universe TR Index	DE000SLA2506	SLA250	.SOLCASTR	SOLCASTR Index

1.2 Initial value

The index will be calculated every Business Day starting on 22nd of March 2017 . The indices were based on 1000 as at the close of trading on 03rd of January 2012.

1.3 Distribution

The Solactive Canadian Bond Universe TR Index and its sub-indices are published via the price marketing services of Boerse Stuttgart AG and is distributed to all affiliated vendors.

1.4 Prices and calculation frequency

The Solactive Canadian Bond Universe TR Index and its sub-indices are calculated based on the Last Evaluated Mid Price (see 4.2 Further Definitions) of the respective Index Components. For the avoidance of doubt this refers to the Evaluated Price. The index is calculated and distributed once every Business Day. In the event that data cannot be provided or that there are troubles regarding the price marketing of Solactive AG the index cannot be distributed.

1.5 Weighting

The Index Components are weighted according to

Solactive Canadian Bond Universe TR Index

The Index Components are weighted according to their respective Market Value in proportion to the aggregated Market Value of all Index Components in the index (see weighting formula in chapter 3.1), whereas no additional weight constraints are applied.

Solactive Short-Term Canadian Bond Universe TR Index

The Index Components are weighted according to their respective Market Value in proportion to the aggregated Market Value of all Index Components in the index (see weighting formula in chapter 3.1), whereas no additional weight constraints are applied.

The weighting methodology may be amended by the Committee if required due to legal framework.

1.6 Index Committee

The Solactive Canadian Bond Universe TR Index and its sub-indices are rules-based indices. Solactive AG is responsible for applying the rules as described in this index guideline.

Only in case of an Extraordinary Event a Committee composed of Solactive AG employees (hereinafter referred to as the "**Committee**" or the "**Index Committee**") will decide about the future composition of the Solactive Canadian Bond Universe TR Index and its sub-indices. The Committee will meet and decide on how to treat the Extraordinary Event in the index based on the information available. An extraordinary adjustment will only be implemented if the majority of the Committee supports the suggested treatment. As soon as a decision has been taken all parties related to the index are informed about the Extraordinary Event as well as the decided treatment and date of implementation. For further information on the treatment of Extraordinary Events see chapter 2.3.

The Committee can also make amendments to the index rules if required. As an example, if the index does not meet legal or regulatory requirements (for the index itself or related financial products) anymore the Committee reserves the right to adjust the rules to meet these requirements. This may affect selection criteria or weighting rules. If there are any changes to the rules, all parties related to the index are informed and the new rulebook will be published on the company website www.solactive.com.

1.7 Publication

All specifications and information relevant for calculating the index are made available on the <http://www.solactive.com> web pages and sub-pages.

1.8 Historical data

Historical data will be maintained from the 03rd of January 2012.

1.9 Licencing

Licences to use the index as the underlying value for derivative instruments are issued to stock exchanges, banks, financial services providers and investment houses by Solactive AG.

2 Composition of the Index

2.1 Selection of the Index Components

At the launch of the index, all financial instruments which meet the requirements of the Selection Pool as defined under 4.1. are eligible for inclusion in the index. Instruments that will be issued after the launch of the index between two selection days will be added to the index between Adjustment Days given they fulfil all requirements of the Selection Pool on the first day a pricing is available from the respective Pricing Provider.

Additionally, on the quarterly Selection Day, the Index Committee evaluates whether all current Index Components still meet the requirements of the Selection Pool and – if necessary – any Index Components which do not pass this screen are removed from the Selection Pool on the Adjustment Day.

Extraordinary adjustments are possible.

2.2 Ordinary adjustment

The composition of the index is ordinarily reviewed on the quarterly Selection Day. Any change to the index will be implemented on the Adjustment Day. Additionally, newly issued bonds will be added between Adjustment Days to the index as soon as a pricing is available from the pricing provider.

2.3 Extraordinary adjustment

Extraordinary Events may lead to adjustments of the index between Adjustment Days.

To standardise processes the following standard treatments for common corporate actions have been established:

Full Tender or Early Redemption: The bond proceeds will be reinvested into the index on the effective date. For the avoidance of doubt a tender must be mandatory, the pure offer to tender a bond will not lead to an adaption of the index.*

On the effective date price and accrued interest are 0 and the proceeds (tender/redemption price + accrued interest/coupon) are considered as “Paid Cash” in the return formula (see 3.1.1). On the next calculation day the bond is removed from the index and weightings are calculated according to the formula in 3.1.1. The new higher weightings of the remaining constituents imply the direct reinvestment of the redeemed bond into all other Index Components.

Exchange Offer:

- 1) optional exchange offers are not treated in the index;*
- 2) mandatory exchange offers: In case less than 90% of the amount outstanding is exchanged the exchange will not be considered in the index.
- 3) mandatory exchange offers: In case more than 90% of the amount outstanding is exchanged the exchange will be considered in the index calculation by exchanging the relevant bonds, so that the new bond will receive the weight of the old exchanged bond.

