SIX Swiss Exchange Indices

Guide Governing Leveraged Indices
# Table of Content

1. **Index Structure** ................................................................................................................. 3  
  1.1 Introduction .......................................................................................................................... 3  
  1.2 General principles .................................................................................................................. 3  
  1.3 Index Commission .................................................................................................................. 3  
  1.4 Review of index concept ....................................................................................................... 3  
  1.5 Termination of the index calculation ...................................................................................... 4  

2. **Index Calculation** .............................................................................................................. 4  
  2.1 Methodology ......................................................................................................................... 4  
  2.1.1 Calculation formula ............................................................................................................ 4  
  2.1.2 Leverage term ..................................................................................................................... 4  
  2.1.3 Financing and interest term ............................................................................................... 4  
  2.2 Adjustment in cases of extraordinary market conditions ..................................................... 4  
  2.2.1 Leverage index ................................................................................................................... 5  
  2.2.2 Short and short leverage index .......................................................................................... 5  
  2.3 Calculation interval and publication ...................................................................................... 5  
  2.4 Unavailability of underlying instrument ............................................................................... 5  
  2.5 Adjustment of standardisation ............................................................................................... 5  
  2.6 Information on index events .................................................................................................. 6  
  2.7 Trade suspensions and market distortions ............................................................................. 6  
  2.8 Index corrections ................................................................................................................... 6  

3. **Trademark Protection, Use And Licensing** .................................................................... 7  
  3.1 Protection .............................................................................................................................. 7  
  3.2 Licensing .............................................................................................................................. 7  
  3.2.1 Free usage ......................................................................................................................... 7  
  3.2.2 Usage subject to licence .................................................................................................... 7  

4. **Contact** ............................................................................................................................... 7  

5. **Static Data** ......................................................................................................................... 8
1 Index Structure

1.1 Introduction

The SIX Swiss Exchange leveraged indices reflect the daily returns of the underlying indices with added leverage. With underlying indices of either equities or bonds, the following types of index are calculated: Leverage (leverage +2), Short (leverage -1) and Short Leverage (leverage -2). By publishing leveraged indices, SIX Swiss Exchange enables investors to replicate investment strategies in a transparent, rule-based and cost-efficient manner.

Given their methodology, leveraged indices are more suited to risk-friendly investors with short-term horizons than to “buy and hold” strategies. Long-term returns of leveraged indices can diverge significantly from the long-term returns of the underlying indices.

The structure, calculation and any changes to the composition of a given index basket for the relevant underlying instrument are regulated in the corresponding rules.

1.2 General principles

In order to achieve the stated index objective SIX Swiss Exchange defines the general principles that govern the index methodology. SIX Swiss Exchange publishes the index objective and rules for all indices.

- **Representative:**
  The development of the market is represented by the index.

- ** Tradable:**
  The index components are tradable in terms of company size and market.

- ** Replicable:**
  The development of the index can be replicated in practise with a portfolio.

- ** Stable:**
  High index continuity.

- ** Rules-based:**
  Index changes and calculations are rule-based.

- ** Projectable:**
  Changes in rules are with appropriate lead time (usually at least 2 trading days) – no retrospective rule changes.

- ** Transparent:**
  Decisions are based on public information.

1.3 Index Commission

The Management Committee of SIX Swiss Exchange is supported by the Index Commission (advisory board) in all index-related matters, notably in connection with changes to the index rules and adjustments, additions and exclusions outside of the established review and acceptance period.

The Index Commission convenes at least twice a year. It provides valuable input on how existing products can be improved and new ones created.

1.4 Review of index concept

The validity of the index concepts and rules is reviewed on a regular basis. In exceptional cases a broad market consultation can be conducted. The changes to the index rules are publicly announced with appropriate lead time (usually 3 months).
1.5 Termination of the index calculation

A decision to discontinue will be publicly announced by SIX Swiss Exchange with appropriate lead time.

In case of existing financial products linked to the index, of which SIX Swiss Exchange is aware, a market consultation is conducted in advance and a transition period is introduced before the definitive termination.

