

# Leveraged Indices

## Leveraged Indices: Short and Leverage indices

The SIX 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). ETFs and structured products are aimed at making it possible to invest cost-effectively in these leveraged indices in a transparent, rule-based manner.

## Leverage and interest components

If the underlying index rises by 1% on a given day, the Short index will fall by around 1%, whereas the Leverage index will rise by around 2%, and vice versa.

The SMI Daily Short serves as a good example of how a Short index works. Let us assume that an investor invests CHF 1,000 with the intention of participating inversely in the SMI's performance, i.e. with a leverage of -1. To this end, the investor sells the SMI index basket short to the value of CHF 1,000. The resulting cash total of CHF 2,000 (the investment capital plus the proceeds from the short sale) are then invested on the money market at the current rate of interest. The negative leverage now arises from the change in value of the short position. The SMI Daily Short thus comprises the leverage component and the interest income earned by the invested capital.

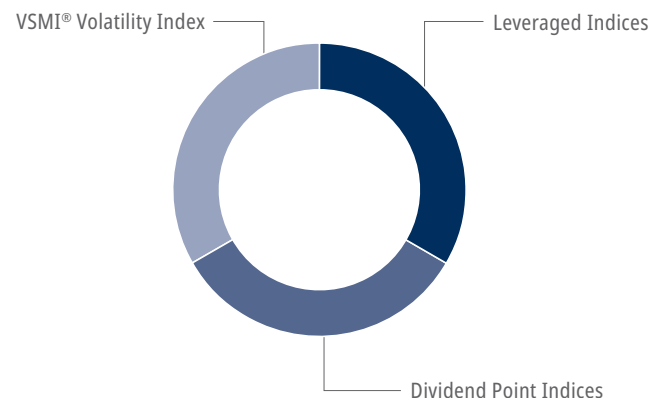
The SLI Daily Leverage, meanwhile, illustrates how a Leverage index (with a leverage of +2) works. Let us assume that the investor invests CHF 1,000 plus a further CHF 1,000 of borrowed capital in the SLI, resulting in a double positive participation in the SLI's performance. In calculating the SLI Daily Leverage, the interest cost for the credit-financed share purchase must be deducted from the leverage component.

## Risk and return

Leveraged indices track their underlying indices on a daily basis with a specific degree of leverage. Long-term returns, however, are path-dependent and can therefore not simply be multiplied by the corresponding factor. Risk, on the other hand, measured in terms of the volatilities of the underlying index and the leveraged indices, reflects the leverage effect very accurately.

Given their methodology, leveraged indices are more suited to risk-friendly investors with short-term horizons than "buy and hold" strategies.

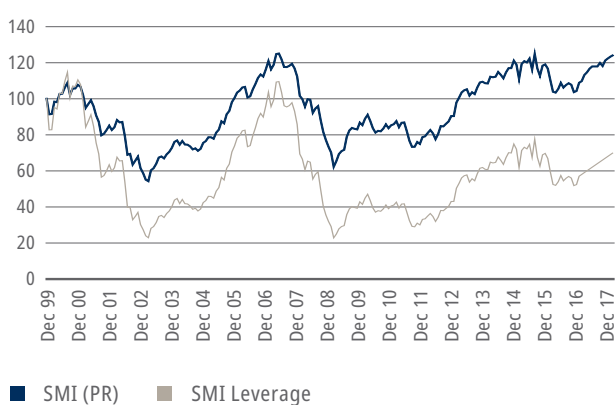
## Overview Strategy Index Family



### SMI® Swiss Market Index (PR)

	YTD	1 year back	3 years back	5 years back
<b>Return</b>				
Underlying	14.14%	14.14%	1.46%	6.58%
Leverage	30.17%	30.17%	0.97%	11.57%
<b>Volatility</b>				
Underlying	5.51%	5.51%	11.94%	10.76%
Leverage	11.18%	11.18%	24.40%	21.98%
<b>Sharpe Ratio</b>				
Underlying	2.07	2.07	-0.18	0.39
Leverage	2.52	2.52	-0.04	0.48

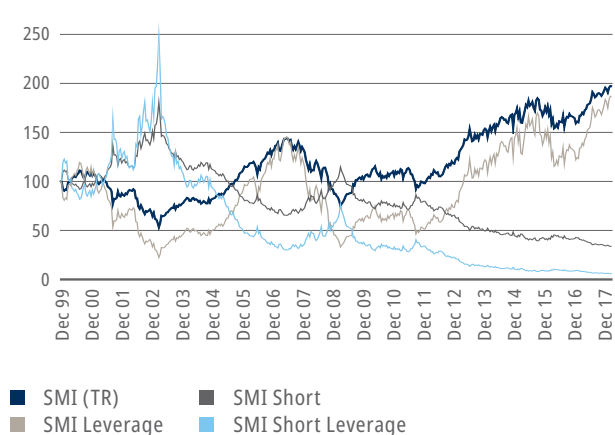
### Leveraged indices SMI® Swiss Market Index (PR)



