

STANDARD  
& POOR'S

# S&P LONG-ONLY MERGER ARBITRAGE INDEX

INDEX METHODOLOGY

May 2008

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# Introduction

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The S&P Long-Only Merger Arbitrage Index seeks to model a risk arbitrage strategy that exploits commonly observed price changes associated with mergers. The index is comprised of a maximum of 40 large and liquid stocks that are active targets in pending merger deals.

## Highlights

When a merger is announced the shares of the company being acquired do not immediately begin trading at the terms of the merger, since there is a risk that the merger will be cancelled. The difference between the current price of the stock and the terms of the merger agreement represents the potential benefit of a merger arbitrage trade.

The S&P Long-Only Merger Arbitrage Index seeks to model such a strategy by including positions in up to 40 large and liquid target companies in pending merger deals.

A target company is considered for inclusion if, based on the terms of the deal, at least 25% of the compensation to be paid for the target's shares is in cash.

Deals are screened on the basis of size, liquidity, premium and exchange listing to ensure that the underlying positions are tradable and offer upside potential if the deal does close.

The index includes a cash component. The cash component of the index earns the overnight U.S. Dollar LIBOR rate.

All positions are added to the index at a weight of 2.5% of capital as represented by the index market value, which includes the cash component.

## Index Family

The Index belongs to the S&P Arbitrage Index Family. Other indices in the family are the S&P Currency Arbitrage Index and the S&P 500 Volatility Arbitrage Index.

# Eligibility Criteria

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The S&P Long-Only Merger Arbitrage Index is comprised of stocks currently involved in pending mergers. A maximum of 40 companies that are currently targets in merger deals are represented in the index at any given time.

## **Additions**

**Domicile.** The company must be domiciled and listed in a developed market country as defined by the S&P/Citigroup index series. The eligible countries are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, South Korea, Spain, Sweden, Switzerland, the United Kingdom and the United States.

**Deal Size.** The deal size, based on the terms of the merger as of the date of the merger announcement, must be greater the Deal Size Threshold. The Deal Size Threshold is currently US\$ 500 million. The deal size is defined as the total value of stock and cash used to acquire the target company. Debt is not included.

**Liquidity.** The company must have a three-month average daily trading value above a Liquidity Threshold, as of the date of the merger announcement. Trading value is defined as the daily trading volume of the target company multiplied by its closing price. The Liquidity Threshold is currently US\$ 2 million.

**Premium.** The deal must have a premium, as of the time of the merger announcement, above the Premium Threshold. The Premium Threshold currently is 5%. In other words, the implied price of the deal must be at least 5% greater than the current stock price of the target company.

**Deal Terms.** The compensation offered to shareholders of the target company must be either cash or a combination of cash and stock. Deals in which the entire compensation offered to shareholders of the target company are stock in the acquiring company are not eligible for inclusion. If the compensation is a combination of cash and stock at least 25% of the compensation, based on the terms of the deal as of the announcement, must be in cash. Besides stock, other types of securities can be included in the combination as long as at least 25% of the compensation is in cash.

## Deletions

**Withdrawal of Merger.** If the acquiring company withdraws a merger, the target company is removed from the index two business days following the withdrawal announcement. However, if the stock is a target of two or more potential acquirers, it will remain in the index as long as any of the offers is still active.

**Completion of Merger.** If a pending merger is completed the company is removed from the index. The deletion is effective on the date the merger becomes effective, if the completion is known and announced at least two days in advance. If the effective date of the merger is not known beforehand, the deletion is effective two business days following the effective date of the merger. The final closing price of the company is used in the calculation of the index until the stock is removed.

**Replacement.** At any given time, the index contains a maximum of 40 long positions. If, at the time of a merger announcement where the merger is eligible for the index, there are 40 positions in the index, the position with the lowest return, since it entered the index, will be deleted from the index. The company being deleted, however, must have been an index member for at least five days – in other words, the return calculation must be based on at least five trading days of data.

**Maximum Inclusion Time.** A company may be included in the index for a maximum of one year. If the merger has not closed within a year, the company is deleted effective on the one-year anniversary of its inclusion, with a two day advanced announcement.

The Deal Size Threshold, Liquidity Threshold and Premium Threshold are subject to change from time to time based on market conditions.