2 Index Calculation

2.1 Methodology

2.1.1 Calculation formula

\[
LI_{x,t} = LI_{x,T} \times \left[ 1 + \left( \frac{UI_t - UI_T}{UI_T} \times x \right) \right]^{LEVERAGE\ TERM} \\
+ (1 - x) \times LI_{x,T} \times \left( \frac{SARON_T}{360} \right) \times D \quad \text{FINANCING/INTEREST\ TERM}
\]

Legend:
- \( LI \): Leveraged Index
- \( UI \): Underlying Index
- \( t \): Time of calculation
- \( T \): Closing price on last trading day prior to \( t \)
- \( SARON \): SAR Swiss Average Rate® ON (published in %)
- \( D \): Number of calendar days between \( t \) and \( T \)
- \( x = +2 \): Leverage Index
- \( x = -1 \): Short Index
- \( x = -2 \): Short Leverage Index

2.1.2 Leverage term

The leverage term describes the influence the underlying has on the corresponding leveraged index. Leverage indices reflect the daily price change in the underlying instrument with a leverage factor of 2. For short and short leverage indices, the daily change in the underlying instrument is reflected with a leverage factor of -1 and -2, respectively.

2.1.3 Financing and interest term

Financing term and interest term are two rate components that result from the underlying strategy. In the case of a leverage index, capital is obtained on which interest must be paid. With short and short leverage indices, the base capital and proceeds from short sales are invested and therefore generate interest income.

The closing level of SAR Swiss Average Rate ON (SARON) recorded for the previous trading day \( T \) is used for calculating the rate component during the current trading day \( t \).

2.2 Adjustment in cases of extraordinary market conditions

In order to limit the risk of a total loss, all leveraged indices feature a safety mechanism, which is triggered upon the occurrence of a predefined daily change in the underlying instrument.
### 2.2.1 Leverage index

If the underlying instrument at any point in time $t$ falls by 25% compared to the previous day’s closing level, a new trading day will be simulated intraday on the basis of adjusted $U_{IT}$ and $L_{IT}$ values. During a trading day, this adjustment process may be repeated as often as required. As a part of this, no financing costs will be taken into account for that particular day.

**Threshold value:**

\[
\left( \frac{U_{IT}}{U_{IT}} - 1 \right) \leq -25\%
\]

**Simulation of a new trading day:**

- $U_{IT,\text{new}} = U_{IT,\text{old}} \times 0.75$
- $L_{IT,\text{new}} = L_{IT,\text{old}} \times (1 - 0.25 \times x)$
- $D = 0$

### 2.2.2 Short and short leverage index

If the underlying instrument at any point in time $t$ rises by 25% compared to the previous day’s closing level, a new trading day will be simulated intraday on the basis of adjusted $U_{IT}$ and $L_{IT}$ values. During a trading day, this adjustment process may be repeated as often as required. As a part of this, no interest income will be taken into account for that particular day.

**Threshold value:**

\[
\left( \frac{U_{IT}}{U_{IT}} - 1 \right) \geq 25\%
\]

**Simulation of a new trading day:**

- $U_{IT,\text{new}} = U_{IT,\text{old}} \times 1.25$
- $L_{IT,\text{new}} = L_{IT,\text{old}} \times (1 + 0.25 \times x)$
- $D = 0$

### 2.3 Calculation interval and publication

All leveraged indices are calculated in realtime and immediately published. As soon as there is a change in the price level of the underlying instrument, the corresponding index reading is re-calculated and published. The shortest calculation interval is one second.

All relevant index data are disseminated by SIX Exfeed (a subsidiary of SIX Group).

### 2.4 Unavailability of underlying instrument

If the price level of the given leveraged index’s underlying instrument is not available at some time during regular SIX Swiss Exchange trading hours, the level of that leveraged index will not be calculated.

If the price level of the index’s underlying instrument persists beyond the closing auction, the closing price level of the given leveraged index will be based on the last available reading for the underlying instrument.

### 2.5 Adjustment of standardisation

SIX Swiss Exchange reserves the right to re-standardise the leveraged indices if it considers such to be necessary.
2.6 **Information on index events**

Any relevant forthcoming extraordinary corporate events that result in an adjustment to the indices are published by e-mail via Investor Service.

The registration form is available on the [SIX Swiss Exchange Website](https://www.six-swiss-exchange.com). SIX Swiss Exchange accepts no liability for Investor Service Equity.

2.7 **Trade suspensions and market distortions**

Should a data source (for example a price source) not be available as result of challenging economic conditions or other market distortions the last available data will normally be used.

In extreme cases a deviation from the rules defined in this rulebook can occur, for example, shifting the schedule of a regular index review.

