MSCI

Index Methodology

MSCI Short and Leveraged Daily Indexes Methodology

November 2014

Table of Contents

1. Introduction 3
2. Short Daily Index Methodology Highlights 3
2.1 Rationale for Including Borrowing Costs in Short Daily Indexes 4
3. Leveraged Daily Index Methodology Highlights 4
Appendix 1: Annual Stock Borrowing Costs 6
Appendix 2: Examples of Simulated Short and Leveraged Daily Index Performance 7
Exhibit 1: Illustration of Simulated Performance of the MSCI World Short Daily Index 7
Exhibit 2: Illustration of Simulated Performance of the MSCI World Leveraged 2x Daily Index 7
Client Service Information is Available 24 Hours a Day 8
Notice and Disclaimer 8
About MSCI 8

1. Introduction

The MSCI Short and Leveraged Daily Indexes aim to replicate the payoff to daily shorting and leveraged investment strategies, respectively. These indexes can serve as benchmarks for the creation of exchange traded funds or other passive investment products that enable investors to gain short or leveraged exposure to certain segments of the equity market or hedge existing portfolio exposures without the need to short individual stocks or use derivative instruments.

2. Short Daily Index Methodology Highlights

The objective of the MSCI Short Daily Indexes is to replicate the payoff to daily shorting investment strategies. The MSCI Short Daily Indexes take into account four main components of the payoff to daily shorting investment strategies:

(1) Capital gains associated with the underlying equity securities.

(2) Cash dividends paid by the underlying equity securities.

(3) Interest earned on the initial capital as well as on the proceeds of the short sale.

(4) Stock borrowing costs, typically fees paid to the beneficial owners of the borrowed stocks.

The formula used in the daily return calculation of the MSCI Short Daily Indexes is as follows:

$$R_S = -R + 2 \cdot r_f \cdot \frac{T}{360} - r_c \cdot \frac{T}{360}$$

The terms in this formula correspond to the different components of daily shorting investment strategies. Assuming that *t* denotes the day of calculation and *t-1* denotes the previous business day, the terms in the above calculation formula can be interpreted as follows:

R_S is the short daily index total return, including gross dividends, between dates *t-1* and *t*

R is the underlying index total return, including gross dividends, between dates *t-1* and *t*

r_f is the annual overnight risk-free rate (EONIA for EUR, LIBOR for other currencies)

r_c is the annual stock borrowing cost (estimated from various sources including OTC swap data)

T is the number of actual calendar days between dates *t-1* and *t*

The MSCI Short Daily Indexes are derived from existing underlying MSCI Indexes. As a result, corporate events are reflected in the MSCI Short Daily Indexes as they occur and as they are captured in the underlying MSCI Indexes.

The MSCI Short Daily Indexes are calculated daily using the formula presented and discussed above. The daily accrual of interest income and daily amortization of stock borrowing costs implied by this formula means that using the same formula to calculate short index returns over a horizon other than daily would result in different calculated index returns.

The source for LIBOR rates is the British Banker's Association (BBA). The source for Eonia is the Euribor FBE (European Banking Federation). Eonia is a registered trademark of Euribor FBE.

Stock borrowing costs used in the calculation of the MSCI Short Daily Indexes will be updated periodically using data from various sources including the OTC total return equity swap market. Initially, stock borrowing cost data will be updated at least annually; however, the update frequency of stock borrowing cost data may be reviewed in the future, depending on data availability. Please see Appendix 1 for the stock borrowing costs used.

2.1 Rationale for Including Borrowing Costs in Short Daily Indexes

Investors pay stock borrowing fees to borrow securities and return them at a later date in the same way that they pay interest when they borrow cash and repay it at a future date. Therefore, stock borrowing costs, unlike transaction costs, are an inventory cost, more akin to interest and dividend payments. Given that MSCI includes interest and dividend payments in the calculation of short daily indexes, it is also appropriate to reflect stock borrowing costs in these indexes.

MSCI held extensive consultations with market participants during the development of the methodology used to construct the MSCI Short Daily Indexes. In these consultations, the majority of market participants commented that it is appropriate to take stock borrowing costs into account. Also, market participants felt that even though there is no single universal stock borrowing cost rate applicable to all stocks and all investors, using proxies for stock borrowing costs such as total return equity swap repo rates or average stock borrowing fees would be acceptable and preferable to ignoring them completely.

3. Leveraged Daily Index Methodology Highlights

The objective of the MSCI Leveraged Daily Indexes is to replicate the payoff to daily leveraged investment strategies. The MSCI Leveraged Daily Indexes take into account three main components of the payoff to daily leveraged investment strategies:

(1) Capital gains associated with the underlying equity securities.