### SMI® Swiss Market Index (TR)

	YTD	1 year back	3 years back	5 years back
<b>Return</b>				
Underlying	17.90%	17.90%	4.84%	10.03%
Leverage	38.89%	38.89%	7.80%	18.90%
Short	-17.14%	-17.14%	-8.41%	-11.88%
Short Leverage	-31.40%	-31.40%	-17.63%	-23.69%
<b>Volatility</b>				
Underlying	5.96%	5.96%	12.22%	11.02%
Leverage	12.10%	12.10%	25.00%	22.54%
Short	5.76%	5.76%	11.64%	10.45%
Short Leverage	11.32%	11.32%	22.62%	20.34%
<b>Sharpe Ratio</b>				
Underlying	2.43	2.43	0.09	0.67
Leverage	2.85	2.85	0.22	0.75
Short	-4.55	-4.55	-0.95	-1.39
Short Leverage	-4.13	-4.13	-0.84	-1.32

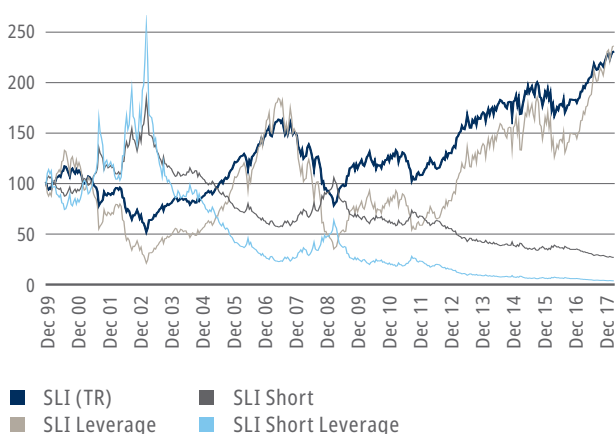
### Leveraged indices SMI® Swiss Market Index (TR)



### SLI® Swiss Leader Index (TR)

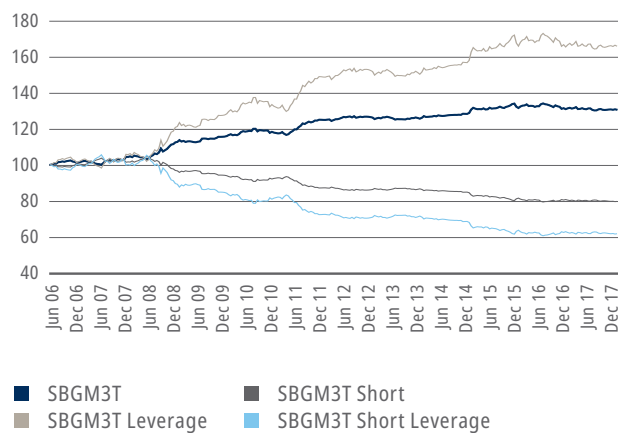
	YTD	1 year back	3 years back	5 years back
<b>Rendite</b>				
Underlying	20.71%	20.71%	7.83%	11.23%
Leverage	45.56%	45.56%	13.85%	21.39%
Short	-19.07%	-19.07%	-11.07%	-12.92%
Short Leverage	-34.59%	-34.59%	-22.44%	-25.53%
<b>Volatility</b>				
Underlying	6.07%	6.07%	13.55%	11.86%
Leverage	12.30%	12.30%	27.73%	24.24%
Short	5.90%	5.90%	12.89%	11.28%
Short Leverage	11.62%	11.62%	25.03%	21.94%
<b>Sharpe Ratio</b>				
Underlying	2.61	2.61	0.30	0.73
Leverage	3.03	3.03	0.42	0.81
Short	-4.66	-4.66	-1.07	-1.39
Short Leverage	-4.25	-4.25	-0.97	-1.33

### Leveraged indices SLI® Swiss Leader Index (TR)



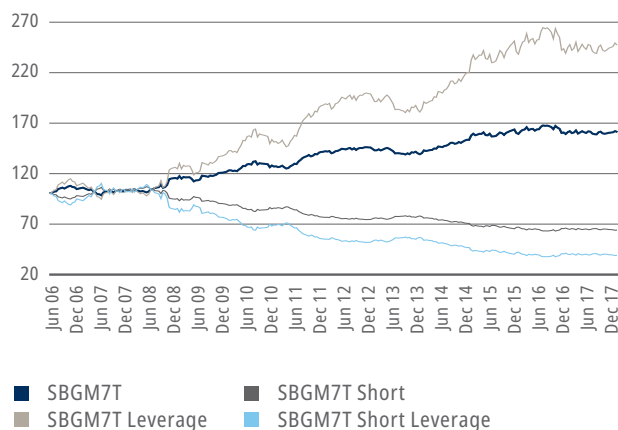
### SBI® Domestic Government Mid 3-7 Total Return