All changes will be publicly announced at least two trading days in advance.

2.8 **Index corrections**

Index corrections distinguish between calculation errors and incorrect input data.

Calculation errors detected within a trading day are corrected immediately. Intraday tick data are not corrected retrospectively.

Calculation errors that are older or based on erroneous input data are corrected if technically possible and economically viable. If significant differences exist, index values can also be corrected retrospectively.

Interested parties may subscribe to an e-mail notifications service on the website. SIX Swiss Exchange distributes notifications over this channel on

- Changes in corporate actions and dividends
- Updates to the periodic index reviews
- Problems and error in the index calculation
- The launch of new indices
- General information on SMI indices
3 Trademark Protection, Use And Licensing

3.1 Protection
The SIX Swiss Exchange Indices Trademarks are internationally registered trademarks of SIX Swiss Exchange.

3.2 Licensing

3.2.1 Free usage
The SIX Swiss Exchange Indices Trademarks may be freely used for the purpose of honest reporting of the relevant index. Insofar as it is technically possible, the symbols ® and ™ should be used, possibly with a footnote stating that these names are registered trademarks of SIX Swiss Exchange, Zurich.

3.2.2 Usage subject to licence
Any additional use of the SIX Swiss Exchange Indices Trademarks or any commercial use of the index figures (e.g., issue of index-linked financial instruments or capital insurance with or without mention of the trademark in the name or description) is only permissible with a valid licensing agreement.

Offering prospectuses must include the disclaimer which is available on the SIX Swiss Exchange Website.

4 Contact

Information concerning the indices of SIX Swiss Exchange (index adjustments, announcements etc.) is available at the following Internet address:


Any requests with respect to the indices may be directed to the following address:

SIX Swiss Exchange Ltd
Selnaustrasse 30
P.O. Box
CH-8021 Zurich

Email: indexsupport@six-group.com
Phone: +41(0)58 399 22 29
## Static Data

<table>
<thead>
<tr>
<th>Underlying index</th>
<th>Symbol</th>
<th>ISIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMI® Swiss Market Index Total Return</td>
<td>SMIC</td>
<td>CH0000222130</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Leveraged indices</th>
<th>Symbol</th>
<th>ISIN</th>
<th>Initial date</th>
<th>Initial value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMI Daily Leverage TR</td>
<td>SMILEV</td>
<td>CH0049815555</td>
<td>31.12.2008</td>
<td>1'000</td>
</tr>
<tr>
<td>SMI Daily Short</td>
<td>SMISHT</td>
<td>CH0049815563</td>
<td>31.12.2008</td>
<td>10'000</td>
</tr>
<tr>
<td>SMI Daily Short Leverage</td>
<td>SMISL</td>
<td>CH0049815571</td>
<td>31.20.2008</td>
<td>10'000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Underlying index</th>
<th>Symbol</th>
<th>ISIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMI® Swiss Market Index Price</td>
<td>SMI</td>
<td>CH0009980894</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Leveraged indices</th>
<th>Symbol</th>
<th>ISIN</th>
<th>Initial date</th>
<th>Initial value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMI Daily Leverage PR</td>
<td>SMILEP</td>
<td>CH0111500531</td>
<td>31.12.2008</td>
<td>1'000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Underlying index</th>
<th>Symbol</th>
<th>ISIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLI® Swiss Leader Index Total Return</td>
<td>SLIC</td>
<td>CH0030252909</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Leveraged indices</th>
<th>Symbol</th>
<th>ISIN</th>
<th>Initial date</th>
<th>Initial value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLI Daily Leverage TR</td>
<td>SLILEV</td>
<td>CH0049815589</td>
<td>31.12.2008</td>
<td>1'000</td>
</tr>
<tr>
<td>SLI Daily Short</td>
<td>SLISHT</td>
<td>CH0049815597</td>
<td>31.12.2008</td>
<td>10'000</td>
</tr>
<tr>
<td>SLI Daily Short Leverage</td>
<td>SLISL</td>
<td>CH0049815605</td>
<td>31.12.2008</td>
<td>10'000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Underlying index</th>
<th>Symbol</th>
<th>ISIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLI® Swiss Leader Index Price</td>
<td>SLI</td>
<td>CH0030252883</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Leveraged indices</th>
<th>Symbol</th>
<th>ISIN</th>
<th>Initial date</th>
<th>Initial value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLI Daily Leverage PR</td>
<td>SLILEP</td>
<td>CH0111500556</td>
<td>31.12.2008</td>
<td>1'000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Underlying index</th>
<th>Symbol</th>
<th>ISIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBI® Domestic Government Mid 3-7 Total Return</td>
<td>SBGM3T</td>
<td>CH0024313691</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Leveraged indices</th>
<th>Symbol</th>
<th>ISIN</th>
<th>Initial date</th>
<th>Initial value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBGM3T Daily Leverage</td>
<td>SBI3L</td>
<td>CH0049815613</td>
<td>31.12.2008</td>
<td>100</td>
</tr>
<tr>
<td>SBGM3T Daily Short</td>
<td>SBI3S</td>
<td>CH0049815639</td>
<td>31.12.2008</td>
<td>1'000</td>
</tr>
<tr>
<td>SBGM3T Daily Short Leverage</td>
<td>SBI3SL</td>
<td>CH0049815654</td>
<td>31.12.2008</td>
<td>1'000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Underlying index</th>
<th>Symbol</th>
<th>ISIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBI® Domestic Government Mid 3-7 Price</td>
<td>SBGM3P</td>
<td>CH0024313618</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Leveraged indices</th>
<th>Symbol</th>
<th>ISIN</th>
<th>Initial date</th>
<th>Initial value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBGM3P Daily Leverage</td>
<td>SBI3LP</td>
<td>CH0111500606</td>
<td>31.12.2008</td>
<td>100</td>
</tr>
</tbody>
</table>
### Underlying index

