

CBOE Strategy Benchmark Indexes

The CBOE-SMA Large-Cap Index (SMLCSM Index)

Introduction

The CBOE-SMA Large-Cap Index (“SMLCSM Index” or “Index”) is a benchmark index designed to track the performance of a hypothetical strategy that buys on a daily basis a portfolio of 25 stocks with high SMA-S Scores (“SMLC Portfolio”). Social Market Analytics, Inc. (SMA) applies its patented account certification algorithm to extract predicted signals from Twitter traffic by passing tweets through their proprietary NLP architecture to generate S-Scores that reflect investors’ sentiment about stocks. The SMLC Portfolio is constituted at 8:30 am CST from stocks in CBOE’s Large-Cap Universe (as defined below) on the basis of SMA S-Scores at 8:10 am CST. The stocks are held until 3:00 pm CST, and the portfolio is then sold. The proceeds from sale are held in cash until 8:30 am of the next business day when it is reinvested in the next SMLC Portfolio.

Index Design

On September 19, 2014 at 8:30 am CST, the inception date and time of the SMLC Index, \$100 is invested in the SMLC Portfolio. This portfolio is an equally weighted portfolio of 25 stocks drawn from the CBOE Large-Cap Universe that have the highest SMA S-Scores at 8:10 am CST. The CBOE Large-Cap Universe is comprised of stocks that (a) are in the top 15% capitalization tranche of stocks that serve as underlying for options listed on the CBOE (approximately 3000 liquid stocks) and (b) whose market capitalization is 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 at 8:30 am CST each business day.

Index Calculation

The SMLC Index value is calculated by CBOE daily at 3:00 pm CST.

On each trading day, the daily return of the Index is calculated as:

$$I_T = 100 * \prod(1 + R_t) \quad t = 1, \dots, T$$

$$R_t = \frac{\sum_{i=1}^{25} N_{it} P_{it}^{3pm}}{\sum_{i=1}^{25} N_{it} P_{it}^{8:30am}}$$

N_{it} is the number of shares of the i^{th} stock held on date t , and P_{it} is its price at time x . The value of the SMLC Index at the close of date T is therefore:

$$I_T = 100 * \prod(1 + R_t) \quad t = 1, \dots, T$$

The number of shares of the i^{th} stock bought on date t is

$$N_{it} = \frac{I_{t-1}}{25 * P_{it}^{8:30am}}$$



About CBOE Holdings, Inc.

CBOE Holdings, Inc. (NASDAQ: CBOE) is the holding company for Chicago Board Options Exchange (CBOE), the CBOE Futures Exchange (CFE), and other subsidiaries. CBOE, the largest U.S. options exchange and creator of listed options, continues to set the bar for options and volatility trading through product innovation, trading technology and investor education. CBOE Holdings offers equity, index and ETP options, including proprietary products, such as options and futures on the CBOE Volatility Index (VIX Index) and S&P 500 options (SPX), the most active U.S. index option. Other products engineered by CBOE include equity options, security index options, Weeklys options, FLEX options, and benchmark products such as the CBOE S&P BuyWrite Index (BXM). CBOE Holdings is home to the world-renowned Options Institute, Livevol options analytics and data tools, and www.cboe.com, the go-to place for options and volatility trading resources.

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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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