

# European Government Bond Liquidity Metrics

an MTS and Yield Book Collaboration

## Reliable pre-trade and post-trade measures of liquidity

To address increasing needs for liquidity assessment within the market, MTS and Yield Book now offer a collaborative set of pre-trade and post-trade analytical measures for the European Government Bond market. MTS has been a trusted facilitator of electronic fixed income markets for over 30 years and facilitates trading through a network of over 500 unique counterparties across our platforms in Europe and the US with average daily volumes exceeding EUR 130 billion. Yield Book, with 30 years of experience serving clients worldwide across the financial industry, has developed a comprehensive, trusted and market-leading library of fixed income analytics.

With combined experience in serving our clients' data, trading and analytical needs we combine MTS' wealth of pre-trade and executed transactional data with Yield Book's advanced analytical models to help clients with their liquidity risk research and decision-making needs.

### Pre- and post-trade volumes

MTS data allows us to calculate:

- ✓ Time-weighted order book executable volume in the market
- ✓ Post-trade executed transaction volumes

#### Market Depth

### Pre-trade bid-ask spread

- ✓ Time and volume-weighted bid-ask spreads across multiple order book levels
- ✓ Steepness of spread change down the order book to analyse hidden illiquidity
- ✓ Bid-Ask spread Resiliency linking Tightness with order book Depth

#### Market Tightness

### Liquidity ratios

- ✓ Quantifies the ability of a bond to be traded easily without affecting the price
- ✓ Measures Spread or Price movement per unit of MTS executed trading volume
- ✓ Further extends metric to bonds without executed transactions using various inference techniques

#### Market Resiliency

Yield Book has developed a set of tools to help clients quickly and reliably analyse both traded and theoretical liquidity of their securities from multiple points of view. The following metrics are calculated for bonds with pre-trade and post-trade data available from MTS:

#### Pre-trade market liquidity

- Quoted Volume
- Bid-Ask Spread
- Yield-Quoted Orders
- Bid-Ask Spread Steepness
- Bid-Ask Spread Resiliency  
(Bid-Ask Spread to Volume Ratio)

#### Post-trade market liquidity

- OAS Liquidity Ratio
- Price Liquidity Ratio
- Universe Liquidity Score
- Country Liquidity Score

### Inference of liquidity metrics

It is critical for clients to have a robust methodology for calculating theoretical liquidity, including for securities that have not traded recently. Yield Book uses a combination of temporal and cross-sectional inference, including bid-ask spread inference or nearest neighbour inference based upon five normalised attributes, allowing us to significantly expand the universe for which we can calculate metrics.

**1200+**

bonds currently in universe

**30 million**

fully executable quotes daily

**50+metrics**

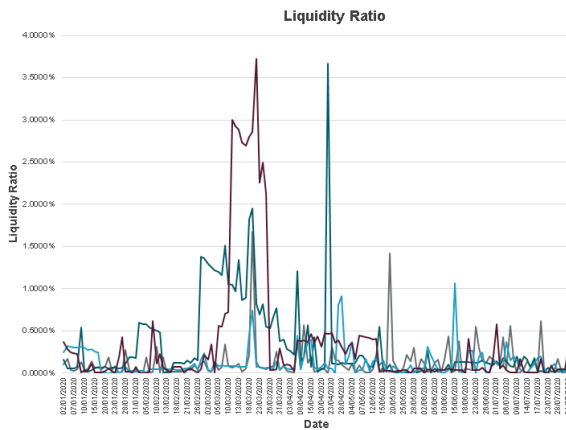
available on a daily/monthly basis

**5+ years**

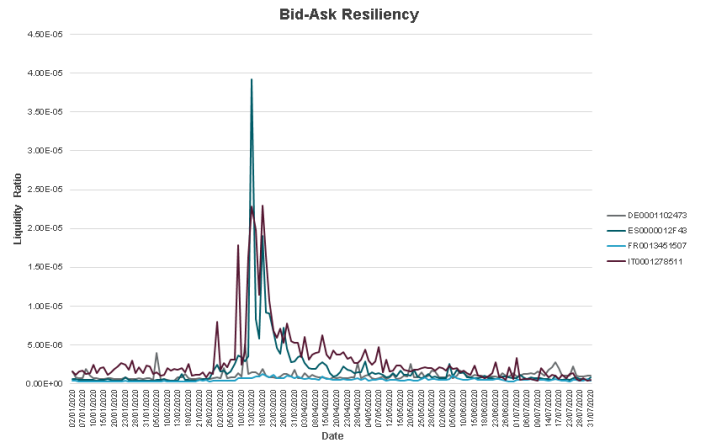
of historical liquidity metrics data available

## Case Study

Here, we examine how the COVID-19 crisis has impacted the liquidity of individual government bonds within the Euro area. We show how both bid-ask spreads and liquidity ratio scores spiked during the March 2020 market turbulence, followed by a return to pre-crisis liquidity levels.



Source: Yield Book. For illustrative purposes only.



## Access the MTS and Yield Book European Government Bond liquidity Metrics

The suite of liquidity metrics is calculated daily and made available through multiple delivery channels: via MTS file-delivery platform and via Yield Book's Add-In, API, Batch and Classic. Daily bid-ask spread files, daily liquidity ratio files and monthly liquidity ratio files are available to clients. Historical data is also available for a 5-year period, allowing you to backfill significant datasets to create an internal golden source for liquidity calculation as well as back-test historical portfolio liquidity.

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