<table>
<thead>
<tr>
<th>Index Description</th>
<th>Symbol</th>
<th>ISIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBI® Domestic Government Mid 7-15 Total Return</td>
<td>SBGM7T</td>
<td>CH0024313774</td>
</tr>
</tbody>
</table>

### Leveraged indices

<table>
<thead>
<tr>
<th>Leveraged Indices</th>
<th>Symbol</th>
<th>ISIN</th>
<th>Initial date</th>
<th>Initial value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBGM7T Daily Leverage</td>
<td>SBI7L</td>
<td>CH0049815662</td>
<td>31.12.2008</td>
<td>100</td>
</tr>
<tr>
<td>SBGM7T Daily Short</td>
<td>SBI7S</td>
<td>CH0049815670</td>
<td>31.12.2008</td>
<td>1'000</td>
</tr>
<tr>
<td>SBGM7T Daily Short Leverage</td>
<td>SBI7SL</td>
<td>CH0049815696</td>
<td>31.12.2008</td>
<td>1'000</td>
</tr>
</tbody>
</table>

### Underlying index

<table>
<thead>
<tr>
<th>Index Description</th>
<th>Symbol</th>
<th>ISIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBI® Domestic Government Mid 7-15 Price</td>
<td>SBGM7P</td>
<td>CH0024313758</td>
</tr>
</tbody>
</table>

### Leveraged indices

<table>
<thead>
<tr>
<th>Leveraged Indices</th>
<th>Symbol</th>
<th>ISIN</th>
<th>Initial date</th>
<th>Initial value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBGM7P Daily Leverage</td>
<td>SBI7LP</td>
<td>CH0111500630</td>
<td>31.12.2008</td>
<td>100</td>
</tr>
</tbody>
</table>

### Zinsatz

<table>
<thead>
<tr>
<th>Zinsatz</th>
<th>Symbol</th>
<th>ISIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAR Swiss Average Rate® ON</td>
<td>SARON</td>
<td>CH0049613687</td>
</tr>
</tbody>
</table>

A current list of all indices calculated by SIX Swiss Exchange is accessible at the SIX Swiss Exchange Website:

The information contained in this document is given without warranty, implies no obligation of any kind on the part of SIX Group Ltd or the companies associated with SIX Group Ltd (referred to below as SIX Group Ltd) and may be altered by SIX Group Ltd at any time without further notice. To the extent permitted by law, SIX Group Ltd accepts no liability whatsoever for any errors contained in this document. SIX Group Ltd is under no obligation whatsoever to draw attention to such errors. Technical documentation must be used only in conjunction with the correct software version and may be used and copied only in accordance with the terms of the licence. All software described in the technical documentation is supplied on the basis of a licence agreement and may be used or copied only in accordance with the terms of the said licence agreement.

© Copyright SIX Group Ltd, 06.2016. All rights reserved. All trademarks observed.