# Index Construction

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## **Approaches**

The methodology employs a modified equal-weighted weighting scheme, using the divisor methodology used in most Standard & Poor's equity indices.

## **Constituent Selection and Timings**

After 03:00 PM (ET) every U.S. trading date, Standard & Poor's identifies any additions and deletions as per eligibility criteria.

If a new company qualifies, it will be added to the index at the close of the U.S. market with two days notice. If there are 40 stocks present in the index at the time of the eligible merger announcement, the stock with the lowest return, since entering the index, will be deleted. If there are fewer than 40 stocks in the index at the time of the merger announcement no deletion is made.

When a deletion is made from the index for any reason -- whether due to a merger completion, merger withdrawal, the stock being in the index for one year or a merger being replaced to maintain a maximum of 40 stocks -- the value of the deleted company(ies) in the index is put into the cash component of the index. If a position is deleted per eligibility criteria, it will be deleted at the close of U.S. market with two days notice.

## **Constituent Weightings**

All stocks are added to the index at a weight of 2.5%. The weight of each stock is then allowed to float over time based on market movements. When a stock is added the value of the cash component will decrease by the value of the added stock. If, at the time of the addition, the cash position represents less than 2.5% of the index the added stock will be assigned a weight equal to the weight of the cash component of the index prior to the change.

At any given time, the index contains a cash position. The value of this cash position changes over time as constituents are added to or deleted from the index and as interest accrues daily, based on the U.S. Dollar LIBOR. The weight of the cash position of the index will, in general, be higher given a lower number of stocks in the index.

## Index Calculations

The index is calculated by means of the divisor methodology used in all Standard & Poor's equity indices. The index value is simply the index market value divided by the index divisor.

$$\text{Index Value} = \frac{\text{Index Market Value}}{\text{Index Divisor}} \quad (1)$$

$$\text{Index Market Value} = \text{Cash} + \sum_{i=1}^n (\text{Index Shares})_i * (\text{Price})_{\text{close},i} \quad (2)$$

Where  $\text{Price}_{\text{close},i}$  is the closing price of  $\text{stock}_i$  and  $n$  is the number of stocks in the index. The maximum value of  $n$  is 40.

*Cash* accounts for the uninvested position in the index. This occurs when there are fewer than 40 stocks in the index and as dividend and interest payments accrue.

The cash position accrues interest daily, based on the overnight U.S. Dollar LIBOR. The cash position also increases as the companies in the index make any regular or special dividend payments. The initial cash position on the base date is equal to the difference between the initial index market value and the market value of the stocks present in the index on the base date.

Therefore, on any given day  $t$ :

$$\text{Cash}_t = \text{Cash}_{t-1} * (\text{Overnight USD LIBOR}_{t-1} * (t - (t-1)) / 360) + \text{Index Dividend Value}_t \quad (3)$$

where  $t$  is equal to today's date and  $t-1$  is equal to the prior business date.

$$\text{Index Dividend Value}_t = \sum_{i=1}^N (1 - \text{Tax Rate}_{i,t}) * \text{Index Shares}_{i,t} * (\text{Ex-dividends})_{i,t} \quad (4)$$

Ex-dividends represent the per share gross dividend amount, in U.S. dollars, of any stock with a dividend effective on day  $t$ . The tax rate applied is the rate for non-resident institutions that do not benefit from double taxation treaties. The net reinvested return series approximates the returns available to an investor based in Luxembourg, reflecting the minimum possible dividend reinvestment since the highest rates are theoretically applied to Luxembourg-based investors. The rates applied are the current effective rates and are sourced from Ernst & Young's Worldwide Corporate Tax Guide and the Economic Intelligence Unit. These rates are maintained and updated to reflect any ongoing changes.

Index Shares are set for each stock at the time the stock is added to the index in the following manner. For the  $i^{\text{th}}$  constituent:

$$\text{Index Shares}_i = \frac{(\text{Index Market Value} * 2.5\%)}{\text{Price}_{\text{close}, i}} \quad (5)$$

where *Index Market Value* is the index value and  $\text{Price}_{\text{close}, i}$  is the price of *stock<sub>i</sub>* as of the market close on which it is to be added to the index.

