BLOCKSIZE
CONNECT

LiquiMetric DAILY VWAPs Methodology

Version 1.5

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History of Amendments to the Rules and Regulations

Effective 29/11/2023	Release of Version 1.4
Effective 22/03/2024	Release of Version 1.5 - Updated Product Naming Conventions

1 Introduction

BLOCKSIZE produces the LiquiMetric DAILY VWAPs Data Feed, formerly DAILY PRICES, as part of its product BLOCKSIZE CONNECT, a comprehensive offering of crypto market information. All data points are converted and delivered in U.S. Dollars, Euros, and various other currencies for an expanding set of cryptocurrencies and other digital asset classes.

The LiquiMetric DAILY VWAPs Data Feed is designed to serve as a transparent and independent pricing source that promotes the functioning of efficient markets, reduces information asymmetries among participants, facilitates trading, and accelerates the adoption of cryptocurrencies as an asset class with the highest standards.

The LiquiMetric DAILY VWAPs Data is an essential tool for financial market participants. They are used for a variety of purposes, including taking investment decisions, executing trades, managing risk, and monitoring markets.

1. Pricing Securities: Accurate and up-to-date price information is essential for determining the fair value of securities, ensuring that transactions are conducted at the most appropriate price levels.
2. Trading Execution: Real-time price data empowers traders to execute trades with precision and efficiency, enabling them to capitalize on fleeting market opportunities and minimize execution costs.

3. Algo Trading: Real-time price data is a key requirement for algorithmic trading strategies, providing the necessary input for complex trading algorithms to execute trades autonomously.

4. High-Frequency Trading (HFT): HFT firms rely on real-time price data to exploit fleeting market inefficiencies and execute high-volume trades at rapid speeds.

5. Risk Management: By providing insights into current market conditions and potential price volatility, real-time price data feeds enable financial institutions and investors to effectively manage their risk exposure and protect their portfolios.

6. Research and Analysis: Real-time price data serves as a rich source of information for financial analysts, enabling them to conduct in-depth research, identify market trends, and develop sophisticated trading strategies.
7. Market Surveillance: Regulatory authorities utilize real-time price data to monitor market activity, identify potential market manipulation, and ensure the integrity of the financial markets.
8. News Analytics: Real-time price data is often integrated with news feeds to analyze the impact of news events on market movements and identify potential trading opportunities.

The LiquiMetric DAILY VWAPs Data Feed is calculated using a transparent and robust methodology with a clear framework of policies and procedures adhering to international best practices.

This methodology is governed by the BLOCKSIZE Data Committee and is part of the BLOCKSIZE CONNECT Manifest (see Appendix A.1) that aims to ensure that the LiquiMetric DAILY VWAPs Data Feeds serve as an accurate source of transparent and reliable pricing.

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2 Calculation of Volume-Weighted Average Prices

The calculation algorithm of the LiquiMetric DAILY VWAPs Data Feed as following:

1. Calculate the volume-weighted sum of prices $\sum_j p_j \times v_j$ denominated in units of the given asset from observable transactions that occurred for each of the accepted markets.
2. Calculate the aggregate volume for each of the accepted markets by adding the size of events across all accepted exchange markets, $\sum_j v_j$. The resulting figure is referred to as the volume weight.
3. Divide the volume-weighted sum of prices, $\sum_j p_j \times v_j$, by the total volume weight, $\sum_j v_j$, to obtain the volume weighted average price (VWAP) denoted by P_{VWAP}.

$$P_{VWAP} = \frac{\sum_j p_j \times v_j}{\sum_j v_j}$$

3 Data Contingency Rules

The following contingency rules are followed to address situations where data is delayed, missing, or unavailable due to periods of low liquidity such as extraordinary market circumstances or outside factors beyond the control of BLOCKSIZE.

1. If observable trade events from an accepted market are unable to be collected due to technical problems specific to the accepted market's exchange during the calculation of the LIQUIMETRIC BID-ASK Data Feed (such as malformed data), the observable trade events are excluded from the calculation of the specific instance of the given Data Feed.
2. If no observable trade events from an accepted market exist during the current 24-hour timeframe, the value of the LIQUIMETRIC BID-ASK Data Feed will rely on the on various other accepted markets for its calculation.
3. If none of the accepted exchanges in Appendix A.3 report observable trade events, the LIQUIMETRIC BID-ASK Data Feed will not report a calculated price. In the highly unlikely event that a user establishes a connection to a LIQUIMETRIC BID-ASK Data Feed in a 24-hour timeframe where none of the accepted exchanges (Appendix A.3) is reporting observable trade events, the price will be computed from the last observed trade events.

4 LiquiMetric DAILY VWAPs Data Quality Assurance

Observed trade events and markets are evaluated by the Data Committee. If potential errors or anomalies in the data are detected, it will be removed from the future calculation of the LIQUIMETRIC DAILY VWAPs Data Feed.

The Data Committee may decide to include the trade event data from new sources that are vetted for data integrity and quality. Alternatively, the Data Committee may decide to exclude previously accepted markets that started to deliver erroneous or anomalous data. Any change in data sources needs to be approved by the members of the Data Committee and is communicated to the users, where relevant.

Appendix: Current Documents

The LiquiMetric DAILY VWAPs Methodology described here is part of the BLOCKSIZE CONNECT Manifest, which describes how BLOCKSIZE is dealing with aspects of its BLOCKSIZE CONNECT suite of data subscriptions.

A.1 Current version of the BLOCKSIZE CONNECT Manifest:
https://www.blocksize.info/blocksize-connect/manifest/

A.2 Current list of supported instruments:
https://www.blocksize.info/blocksize-connect/instruments-realtime/

A.3 Current list of supported markets:
https://www.blocksize.info/blocksize-connect/markets-overview/

A.4 Current version of the LiquiMetric VWAPs Methodology:
https://www.blocksize.info/blocksize-connect/manifest/real-time-prices-methodology/

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