(2) Cash dividends paid by the underlying equity securities.

(3) Interest paid to the lender of the capital that is used to lever the portfolio.

The formula that computes the daily return of the MSCI Leveraged Daily Indexes is as follows:

$$R_L = g \cdot R + (1-g) \cdot r_f \cdot \frac{T}{360}$$

The terms in this formula correspond to the different components of daily leveraged investment strategies. Assuming that *t* denotes the day of calculation and *t-1* denotes the previous business day, the terms in the above calculation formula can be interpreted as follows:

R_L is the leveraged daily index total return, including gross dividends, between dates *t-1* and *t*

R is the underlying index total return, including gross dividends, between dates *t-1* and *t*

r_f is the annual overnight risk-free rate (EONIA for EUR, LIBOR for other currencies)

g is the strictly higher than one leverage ratio, defined as total capital over initial capital

T is the number of actual calendar days between dates *t-1* and *t*

The MSCI Leveraged Daily Indexes are derived from existing underlying MSCI Indexes. As a result, corporate events are reflected in the MSCI Leveraged Daily Indexes as they occur and as they are captured in the underlying MSCI Indexes. With respect to calculation frequency, the MSCI Leveraged Daily Indexes are calculated daily using the above formula. The daily amortisation of interest expense implied by this formula means that using the same formula to calculate leveraged index returns over a horizon other than daily would result in different calculated index returns.

The source for LIBOR rates is the British Banker's Association (BBA). The source for Eonia is the Euribor FBE (European Banking Federation). Eonia is a registered trademark of Euribor FBE.

The following section has been modified since August 2014:

Appendix 1: Annual Stock Borrowing Costs

Appendix 1: Annual Stock Borrowing Costs

Country	Stock Borrowing Cost (bp annualized)
MSCI USA SHORT DAILY INDEX	5.00
MSCI JAPAN SHORT DAILY INDEX	25.00
Composite	
MSCI ACWI SHORT DAILY INDEX	15.00
MSCI WORLD SHORT DAILY INDEX	10.00
MSCI EUROPE SHORT DAILY INDEX	15.00
MSCI EAFE SHORT DAILY INDEX	20.00
MSCI EM SHORT DAILY INDEX	65.00

Data as of October 29, 2014

Appendix 2: Examples of Simulated Short and Leveraged Daily Index Performance

The attached charts display examples of simulated performance for the MSCI World Short Daily Index and the MSCI World Leveraged Daily Index. Both simulations were carried out from a USD base currency perspective. Annual stock borrowing costs of 25 basis points were applied in the simulation of the MSCI World Short Daily Index and a leverage ratio of two was used in the simulation of the MSCI World Leveraged Daily Index. The USD overnight LIBOR interest rate was used to account for interest payments in both simulations.

Exhibit 1: Illustration of Simulated Performance of the MSCI World Short Daily Index