The index assumes proceeds from deletions are added to the cash position, while additions are financed by the cash position. Therefore, in order to maintain basket series continuity, it is also necessary to adjust cash after the close of any date on which there is an addition or deletion to the index. Note that cash at the close of day  $t$  before any adjustment is equal to the prior day's cash after any adjustment plus any interest accrued and dividends paid on day  $t$ .

$$(\text{Index Market Value})_{\text{before change}} = (\text{Index Market Value})_{\text{after change}} \quad (6)$$

Therefore,

$$(\text{Cash})_{\text{after change}} = (\text{Index Market Value})_{\text{before change}} - \sum_{i=1}^{N'} (\text{Index Shares})_i * (\text{Price})_i \quad (7)$$

Where  $N'$  is the number of stocks in the index after accounting for additions and deletions.

# Index Maintenance

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## Rebalancing

**Frequency.** Changes to the S&P Long-Only Merger Arbitrage Index are made on an as-needed basis. There is no calendar-driven rebalancing. Rather, changes are made to the index as required by merger announcements, withdrawals and completions.

## Corporate Actions

<b>Corporate Action</b>	<b>Adjustment made to index</b>	<b>Divisor adjustment?</b>
Spin-off	No weight change. The price is adjusted to the Price of the Parent Company minus (Price of the Spun-off company/Share Exchange Ratio). Index Shares change so that the company's weight remains the same as its weight before the spin-off.	No
Rights Offering	No weight change. The price is adjusted to the Price of Parent Company minus (Price of the Rights Offering/Rights Ratio). Index Shares change so that the company's weight remains the same as its weight before the rights offering.	No
Stock Split	Index Shares are multiplied by and the price is divided by the split factor.	No
Share Issuance or Share Repurchase	None. Actual shares outstanding of the company play no role in the daily index calculation.	No
Special Dividends	The price of the stock making the special dividend payment is reduced by the per share special dividend amount after the close of trading on the day before the dividend ex-date. The proceeds of the dividend are put in the cash position.	No
Cash Dividends	The proceeds of the dividend are put in the cash position.	No

## Base Date

The index base date is December 31<sup>st</sup>, 2003. The base value is 1000. Daily returns are available from December 31<sup>st</sup>, 2003.

# Index Data

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## **Total Return and Net Return Indices**

The index is calculated as a net return index series using net cash dividends, which are applied on the ex-date of the dividend.

# Index Governance

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## **Index Committee**

The S&P Arbitrage Index Committee maintains the S&P Long-Only Merger Arbitrage Index. The Index Committee meets regularly. At each meeting, the Index Committee reviews pending corporate actions that may affect index constituents and any significant market events. In addition, the Index Committee may revise index policy covering rules for selecting companies or other matters.

Standard & Poor's considers information about changes to its indices and related matters to be potentially market moving and material. Therefore, all Index Committee discussions are confidential.

# Index Policy

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## **Announcements**

Announcements of additions and deletions are made on an as-needed basis at 05:15 PM (ET) via the Web site at [www.indices.standardandpoors.com](http://www.indices.standardandpoors.com).

## **Holiday Schedule**

The index is calculated daily, throughout the calendar year. The only days the index is not calculated are on days when all exchanges where the S&P Long-Only Merger Arbitrage Index constituents are listed are officially closed or if WM Reuters' exchange rates services are not published.

*A complete holiday schedule for the year is available on Standard & Poor's Web site at [www.indices.standardandpoors.com](http://www.indices.standardandpoors.com).*

## **Unscheduled Market Closures**

In situations where an exchange is forced to close early due to unforeseen events, such as computer or electric power failures, weather conditions or other events, Standard & Poor's will calculate the closing price of the indices based on (1) the closing prices published by the exchange, or (2) if no closing price is available, the last regular trade reported for each stock before the exchange closed. In all cases, the prices will be from the primary exchange for each stock in the index. If an exchange fails to open due to unforeseen circumstances, the index will use the prior day's closing prices. If all exchanges fail to open, Standard & Poor's may determine not to publish the index for that day.

# Index Dissemination

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Complete data for index replication (including share counts, tickers and data on index levels and returns) are available through Standard & Poor's index data group for subscription via FTP.

## **Tickers**

	<b>Bloomberg</b>	<b>Reuters</b>
S&P Long-Only Merger Arbitrage Index	SPARBM	.SPARBM

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