



Swiss Exchange

SIX Swiss Exchange Indices

Rules Governing The SMI Index Family

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1 Index Structure

1.1 Securities universe

The SMI[®] Family comprises three indices: the Swiss Market Index (SMI)[®], the SMI MID (SMIM)[®] and the SMI Expanded[®]. It contains the largest and most liquid stocks on the Swiss stock market. The entire Swiss market is represented by the SPI[®] Family.

As a blue-chip index, the SMI[®] is Switzerland's key equity index. It represents about 85% of the free-float capitalisation of the Swiss equity market. The SMI[®] comprises the 20 largest and most liquid equities of the SPI[®].

The SMIM[®] tracks the 30 next-largest and most liquid equities of the SPI[®]. Together, the SMI[®] and the SMIM[®] form the SMI Expanded[®]. This index, then, comprises the 50 largest and most liquid equities of the Swiss equity market.

As the indices of the SMI[®] Family are representative of the Swiss market and have a high level of liquidity, they are extremely well suited as the basis for numerous financial products such as options, futures and ETFs (e.g., SMI[®] futures and options on Eurex, SMI[®] warrants, SMI[®] ETFs).

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 Standardisation

The SMI (performance and price index) was standardised on 30 June 1988 with an initial baseline value of 1500 points. The SMIM and the SMI Expanded (performance and price index) were standardised on 31 December 1999 with an initial baseline value of 1000 points.

The indices' divisors (see Section 2.2) were established such that the result of dividing the total market capitalisation by the divisor was a corresponding index level of 1500 and 1000 points respectively.

1.4 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.

1.5 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).

1.6 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 Laspeyres Index formula

The SMI Family, like all other SIX Swiss Exchange indices, is calculated using the Laspeyres method with the weighted arithmetic mean of a defined number of securities issues. The index level is calculated by dividing the market capitalisation of all securities included in the index by a divisor.

$$I_s = \frac{\sum_{i=1}^M p_{i,s} * x_{i,t} * f_{i,t} * K_{i,t} * r_s}{D_t}$$

Legend:

t:	Current day
s:	Current time on day t
I_s:	Current index level at time s
D_t:	Divisor on day t
M:	Number of issues in index
p_{i,s}:	Last-paid price of security i
x_{i,t}:	Number of shares of security i on day t
f_{i,t}:	Free float for security i on day t
K_{i,t}:	Capping factor for security i on day t
r_s:	Current CHF exchange rate at time s

2.2 Divisor

The divisor is a technical number used to calculate the index. If the market capitalisation changes due to a corporate event (see Section 4), the divisor changes while the index value remains the same.

The new divisor is calculated on the evening of the day before the corporate event takes effect.

2.3 Capped weightings and intra-quarter breaches

One of the characteristics of the Swiss Equity market is that a few shares have a very large freefloat market capitalization compared to the others. To mitigate the connected risk structure the weight of those index components which exceed a weight of 18% is reduced to that value at each quarterly Index Review. The difference of the capped market capitalization is distributed proportionally across the other components.

In order to maintain the risk profile the components are also capped to 18% as soon as two components are exceeding a weight of 20%. If such an intra quarter breach is observed after the close of markets, the new capping factors are implemented after the close of the following trading day. The weights of the largest components are therefore set again to be around 18% at the subsequent market open.

Transition period:

In order to reach a capped index without causing market distortion a stepwise reduction is conducted based on the normal index reviews. The transition period is in effect until no component has a weight larger than 18%.

The adjustment basis is the theoretical weight if the components are not capped in the index. From this theoretical weight 3% are deducted on the first review, based on the above rules. At every subsequent Index Review an additional 3% is deducted. This ensures that no change in the capping from one review to the next exceeds 3%. In case of an intra quarter breach where two components exceed 20% the weights are restricted to the last defined weights of the past review.

The application of the transitory steps is outlined in the following table. The weights used are solely illustrative and constant prices are assumed. The weight of the fourth and subsequent components rises because of the redistribution from the heavy weights.

Title	First Index Review			Second Index Review			Third Index Review		
	Weight before (uncapped)	Transitory Step 1	Weight after Review (capped)	Weight before Review (uncapped)	Transitory Step 2	Weight after Review (capped)	Weight before Review (uncapped)	Transitory Step 3	Weight after Review (capped)
1	25.00%	-3%	22.00%	25.00%	-2*3%	19.00%	25.00%	-2*3%-1%	18.00%
2	19.00%	none	18.00%	19.00%	none	18.00%	19.00%	none	18.00%
3	17.00%	none	18.00%	17.00%	none	18.00%	17.00%	none	18.00%
4	5.00%	none	5.38%	5.00%	none	5.77%	5.00%	none	5.90%
5	4.00%	none	4.31%	4.00%	none	4.62%	4.00%	none	4.72%
6	---	---	---	---	---	---	---	---	---

Should the capped weights change based on market movements or corporate actions the inception of the 18% cap may extend or shorten.