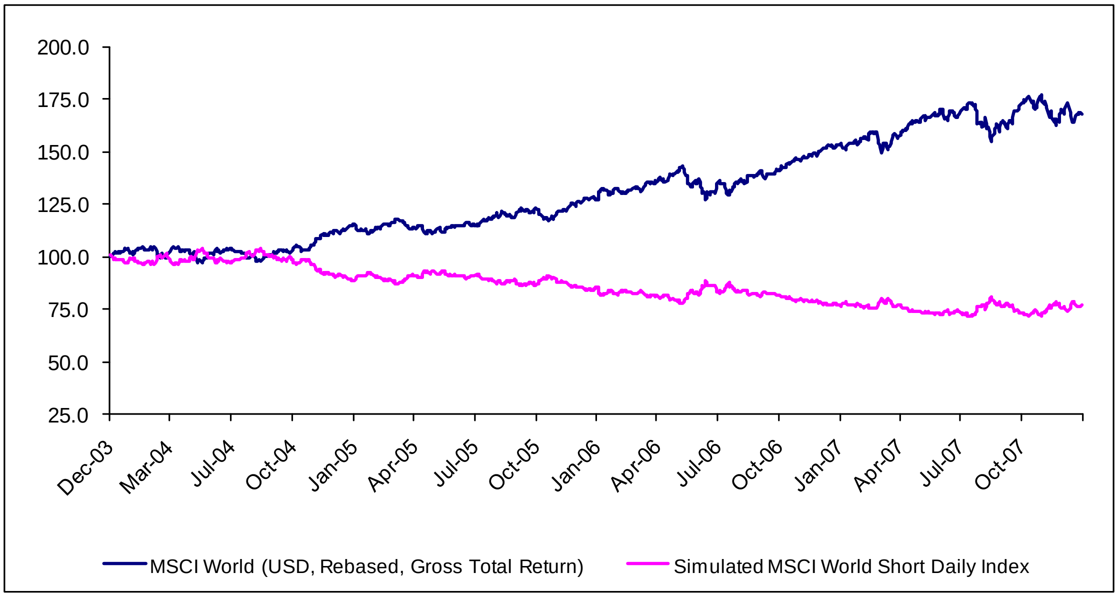
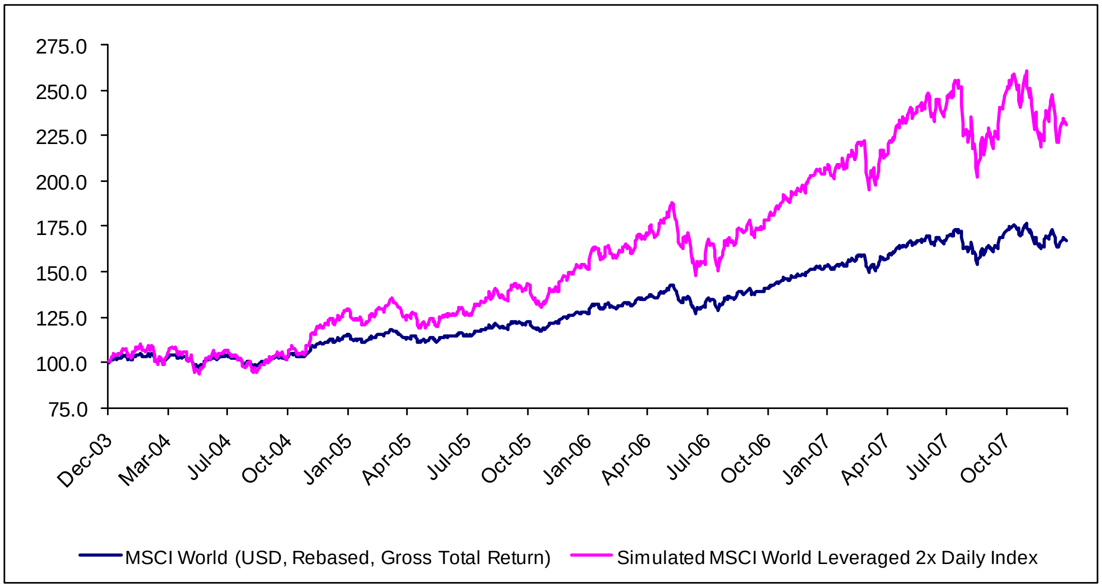


Exhibit 2: Illustration of Simulated Performance of the MSCI World Leveraged 2x Daily Index



Client Service Information is Available 24 Hours a Day

clientservice@msci.com

Americas

Americas	1.888.588.4567 (toll free)
Atlanta	+ 1.404.551.3212
Boston	+ 1.617.532.0920
Chicago	+ 1.312.675.0545
Monterrey	+ 52.81.1253.4020
New York	+ 1.212.804.3901
San Francisco	+ 1.415.836.8800
Sao Paulo	+ 55.11.3706.1360
Toronto	+ 1.416.628.1007

Europe, Middle East & Africa

Cape Town	+ 27.21.673.0100
Frankfurt	+ 49.69.133.859.00
Geneva	+ 41.22.817.9777
London	+ 44.20.7618.2222
Milan	+ 39.02.5849.0415
Paris	0800.91.59.17 (toll free)

Asia Pacific

China North	10800.852.1032 (toll free)
China South	10800.152.1032 (toll free)
Hong Kong	+ 852.2844.9333
Seoul	00798.8521.3392 (toll free)
Singapore	800.852.3749 (toll free)
Sydney	+ 61.2.9033.9333
Taipei	008.0112.7513 (toll free)
Tokyo	+ 81.3.5290.1555

About MSCI

MSCI Inc. is a leading provider of investment decision support tools to investors globally, including asset managers, banks, hedge funds and pension funds. MSCI products and services include indexes, portfolio risk and performance analytics, and governance tools.

The company's flagship product offerings are: the MSCI indexes with approximately USD 8 trillion estimated to be benchmarked to them on a worldwide basis[1]; Barra multi-asset class factor models, portfolio risk and performance analytics; RiskMetrics multi-asset class market and credit risk analytics; IPD real estate information, indexes and analytics; MSCI ESG (environmental, social and governance) Research screening, analysis and ratings; ISS corporate governance research, data and outsourced proxy voting and reporting services; and FEA valuation models and risk management software for the energy and commodities markets. MSCI is headquartered in New York, with research and commercial offices around the world.

[1] *As of September 30, 2013, as reported on January 31, 2014 by eVestment, Lipper and Bloomberg* *Feb 2014*