

# DISCOVER MTS LIVE DATA



## 01 Why choose MTS Live Data?

# 577

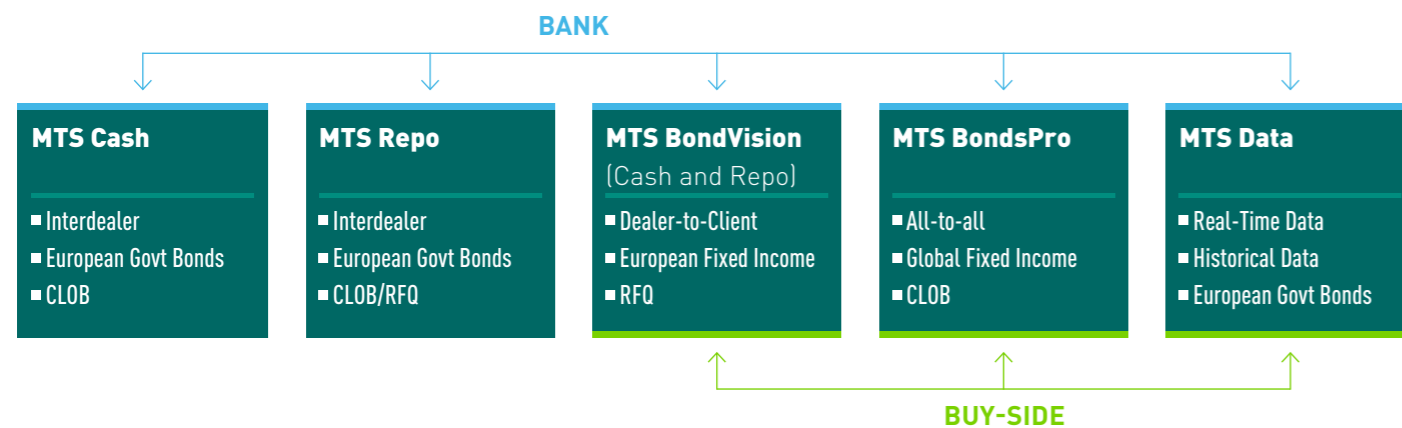
microseconds  
is our average  
round trip  
time

MTS Live is an ultra-low latency data distribution facility, offering a complete and un-aggregated order book with every visible price and order for bonds traded on the MTS Cash markets, the leading interdealer market for European government bonds.

MTS Live users can access over 30,000,000 quotes and orders generated by the MTS trading community each day on bonds, bills and linkers from a total of 18 domestic markets. MTS Live supports premium data granularity by providing users with every price and all order information submitted to the MTS matching engine including fill-and-store (FAS), all fill-and-kill and all-or-nothing orders as well as all executed trades.

### Benefits Include:

- Increased matching opportunities – continuous insight into price movements
- Maximum data granularity – tick-by-tick un-aggregated depth
- Optimised for trading algorithms – fed with the richest bond market data
- Enhanced risk management – the data you need to hedge more effectively
- Reduced latency – data is delivered via FIX-FAST protocol
- Confidentiality ensured – no disclosure of participant names
- Access comprehensive post-trade data



## Leading-edge technology

MTS has successfully facilitated an orderly electronic European fixed income market for issuers, primary dealers and the secondary market since 1988. The company invests a significant proportion of revenues into technology development to support the diverse needs of fixed income market participants along with proven system stability and local expert customer service.

- Peak messages per second: 7,406 messages
- Average round trip time: 577 microseconds

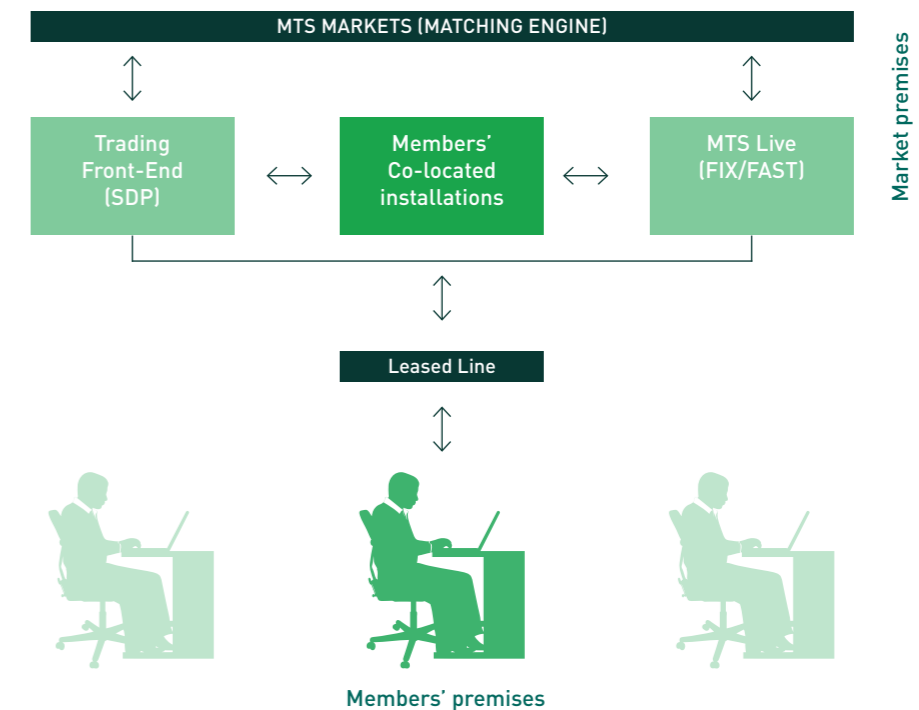
The system includes various fail-over mechanisms and will also be available in the DR facility.