The capping factor of the new bond is calculated based on the following formula:

$$CapFactor_{t,new} = \frac{(Price_{t,old} + ACCInt_{t,old}) * Amount_{SD,old} * Cap_{SD,old}}{(Price_{t,new} + ACCInt_{t,new}) * Amount_{t,new}}$$

Flat Trading: A bond is flat trading if the bond issuer will not meet its coupon payment obligation which means that the buyer of a bond is not responsible for paying the interest that has accrued since the last payment. If a bond is defined to be “flat trading”

between two adjustment days the respective accrued interests and coupons will be set to 0. The bond will not be removed until the next adjustment date.

Default: If the status of a bond changes to “In Default”, the bond will remain as part of the index or portfolio at the last available evaluated price provided by the pricing source until the next regular index adjustment day.

New issuances:** New bond issues will be added to the index between Adjustment Days as soon as a pricing is available for the new bond.

Re-Opening:** Re-opening outstanding issues and increasing the notional amount will be reflected in the index on a daily basis. I.e. the weight of the specific component will increase on the respective ex-date, or as soon as the information becomes available after the ex-date. For the avoidance of doubt, other events affecting the amount outstanding other than the ones mentioned under 2.3. are not considered between Adjustment Days.

*For the avoidance of doubt, an optional tender or exchange offer may lead to an index adjustment after the end of the submission period. In case the tender or exchange has been successful for at least 90% of the Amount Outstanding, the bond will be removed from the index/exchanged into the relevant bond.

**During the backtesting period new issuances and debt increases are only considered on the quarterly Adjustment Days.

In case of an Extraordinary Event that is not covered by the standard treatments mentioned above the Committee will meet and decide on how to treat the Extraordinary Event in the index based on the information available. An extraordinary adjustment will only be implemented if the majority of the Committee supports the suggested treatment. As soon as a decision has been taken all parties related to the index are informed about the Extraordinary Event as well as the decided treatment and date of implementation.

3 Calculation of the Index

3.1. Index formula

The Solactive Canadian Bond Universe TR Index and its sub-indices are indices whose value reflects the relative changes in bond values.

As a formula:

$$Totalreturn_{t,i} = \frac{Price_{t,i} + ACCInt_{t,i} + PaidCash_{t,i}}{Price_{t-1,i} + ACCInt_{t-1,i}} \cdot \frac{FX_{t,i}}{FX_{t-1,i}} - 1$$

$$Weighting_{t,i} = \frac{MarketValue_{t,i} \cdot Cap_{SD,i}}{\sum_{i=1}^a MarketValue_{t,i} \cdot Cap_{SD,i}} = \frac{(Price_{t,i} + ACCInt_{t,i}) * Amount_{SD,i} * Cap_{SD,i} * FX_{t,i}}{\sum_{i=1}^a (Price_{t,i} + ACCInt_{t,i}) * Amount_{SD,i} * Cap_{SD,i} * FX_{t,i}}$$

$$Index_t = Index_{t-1} * (1 + \sum_{i=1}^a (Totalreturn_{t,i} * weighting_{t-1,i}))$$

Whereas:

<i>Totalreturn_{t,i}</i>	= Total return of the bond i on trading day t
<i>Index_t</i>	= Value of the index on trading day t
<i>Index_{t-1}</i>	= Value of the index on trading day t-1
<i>Price_{t,i}</i>	= Last Evaluated Price of the bond i on trading day t
<i>Price_{t-1,i}</i>	= Last Evaluated Price of the bond i on trading day t-1
<i>ACCInt_{t,i}</i>	= Accrued Interest of the bond i on trading day t
<i>ACCInt_{t-1,i}</i>	= Accrued Interest of the bond i on trading day t-1
<i>Weighting_{t,i}</i>	= Weighting of the bond i on trading day t
<i>Weighting_{t-1,i}</i>	= Weighting of the bond i on trading day t-1
<i>Amount_{SD,i}</i>	= Amount Outstanding of bond i on the last Selection Day SD, except for re-openings which will be considered between Adjustment Days.
<i>Cap_{SD,i}</i>	= Capping Factor which helps to adjust the weights as defined under 2.3. Except for an extraordinary event this factor is set to 1.
<i>FX_{t,i}</i>	= Foreign Exchange Rate of bond i on trading day t
<i>FX_{t-1,i}</i>	= Foreign Exchange Rate of bond i on trading day t-1
<i>PaidCash_{t,i}</i>	= a) Value of the coupon payment for bond i on trading day t b) If a bond i will be removed from the index, the resulting payment of the bond will be included in the paid cash component

3.2 Accuracy

The value of the index will be rounded to four decimal places.

According to the terms of the bond, the Index Calculator will take the following conventions into account:

Act/Act

Act/360

Act/365

30/360

ISMA 30/360

The index does not take into account taxes and assumes gross coupon payments.

Accrued Interest is calculated with settlement convention t+0. If a bond does not pay any coupons (e.g. zero coupon bonds or T-Bills) the Accrued Interest as well as the coupon payment will be set to 0.