2.4 Treatment of dividends

The SMI, the SMIM and the SMI Expanded are non-dividend-adjusted price indices. They are also calculated as performance indices in whose calculation dividend payments are taken into account. The treatment of dividend payments is detailed in Section 4.3.

2.5 Free Float

The securities included in the SMI, SMIM und SMI Expanded are weighted according to their free float. This means that large share packages that reach or exceed the threshold of 5% are subtracted from the total market capitalisation.

The free float is calculated on the basis of outstanding shares. Issued and outstanding equity capital is, as a rule, the total amount of equity capital that has been fully subscribed and wholly or partially paid in and documented in the Commercial Register. Not counting as issued and outstanding equity capital are the approved capital and the conditional capital of a company.

The free float is calculated on the basis of listed shares only. If a company offers several different categories of listed participation rights, each is treated separately for the purposes of index calculation.

2.5.1 Shares in fixed ownership: definition

Fundamentally deemed to be shares held in firm hands are shareholdings that have been acquired by one person or a group of persons in companies domiciled in Switzerland and which, upon exceeding or falling below the 5% or higher threshold values defined in Art. 120 FinfraG, have been reported to SIX Swiss Exchange.

The threshold values defined Art. 120 FinfraG are, as of 5%, applicable analogously to companies domiciled abroad.

Shares of persons and groups of persons who are subject to a shareholder agreement which is binding for more than 5% of the listed shares or who, according to publicly known facts, have a long-term interest in a company are also deemed to be in fixed ownership.

2.5.2 Sources of information

For the calculation of the number of shares in firm hands, SIX Swiss Exchange may also use other sources than the reports submitted under Art. 120 FinfraG, Art. 55 Listing Rules and the Directive on Regular Reporting Obligations¹. In particular, SIX Swiss Exchange may use data gained from issuer surveys that it conducts itself.

2.5.3 Exceptions

In principle, shares held by the following groups are deemed free-floating regardless whether a report has been made pursuant to Section 2.5.1.

- Custodian nominees
- Trustee companies
- Investment funds
- Pension funds
- Investment companies

SIX Swiss Exchange classifies at its own discretion persons and groups of persons who, because of their area of activity or the absence of important information, cannot be clearly assigned.

The free-float rule applies only to bearer shares and registered shares. Capital issued in the form of participation certificates ("Partizipationsscheine") and bonus certificates ("Genussscheine") is taken into full account in calculating the index because it does not confer voting rights.

¹ <https://www.six-exchange-regulation.com> -> Regulations -> Listing Rules



2.6 Calculation interval and publication

The SMI family is calculated in real time. The index is recalculated every time a new transaction is made for a stock included in the index. The shortest interval is one second.

All index data is distributed by SIX Exfeed Ltd (indirect subsidiary of SIX Group Ltd).

2.7 Prices used

In calculating the index, the last-paid price is taken into account. If no price has been paid on the day of calculation, the previous day's price is used. Only the prices achieved via the electronic order book of SIX Swiss Exchange are used.

2.8 Trading hours

The trading hours for Swiss equities, participation certificates and bonus certificates are determined by SIX Swiss Exchange.

Since the opening phase usually causes strong price fluctuations, the SMI is first calculated two minutes after the start of on order book trading. This index level is called the "open".

A closing auction takes place ten minutes before close of trading. At the close of trading, the final closing prices used in calculating the closing level of the SMI are established.

2.9 Final Settlement Value (FSV)

For the index options and futures expiry a Final Settlement Value (FSV) is calculated. The value is calculated using the first-paid price between 9:00:00 CET and 9:02:15 CET. If no price is available during this period for a component the last available price of the previous day is used.

3 Admission To And Exclusion From The Index

3.1 Adjustment date

The changes to the index-basket composition will be made once a year after prior notice of at least two months on the third Friday in September after close of trading.

3.2 Determination of rankings

A selection list in which all SPI securities are ranked and which forms the basis for the rankings can be downloaded from the SIX Swiss Exchange Website. The position of each security is determined by a combination of the following criteria:

- Average free-float market capitalisation over the last 12 months (compared to the capitalisation of the entire SPI)
- Cumulated on order book turnover over the last 12 months (compared to the total turnover of the SPI)

For companies that have been listed during the 12 months period, the cumulated on order book turnover will be extrapolated, whereby generally the first 5 trading days for those shares will not be included in the calculation.

