CBOE

CBOE Strategy Benchmark Indexes

The CBOE-SMA Large-Cap Index (SMLC℠ Index)

The CBOE SMA Large-Cap Index (SMLC℠) tracks the return of a hypothetical portfolio strategy based on Social Market Analytics (SMA) S-Scores. SMA generates S-Scores from stock tweets. These scores express rising or declining sentiment for different stocks. The SMLC portfolio is an equally-weighted portfolio of the 25 highest scoring stocks in the CBOE Large-Cap Universe. Stocks in this universe (a) are in the top 15% capitalization tranche of stocks that are the underlying for options listed on the CBOE (approximately 3000) and (b) have a market capitalization greater than or equal to $10 billion.

The CBOE Large-Cap Universe is reconstituted quarterly on the third Friday of the month. The SMLC portfolio is reconstituted daily at 8:30 am CT, based on SMA S-Scores at 8:10 am CT. Stocks are deemed purchased at market on open prices. The portfolio is held until 3:00 pm CST and the proceeds from selling the stocks at market on close prices are held in cash until the next business day when a new portfolio is selected.

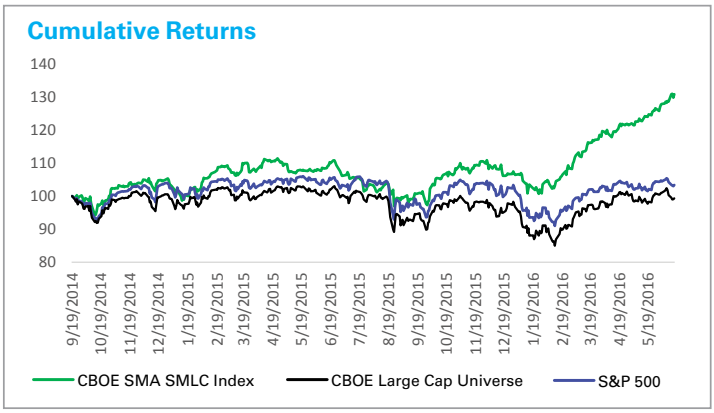
SMLC Index Performance To Date

Jul-16	1M	3M	YTD	IY
CBOE SMA SMLC INDEX	67.77%	57.04%	58.32%	29.42%
S&P 500	52.18%	22.68%	11.12%	3.31%

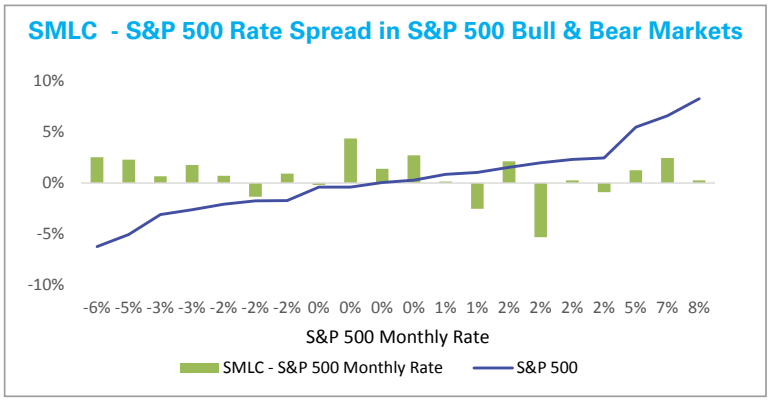
SMLC Index Portfolio Characteristics

The CBOE Large-Cap Universe typically includes around 450 large capitalization stocks. From October 2014 to June 2016, between 65% to 80% of CBOE Large-Cap Universe stocks have been included in the SMLC Index portfolio. This shows significant turnover in the SMLC Index.

Quarter	PCT of Universe	Average # Reappearances
QIV 2014	79%	5.06
QI 2015	66%	3.21
QII 2015	78%	4.57
QIII 2015	73%	5.43
QIV 2015	80%	4.14
QI 2016	79%	3.77
QII 2016	79%	3.77



Returns Over Bull And Bear Cycles



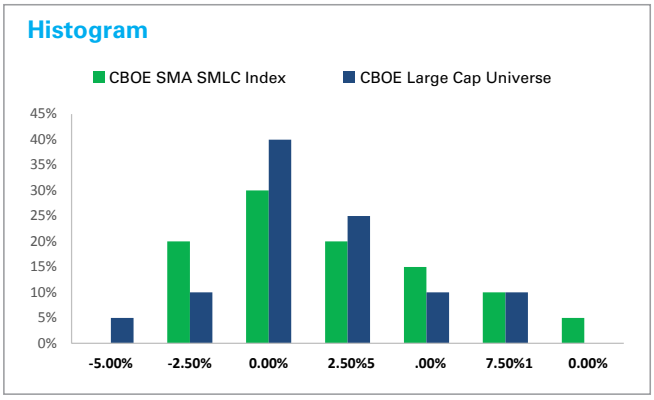
The performance of the SMLC Index relative to the S&P 500® is independent of the vagaries of the U.S. stock market. The SMLC Index tends to outperform the S&P 500 in bull or bear cycles.

SMLC Index Month End Return Statistics

	SMLC	Large-cap Universe	S&P 500
Mean	1%	0%	0%
Min	-4%	-6%	0%
Max	9%	8%	8%
Stdv	4%	4%	3%
Neg Dev	2%	2%	2%
Skew	0.77	0.45	0.46
Kurt	-0.24	0.33	0.65
Sharpe	0.27	0.04	0.07
Sortino	0.45	0.06	0.11

The higher mean return of the SMLC Index more than compensates for its slightly higher standard deviation and negative semi-deviation. Hence its higher Sharpe and Sortino ratios.

Distribution Of SMLC Index Returns



The CBOE-SMA Large-Cap Index (SMLC Index) is designed to represent a hypothetical yield enhancement strategy. Like many passive indexes, the SMLC Index does not take into account significant factors such as transaction costs and taxes and, because of factors such as these, many or most investors should be expected to underperform passive indexes. In the construction of the hypothetical SMLC Index, the stocks in the portfolio are assumed to be purchased on every business date at the market-on-open and sold at the market-on-close . However, there is no guarantee that all investors will be able to sell at these prices, and investors attempting to replicate the SMLC Index should discuss with their brokers possible timing and liquidity issues. Transaction costs and taxes for a strategy such as that underlying the SMLC Index could be significantly higher than transaction costs for a passive strategy of buying-and-holding stock over a longer period of time. Past performance does not guarantee future results. It is not possible to invest directly in an index. Chicago Board Options Exchange, Incorporated (CBOE) calculates and disseminates the SMLC Index.

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