	YTD	1 year back	3 years back	5 years back
<b>Return</b>				
Underlying	-0.15%	-0.15%	1.50%	0.99%
Leverage	0.41%	0.41%	3.49%	2.27%
Short	-1.36%	-1.36%	-2.47%	-1.60%
Short Leverage	-1.99%	-1.99%	-4.45%	-2.92%
<b>Volatility</b>				
Underlying	2.76%	2.76%	2.36%	2.02%
Leverage	5.52%	5.52%	4.72%	4.04%
Short	2.77%	2.77%	2.34%	2.02%
Short Leverage	5.55%	5.55%	4.68%	4.03%
<b>Sharpe Ratio</b>				
Underlying	-2.35	-2.35	-0.49	-0.36
Leverage	-1.36	-1.36	0.14	0.16
Short	-1.58	-1.58	-2.01	-1.71
Short Leverage	-0.58	-0.58	-1.37	-1.18



### SBI® Domestic Government Mid 7+ Total Return

	YTD	1 year back	3 years back	5 years back
<b>Return</b>				
Underlying	1.08%	1.08%	5.01%	2.65%
Leverage	2.78%	2.78%	10.63%	5.53%
Short	-2.69%	-2.69%	-5.85%	-3.29%
Short Leverage	-4.75%	-4.75%	-11.06%	-6.32%
<b>Volatility</b>				
Underlying	5.75%	5.75%	4.90%	4.45%
Leverage	11.51%	11.51%	9.80%	8.90%
Short	5.75%	5.75%	4.83%	4.42%
Short Leverage	11.48%	11.48%	9.64%	8.82%
<b>Sharpe Ratio</b>				
Underlying	-1.05	-1.05	0.38	0.27
Leverage	-0.57	-0.57	0.69	0.51
Short	-0.82	-0.82	-1.58	-1.20
Short Leverage	-0.34	-0.34	-1.27	-0.96



## Quick facts

	Symbol	ISIN	Baseline value	Historical data
<b>Underlying</b>				
SMI® Swiss Market Index Price	SMI	CH0009980894		
<b>Leveraged indices</b>				
SMI Leverage	SMILEP	CH0111500531	30.12.2008 = 1 000	31.12.1999
<b>Underlying</b>				
SMI® Swiss Market Index Total Return	SMIC	CH0000222130		
<b>Leveraged indices</b>				
SMI Leverage	SMILEV	CH0049815555	30.12.2008 = 1 000	31.12.1999
SMI Short	SMISHT	CH0049815563	30.12.2008 = 10 000	31.12.1999
SMI Short Leverage	SMISL	CH0049815571	30.12.2008 = 10 000	31.12.1999
<b>Underlying</b>				
SLI® Swiss Leader Index Total Return	SLIC	CH0030252909		
<b>Leveraged indices</b>				
SLI Leverage	SLILEV	CH0049815589	30.12.2008 = 1 000	31.12.1999
SLI Short	SLISHT	CH0049815597	30.12.2008 = 10 000	31.12.1999
SLI Short Leverage	SLISL	CH0049815605	30.12.2008 = 10 000	31.12.1999
<b>Underlying</b>				
SBI® Domestic Government Mid 3-7 Total Return	SBGM3T	CH0024313691		
<b>Leveraged indices</b>				
SBI Domestic Government Mid 3-7 Leverage	SBI3L	CH0049815613	30.12.2008 = 100	30.06.2006
SBI Domestic Government Mid 3-7 Short	SBI3S	CH0049815639	30.12.2008 = 1 000	30.06.2006
SBI Domestic Government Mid 3-7 Short Leverage	SBI3SL	CH0049815654	30.12.2008 = 1 000	30.06.2006
<b>Underlying</b>				
SBI Domestic Government Mid 7+ Total Return	SBGM7T	CH0024313774		
<b>Leveraged indices</b>				
SBI Domestic Government Mid 7+ Leverage	SBI7L	CH0049815662	30.12.2008 = 100	30.06.2006
SBI Domestic Government Mid 7+ Short	SBI7S	CH0049815670	30.12.2008 = 1 000	30.06.2006
SBI Domestic Government Mid 7+ Short Leverage	SBI7SL	CH0049815696	30.12.2008 = 1 000	30.06.2006
<b>Interest rate</b>				
SAR Swiss Average Rate® ON	SARON	CH0049613687	–	

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All used data are on a yearly basis as of 29.12.2017. Source: SIX Swiss Exchange Ltd

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