4. Definitions

4.1 index-specific definitions

The “**Selection Pool**” of the **Solactive Canadian Bond Universe TR Index** comprises bonds that fulfill the following conditions:

- (a) Government and Corporate bonds issued in the Canadian market. This includes domestic issued bonds as well as global issued bonds as well as private placements which have an ISIN beginning with the CA characters.
- (b) Denominated in CAD.
- (c) Effective Time to Maturity of not less than 12 months.
- (d) Amount Outstanding of more than 100m CAD.*
- (e) Fixed rated bonds are eligible for inclusion. For the avoidance of doubt only bonds that have a fix constant coupon over the lifetime of the bond are eligible while bonds that have a fixed coupon schedule with different coupon values are excluded (e.g. step up bonds).
- (f) Fixed-to-float/fixed-to-variable bonds are eligible provided they are at least one year from their floating/variable period.
- (g) Zero coupon bonds or pay-in-kind bonds are explicitly excluded.
- (h) Bond must pay coupons twice a year to be eligible for inclusion.
- (i) Callable, puttable, extendible, sinkable, perpetual bonds are eligible for inclusion.
- (j) The securities must have an investment grade rating (i.e. at least BBB- or its equivalent) from S&P, Moody’s or DBRS. If several ratings are available the lowest rating is considered.
- (k) Repackaged bonds, convertibles, mortgage backed securities (except 1st mortgages), other asset backed securities, inflation-linked securities, flat trading or defaulted securities are not eligible for inclusion.
- (l) The bond must be priced from the Bond Pricing Provider.
- (m) If two or more identical bonds qualify the following rules are considered in order to avoid double-inclusion:
 - a. Private placements are excluded
 - b. RegS issues are preferred over 144A
 - c. Series 1A issues are preferred over other series
 - d. Bonds issued with a series are preferred over bonds without a specific series

*If available net amount outstanding is used (defined as gross amount outstanding less the amount that has been stripped as per TMX monthly strip bond report). If not available, gross amount outstanding is considered.

The “**Selection Pool**” of the **Solactive Short-Term Canadian Bond Universe TR Index** comprises bonds that fulfill the following conditions:

- (a) Bonds that are part of the Selection Pool of the Solactive Canadian Bond Universe TR Index
- (b) Bonds that have an Effective Time to Maturity of 5 years or less

4.2 Further definitions

“**Adjustment Day**” is the last Business Day in February, May, August and November.

“**Amount Outstanding**” is the face value of the respective bond.

“**Bond Price Provider**” is Interactive Data Corporation part of the ICE group.

A “**Business Day**” in relation to the index is any day other than a Saturday or Sunday or a day on which the Investment Industry Association of Canada recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in domestic bond and money markets.

A “**Credit Event**” is the suspension of debt service, insolvency or failure to pay.

“Early Redemption” includes every event that leads to a redemption of a bond before the actual maturity date.

“Effective Time to Maturity” is the minimum of the next call or put date and the final maturity date.

“Exchange Offer” means that the holder of a bond is invited to exchange the existing bond to another debt security.

In particular an **“Extraordinary Event”** is

- an early redemption of the bond
- a credit event

A bond is **“Flat Trading”** if the bond issuer does not meet its coupon payment obligation which means that the buyer of a bond is not responsible for paying the interest that has accrued since the last payment.

“Foreign Exchange Rate” is the respective WM 4pm London fixing.

A bond is **“In Default”** once the issuer is not able to fulfil its bond payment obligations anymore after the 30 days grace period.

The **“Index Calculator”** is Solactive AG or any other appropriately appointed successor in this function.

The **“Index Provider”** is Solactive AG or any other appropriately appointed successor in this function.

“Index Components” are all bonds in the Selection Pool.

The **“Index Currency”** is CAD

“Issuer” is the issuing entity of the respective bond.

“Last Evaluated Price” generally is (aside from the rules referred to in „Extraordinary Events“) the last available evaluated Mid price provided by the Bond Price Provider.

The **“Market Value”** of a bond is defined as the sum of the Last Evaluated Price and Accrued Interest multiplied by the Amount Outstanding.

“Re-Opening” means offering an additional amount on an existing bond issue, as opposed to creating a new issue.

“Selection Day” is a Business Day 7 Business Days prior to the Adjustment Day.

“sub-indices” refers to any sub-index of the Solactive Canadian Bond Universe TR Index . In particular this definition covers the Solactive Short-Term Canadian Bond Universe TR Index

“Tender Offer” means that a holder of a bond is invited to tender the bond for a specific price at a specific time before the actual maturity date.

5 Appendix

5.1 Contact data

Information regarding the Solactive Canadian Bond Universe TR Index and its sub-indices concept

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5.2 Calculation of the Index – change in calculation method

The application by the index calculator of the method described in this document is final and binding. The index calculator shall apply the method described above for the composition and calculation of the index. However, it cannot be excluded that the market environment, supervisory, legal, financial or tax reasons may require changes to be made to this method. The index calculator may also make changes to the terms and conditions of the index and the method applied to calculate the index, which he deems to be necessary and desirable in order to prevent obvious or demonstrable error or to remedy, correct or supplement incorrect terms and conditions. The index calculator is not obliged to provide information on any such modifications or changes. Despite the modifications and changes the index calculator will take the appropriate steps to ensure a calculation method is applied that is consistent with the method described above.