MSCI USA SELECT STRONG-BALANCE-SHEET INDEX

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1 INTRODUCTION

The MSCI USA Select Strong-Balance-Sheet Index aims to represent the performance of the 250 stocks with highest Merton's 'Distance to Default' score from MSCI USA Small Cap Index. A simplified version of the model is used to select companies with lower probability of credit default according to the score. The Index aims to achieve diversification by equal weighting of the constituents.

2 CONSTRUCTING THE INDEX

The MSCI USA Select Strong-Balance-Sheet Index is constructed from the MSCI USA Small Cap Index (the "Parent Index").

The following steps are applied at initial construction as well as subsequent Quarterly Index Reviews of the MSCI USA Select Strong-Balance-Sheet Index:

- Eligible Universe
- Security Selection based on simplified Distance to Default Score
- Weighting Scheme

2.1 ELIGIBLE UNIVERSE

The eligible universe consists of securities from the MSCI USA Small Cap Index. The universe excludes securities that have a 6-month Annualized Traded Value[1] less than USD 756 Million and securities with the GICS sector 'Financials' and 'Real Estate'. This approach aims to provide an opportunity set with sufficient liquidity that excludes 'Financials' and 'Real Estate' securities to prevent a distorted Merton's Distance to Default score.

2.2 SECURITY SELECTION BASED ON SIMPLIFIED DISTANCE TO DEFAULT SCORE

The securities from the eligible universe are subsequently filtered to include a single security per issuer. Where the same issuer has multiple securities, the security with the highest 6-month ATV is selected.

The top 250 securities, ranked in descending order of their latest 'Distance to Default' score, are selected for inclusion in the Index.

The score is based on a simplified version of Merton's Distance to Default score which hypothesizes that equity is a call option on the value of the firm. The strike price of this option is equal to the value of the debt. By put-call parity, the value of a firm's debt is then equal to a risk-free bond less a put on the debt.

$$Distance\ to\ Default(i,t) =$$

$$\frac{\ln\left(\frac{Mkt\ Cap(i,t)+(Current\ Liabilities(i,t)+0.5*Long\ Term\ liabilities(i,t))}{(Current\ Liabilities(i,t)+0.5*(Long\ Term\ liabilities(i,t)))}\right)+\left(Rate(t)-\frac{\sigma_A^2(i,t)}{2}\right)}{\sigma_A(i,t)}$$

1 Please refer to the MSCI Indexes methodology at www.msci.com/index-methodology

where:

$$\sigma_A(i,t) = \frac{Mkt\ Cap(i,t)}{Mkt\ Cap(i,t) + (Current\ Liabilities(i,t) + 0.5 * Long\ Term\ liabilities(i,t))}\sigma_E(\mathrm{i,t}) + \frac{(Current\ Liabilities(i,t) + 0.5 * Long\ Term\ liabilities(i,t))}{Mkt\ Cap(i,t) + (Current\ Liabilities(i,t) + 0.5 * Long\ Term\ liabilities(i,t))}\sigma_D(\mathrm{i,t})$$

$$\sigma_D(i,t) = 0.05 + 0.25 * \sigma_E(i,t)$$

$\sigma_E(i,t)$ is the 6-month historical price volatility of the security (i) calculated as the standard deviation of daily price changes over the 126 weekdays up to Review Date t (included)

$Current\ Liabilities(i,t)$ are the latest available liabilities of the security (i) on date (t) that need to be settled within 1 year. The fundamental data used to determine Current Liabilities is maintained quarterly. For the May, August, November and February Quarterly Index Reviews, the fundamental data as of the end of April, July, October and January respectively is used.

$Long\ Term\ liabilities(i,t)$ are the latest available Liabilities of the security (i) on date (t) that need to be settled beyond a year. The fundamental data used to determine Long Term Liabilities is maintained quarterly. For the May, August, November and February Quarterly Index Reviews, the fundamental data as of the end of April, July, October and January respectively is used.

$Mkt\ Cap(i,t)$ is the latest equity market cap for security i available on date t

$Rate\ (t)$ is the latest 3-month Libor rate available from date t

2.3 WEIGHTING SCHEME

Each selected security is then assigned an equal weight at initial construction and at every Index Review, in accordance with the MSCI Equal Weighted Indexes methodology[2].

[2] Please refer to the MSCI Equal Weighted Indexes methodology at www.msci.com/index-methodology

3 MAINTAINING THE INDEXES

3.1 QUARTERLY INDEX REVIEWS

The MSCI USA Select Strong-Balance-Sheet Index is reviewed on a quarterly basis using the steps described in section 2 and the selection buffer rules described in 3.1.1. The quarterly index rebalance is staggered over a period of 5 days from the 4th business day to the 8th business day of the subsequent month of the May and November Semi-Annual Index Reviews and the February and August Quarterly Index Reviews of the Parent Index as per 3.1.2.

The pro forma index is in general announced five business days before the first effective date, continuing for the next 5 business days.

3.1.1 SECURITY SELECTION BUFFER

A security selection buffer of 50% is applied during the on-going index reviews.

For example, the MSCI USA Select Strong-Balance-Sheet Index targets 250 securities and the buffers are applied between rank 126 and 375. The securities in the Parent Index with a Merton's Distance to Default score rank at or above 125 will be added to the MSCI USA Select Strong-Balance-Sheet Index on a priority basis. Existing constituents that have a Merton's Distance to Default score rank between 126 and 375 are then successively added until the number of securities in the MSCI USA Select Strong-Balance-Sheet Index reaches 250. If the number of securities is below 250 after this step, the remaining securities in the Parent Index with the highest Merton's Distance to Default score rank are added until the number of securities in the MSCI USA Select Strong-Balance-Sheet Index reaches 250.

3.1.2 STAGGERED REBALANCE

The quarterly Index rebalance is staggered over a period of 5 days starting on the 4th business day of each June, September, December and March. Five versions of the Index are calculated, based on the steps described above, having their effective date from the 4th to 8th business day respectively. These indexes are then equal weighted to arrive at the final index, which rebalances to equal weights daily during this five-day period.

3.2 ONGOING EVENT RELATED CHANGES

The following section briefly describes the treatment of common corporate events within the MSCI USA Select Strong-Balance-Sheet Index.

No new securities will be added (except where noted below) to the Index between Index Reviews. For cases where additions are noted below, securities will be added to the Index only if added to the Parent Index. Parent Index deletions will be reflected simultaneously.

EVENT TYPE	EVENT DETAILS
New additions to the Parent Index	A new security added to the Parent Index (such as IPO and other early inclusions) will not be added to the index.
Spin-Offs	All securities created as a result of the spin-off of an existing Index constituent will be added to the Index at the time of event implementation. Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.
Merger/Acquisition	For Mergers and Acquisitions, the acquirer's post event weight will account for the proportionate amount of shares involved in deal consideration, while cash proceeds will be invested across the Index. If an existing Index constituent is acquired by a non-Index constituent, the existing constituent will be deleted from the Index and the acquiring non-constituent will not be added to the Index.
Changes in Security Characteristics	A security will be kept in the Index if there are changes in its characteristics (country, sector, size segment, etc.) Reevaluation for inclusion in the Index will occur at the subsequent Index Review.

Further detail and illustration regarding specific treatment of corporate events relevant to this Index can be found in the MSCI Corporate Events Methodology book under the sections detailing the treatment of events in Capped Weighted and Non-Market Capitalization Weighted indexes.

The MSCI Corporate Events methodology book is available at:
https://www.msci.com/index-methodology

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