July 2020

Single Stock Circuit Breakers in Canada

Single Stock Circuit Breakers ("SSCBs") were implemented in Canada by the Investment Industry Regulatory Organization of Canada ("IIROC") to prevent rapid, significant and unexplained price movement in a particular security. The SSCBs are intended to operate as part of a multi-tiered approach to controlling short term, unexplained price volatility.

SSCBs are in effect from 9:30 a.m. to 3:30 p.m. When a SSCB is triggered, there is an initial trading halt of five minutes for the applicable security, which may be extended for a further five-minute period at IIROC's discretion. Any trade(s) executed at more than 5% beyond the trigger level will be cancelled.

Qualifying Securities

SSCBs apply to the following:

- Each security that is a constituent of the S&P/TSX Composite Index,
- Each exempt Exchange-Traded Fund ("ETF"), the assets of which are comprised principally of listed securities, and
- Each security that is considered "actively traded," including any Leveraged ETFs.[1]

For the purposes of SSCBs, a listed security is considered "actively traded" if the particular listed security traded, in total, on one or more marketplaces as reported on a consolidated market display during the three calendar months ending immediately preceding the determination:

- An average of at least 500 times per trading day, and
- With an average trading value of at least $1,200,000 per trading day.

IIROC provides a daily list of the securities to which SSCBs apply, which is available for retrieval on its website. Listed securities that are not subject to SSCBs are still subject to regulatory intervention by IIROC Market Integrity Officials.

Trigger Levels for Qualifying Securities (except Leveraged ETFs)

A SSCB is triggered in the event of a price increase or decline of:

- At least 10% and 20 trading increments in a five-minute period between 9:50 a.m. and 3:30 p.m.
- At least 20% and 40 trading increments in a five-minute period between 9:30 a.m. and 9:50 a.m.
- At least 20% and 40 trading increments in a five-minute period during the 30-minute period following the resumption of trading after a regulatory halt, including a regulatory halt caused by the triggering of a SSCB.

To determine the size of a price increase or decline, IIROC compares the price of the "triggering" trade to a "reference price." The reference price is determined from transactions in the particular security in the five-minute period immediately prior to the triggering trade (as summarized in the table below). If the last trade in the security occurred more than five minutes earlier, no reference price is calculated and the

[1] As per IIROC Guidance Notice 16-0138, a Leveraged ETF uses financial derivatives and debt to amplify the daily returns of an underlying index. Leveraged ETFs aim at keeping a constant amount of leverage during the investment time frame such as a 2:1 or 3:1 ratio.

SSCB will not trigger.

Determining Reference Price

Type of Price Change	Reference Price[2]
Price Increase	The lowest price in that particular security in the 5-minute period immediately prior to the triggering trade.
Price Decrease	The highest price in that particular security in the 5-minute period immediately prior to the triggering trade.

IIROC maintains the discretion to temporarily widen the threshold used to calculate the trigger level of a particular security in response to an extraordinary event, where increased volatility may be considered "normal" trading activity.

The price of any trade that is permitted by Universal Market Integrity Rules ("UMIR") or the Order Protection Rule ("OPR") to be executed outside of the "best bid – best ask" spread will not trigger an SSCB.

Trigger Levels for Leveraged ETFs

SSCB thresholds for Leveraged ETFs are calculated by multiplying the trigger levels for qualifying securities (other than Leveraged ETFs) with the leverage ratio of the Leveraged ETF. For example, a qualifying Leveraged ETF with a 2:1 ratio will have trigger levels set at twice the usual level of a qualifying non-Leveraged ETF.

Preventative Risk Controls

Virtu ITG Canada Corp. ("Virtu") has preventative risk controls in place to prevent its direct electronic access ("DEA") clients from unintentionally triggering a SSCB. The Limit Price Check is intended to prevent the submission of an order with a limit price that exceeds an allowed combination of a dollar amount and a percentage band away from the aggressive quote of the national best bid and/or offer ("NBBO") of the relevant security. For securities subject to the SSCB, the Limit Price Check is designed to reject any order(s) which would exceed the SSCB threshold(s).

[2] Trades that execute at prices outside the "best bid-best ask" spread are excluded from the trigger calculation.