

TickMAP

Overview

July 2011

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Revision History

Version	Description	Date
001	Initial release	July, 2011

TickMAP – Overview

Summary

QuantQuote's TickMAP framework allows for tracking of corporate events. These include splits, dividends, spin-offs, bankruptcies, mergers, and acquisitions. TickMAP is available as standalone files or with the C++ based TickMAP software. The two main features are symbol mapping and split/dividend adjustments.

Symbol Mapping

It is not uncommon for companies to change their ticker based on events such as mergers, spin-offs, or simple renaming. In order to perform reliable backtests, it is important to track companies through these events. Because company tickers are always changing, TickMAP assigns a historically unique ticker to each company known as a permtick.

Conceptual Example:

JPMorgan prior to merger with Chase Manhattan traded under JPM. When the two companies merged, the combined company inherited Chase Manhattan's stock, CMB which was then traded under symbol JPM. TickMAP handles this by assigning pre-merger JPMorgan the permtick JPM.1 to uniquely identify it. Thus, both tickers, JPM.1 and JPM are available and separated. Furthermore, it correctly maps JPM to CMB and JPM.1 to JPM for dates prior to the merger coming into effect.

When a permtick and date is passed to the `mapped_symbol()` function within the C++ version of TickMAP, it returns the `traded_symbol`, which is the symbol that particular company traded under at that point in history (which could be different from its present permtick). Thus, even though both JPMorgan and JPMorgan Chase traded under JPM at one point, TickMAP can distinguish them.

TickMAP is also available as a standalone set of files which encapsulates the same information, the C++ code is just an automated method of extracting the data contained within the TickMAP files.

Split/Dividend Adjustments

TickView Quote and Trade files are provided without split and dividend adjustments to the prices and volumes. However, TickMAP has the ability to adjust prices on the fly by providing the multiplicative factor required to adjust for splits and dividends. Simply passing the permtick and date to the `adj_factor()` function in the TickMAP code will return the factors for that trading day. Then, the following equation can be used to get the adjusted price:

$\text{adjusted price} = \text{raw_price} \times \text{dividend_factor} \times \text{split_factor}.$

The standalone version of TickMAP provides a CSV file which contains the same information (date, dividend factor, and split factor). The exact split and dividend calculation method can be found in Technical Specifications – Minute Data (Document 3058, QuantQuote_Minute.pdf).

Updates

TickMAP is extremely easy to update and can be done in a single step by simply downloading a new version of the TickMAP map_files and factor_files. For example, if there is a new dividend, it is not necessary to update all files for that symbol. Instead, it is only necessary to download a new TickMAP file for the symbol which will include an updated dividend factor for each trading day.