For the ordinary index review the time period used for the calculations is 1 July through 30 June of the following year. At the cut-off dates September 30, December 31 and March 31 a provisional selection list based on the average free-float market capitalisation and cumulated on order book turnover over the last 12 months is created,

The average market capitalisation in per cent and the turnover in per cent are each given a weighting of 50% and yield the so-called weighted market share.

3.2.1 Tolerance zone

In order to limit fluctuations in the index baskets of the SMI Family, the selection list features a tolerance zone of 10 per cent which inhibits securities' addition to and exclusion from the index.

In the SMI, this tolerance is +/- 2 positions, i.e. it encompasses positions 19 through 22 in the SMI, which comprises 20 securities.

In the SMIM, the tolerance is +/-3 positions, i.e. it encompasses positions 48 through 53 in the SMIM, which comprises 30 securities.

3.2.2 Admission criterion

A security is admitted to the SMI if it ranks 18 or better in the selection list. A share ranked 19 or 20 is admitted only if a share included in the SMI meets the exclusion criteria directly (position 23 or lower) and no other share that either meets the admission criteria directly (position 18 or higher) or is rated higher has moved up in its place.

A security is admitted to the SMIM if it ranks 47 or better in the selection list. A share ranked 48, 49 or 50 is admitted only if a share included in the SMIM meets the exclusion criteria directly (position 54 or lower) and no other share that either meets the admission criteria directly (position 47 or higher) or is rated higher has moved up in its place.

3.2.3 Exclusion criterion

A security is excluded from the SMI if it ranked 23 or lower in the selection list. A share ranked 21 or 22 is excluded only if a share meets the admission criteria directly (position 18 or higher) and no other share that either meets the exclusion criteria directly (position 23 or lower) or is rated lower has been excluded in its place.

A security is excluded from the SMIM if it ranked 54 or lower in the selection list. A share ranked 51, 52 or 53 is excluded only if a share meets the admission criteria directly (position 47 or higher) and no other share that either meets the exclusion criteria directly (position 54 or lower) or is rated lower has been excluded in its place.

3.2.4 Additional criterion for the admission of companies whose securities have a primary listing on several exchanges and less than 50% of their total turnover is generated on SIX Swiss Exchange

A security is admitted to the SMI if it fulfils the provisions of Section 3.2.2 and, as measured solely on the basis of cumulated on order book turnover in keeping with Section 3.2 ranks 18 or better in the selection list.

A security is admitted to the SMIM if it fulfils the provisions of Section 3.2.2 and, as measured solely on the basis of cumulated on order book turnover in keeping with Section 3.2, ranks 47 or better in the selection list.

In assessing the relevant proportion of turnover, only the trading turnover on those exchanges where the company has a primary listing will be taken into account.

3.2.5 Additional criterion for the exclusion of companies whose securities have a primary listing on several exchanges and less than 50% of their total turnover is generated on SIX Swiss Exchange

A security is excluded from the SMI if it fulfils the provisions of Section 3.2.3 or, as measured solely on the basis of cumulated on order book turnover in keeping with Section 3.2, ranks 23 or lower in the selection list.

A security is excluded from the SMIM if it fulfils the provisions of Section 3.2.3 or, as measured solely on the basis of cumulated on order book turnover in keeping with Section 3.2, ranks 54 or lower in the selection list.

In assessing the relevant proportion of turnover, only the trading turnover on those exchanges where the company has a primary listing will be taken into account.

3.3 Reallocations outside accepted review and acceptance period

In the case of major market changes as a result of capital events such as mergers or new listings, the Management Committee of SIX Swiss Exchange can decide at the request of the Index Commission that a security should be admitted to the SMI or SMIM outside the accepted admission period as long as it clearly fulfils the criteria. For the same reasons, a security can also be excluded if the requirements for admission to the SMI or SMIM are no longer fulfilled. As a general rule, extraordinary acceptances into the index take place after a three-month period, this on a quarterly basis after the close of trading on the third Friday of March, June, September and December as follows:

Latest listing date	Earliest extraordinary acceptance date
5 trading days prior to the end of November	March
5 trading days prior to the end of February	June
5 trading days prior to the end of May	September
5 trading days prior to the end of August	December

4 Index Adjustments

4.1 Ordinary adjustments

The number of securities and free-float shares are adjusted on four ordinary adjustment dates a year:

- The third Friday in March (after close of trading)
- The third Friday in June (after close of trading)
- The third Friday in September (after close of trading)
- The third Friday in December (after close of trading)

SIX Swiss Exchange may conduct a capital survey among issuers in order to obtain the required data.

The announcement of the provisional new securities occurs at least one month before the adjustment date. SIX Swiss Exchange reserves the right to take account of recent changes before the adjustment date, so the definite new securities are announced only five trading days before the adjustment date.

The communication of the capping factors follows as well five trading days before implementation. The new number of shares and freefloat figures are used to determine the factors.

4.2 Extraordinary adjustments

In order to avoid frequent slight changes to the weighting and to maintain the stability of the indices, any extraordinary change of the total number of outstanding securities or the free float with a 2 day notice period will only result in an extraordinary adjustment if it exceeds 10% and 5% respectively, occurs from one trading day to the next one and is in conjunction with a corporate action.

After a takeover, SIX Swiss Exchange may, in exceptional cases, adjust the free float of the company in question upon publication of the end results. A five-day notification period applies. At the same time, SIX Swiss Exchange may exclude the security from the relevant index family.

Where an insolvency has been announced, an extraordinary adjustment will be made and an exclusion from the indices, taking into account a notification period of 5 trading days.

In case SIX Regulation has confirmed a delisting, an exclusion from the indices will be made at the next upcoming ordinary adjustment date (March, June, September, December) taking into account a notification period of at least 5 trading days.

If a company is deleted from indices with a fixed number of constituents as result of a delisting, takeover or bankruptcy a replacement is determined based on the current selection list.

The foregoing notwithstanding, SIX Swiss Exchange reserves the right to make this adjustment, in exceptional cases, without observing the notification period.

An extraordinary adjustment of the capping factors follows the application described in chapter 2.3.

4.3 Dividends and other payments

4.3.1 Regular cash dividend

Regular cash dividend payments do not result in adjustments to the divisors of price indices. Dividends are, however, fully taken account of in performance indices. Dividend payments are always treated as gross amounts, including the withholding tax portion.

	Divisor performance indices	Divisor price indices	Dividend points
Regular cash dividend	↘	→	Yes

4.3.2 Repayments of capital instead of a cash dividend

Repayments of capital through the reduction of a share's par value, which can take the place of a regular cash dividend or constitute a component of the regular distribution, are treated in the same way as a normal dividend payment (i.e. no adjustment to the price index divisor).

	Divisor performance indices	Divisor price indices	Dividend points
Repayments of capital instead of a cash dividend	↘	→	Yes

4.3.3 Extraordinary payments

Distributions (e.g., special dividends and anniversary bonuses) that, contrary to the company's usual dividend policy, are paid out or declared extraordinary dividends, are not deemed dividends in the above sense. These distributions are considered corporate events and also result in adjustments to the divisors of price indices.

	Divisor performance indices	Divisor price indices	Dividend points
Extraordinary payments	↘	↘	No

4.3.4 Share dividend (company's own shares)

Share dividends are not treated like ordinary dividend payments. The increase in the number of shares is offset by the lower price of the share on the ex date. The capitalisation does not change in total and the divisors are not adjusted.

	Divisor performance indices	Divisor price indices	Dividend points
Share dividend (company's own shares)	→	→	No

4.3.5 Share dividend (shares of another company)

The distribution of a dividend on shares of another company is not classified as an ordinary dividend payment and so necessitates an adjustment of the price index divisor.

	Divisor performance indices	Divisor price indices	Dividend points
Share dividend (shares of another company)	↘	↘	No

4.3.6 Extraordinary situations

At variance to the treatment of dividends and other distributions described in Section 4.3.1 through 4.3.5, SIX Swiss Exchange reserves the right in justifiable instances to diverge from those provisions.

4.4 Information on corporate events

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

The registration form is available on the SIX Swiss Exchange Website. SIX Swiss Exchange accepts no liability for Investor Service Equity.

4.5 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.

4.6 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

5 Trademark Protection, Use And Licensing

5.1 Protection

The [SIX Swiss Exchange Indices Trademarks](#) are internationally registered trademarks of SIX Swiss Exchange.

5.2 Licensing

5.2.1 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.

5.2.2 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](#).

6 Contact

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

http://www.six-swiss-exchange.com/indices_en.html

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

SIX Swiss Exchange Ltd
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P.O. Box
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Email: indexsupport@six-group.com

Phone: +41(0)58 399 22 29

7 Static Data

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

www.six-swiss-exchange.com/.../calculated_indices.xls

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