### MTS Live uses the following standard protocols:

- FIX 5.0 SP2 at application level
- FAST 1.2 over TCP (unicast) at transport level

### The delivery of data will be available via a number of options:

- Co-Location in the same data center as the MTS Matching Engine
- Proximity solutions
- Over a Wider Area Network (WAN)



## Connectivity

MTS Live supports five certified client connectivity solutions, including major ISVs. MTS users (members and data vendors) have the ability to connect directly to MTS Markets for trading purposes and for MTS Live feed via MTS authorised Network Service Providers (NSP). There are two different options offered to market participants:

### Co-location

The Co-Location service is offered by MTS to customers, including network service providers (NSPs), market data users and market participants. This service is the ultimate option in terms of low-latency connectivity putting users as close as possible to trading and market data systems. The Co-location facility is available only on the production environment.

### Secure Market Access Portal (SMAP)

The Secure Market Access Portal (SMAP) service allows market participants to establish the logical access (IP Address on a dedicated leased line network) via NSP to MTS Live as well as to the MTS Markets, including access to the test and DR environments hosted at MTS central system premises.

# MTS Live Data

Access premium ultra-low latency European government bond data

## Historical data and MTS Live – the ultimate market insight

When MTS Live is combined with the company's historical data service, MTS Historical Tick-by-Tick Data, the two products offer market participants a groundbreaking level of insight, supporting them to develop and implement trading strategies appropriate to current market conditions.

MTS Historical Tick-by-Tick Data is the most granular data service available from MTS, providing the richest and most accurate record of market behaviour across the entire European government bond market. The service delivers a unique level of market depth and transparency with un-aggregated price, order and trade information with microsecond time stamps from over 100 counterparties trading on the MTS interdealer cash markets.

Dating back to June 2011, data is made available for daily retrieval via FTP or HTTPS for a specified time-series.



Austria, Belgium, Cyprus, Czech Republic, Denmark, EFSF/ESM, Finland, France, Germany, Hungary, Ireland, Israel, Italy, Netherlands, Poland, Portugal, Slovakia, Spain.

## Available data

Delivered direct from the MTS platform, MTS Live provides constant un-netted tradable pricing as well as all orders sent to the order book, giving participants access to the richest source of pre-trade information in the European government bond market:

- All new quotes and Fill-and-Store (FAS) orders
- All quotes and FAS order changes
- All cancelled quotes and FAS orders
- All fill-and-kill and all-or-nothing orders

# MTS Live – Sample data ordered by time entry

## Time series: One second

Current aggregated order book  
Order book updates from MTS Cash markets (CMF).

14:04:09:814.575

CMF DEPTH update			
Bid Qty	Bid Price	Ask Price	Ask Qty
20	99.24	99.43	25
15	99.23	99.44	15
10	99.22	99.45	10
10	99.21	99.46	10
10	99.20	99.47	10

MTS Live updates  
Full order book depth ordered by time entry.  
Includes microsecond time stamp and Entry ID.

Time in microseconds	Entry ID	MTS Live updates			
		Bid Qty	Bid Price	Ask Price	Ask Qty
14:04:09.910.855	900000169	10	99.23	99.45	10
14:04:09.919.998	900000375	5	98.26	100.42	5
14:04:09.926.006	900000415	10	99.25	99.43	10
14:04:09.946.308	900000420	5	99.03	99.73	5
14:04:09.972.509	900000166	10	99.24	99.44	10
14:04:09.998.575	900000501	10	99.24	99.44	10
14:04:10.006.710	900000464	10	99.25	99.43	10
14:04:10.247.556	900000296	10	99.19	99.49	10
14:04:10.279.308	900000405	10	99.24	99.44	10
14:04:10.303.575	900000010	5	99.23	99.45	5
14:04:10.308.556	900000389	5	98.43	99.41	5
14:04:10.315.509	900000389	5	98.44	99.42	5
14:04:10.316.710	900000405	10	99.25	99.45	10
14:04:10.509.855	900000594	10	99.25	99.42	10
14:04:10.538.006	900000565	10	99.20	99.48	10
14:04:10.556.308	900000312	10	99.21	99.47	10
14:04:10.575.998	900000420	5	99.02	99.72	5
14:04:10.710.308	900000594	10	99.25	99.43	10

Current aggregated order book  
Second order book update within time series.

14:04:10:816.327

CMF DEPTH update			
Bid Qty	Bid Price	Ask Price	Ask Qty
40	99.25	99.42	5
20	99.24	99.43	30
15	99.23	99.44	20
10	99.21	99.45	25
10	99.20	99.47	10

Current aggregated order book  
Order book updates from MTS Cash markets (CMF).

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CMF DEPTH update			
Bid Qty	Bid Price	Ask Price	Ask Qty
20	99.24	99.43	25
15	99.23	99.44	15
10	99.22	99.45	10
10	99.21	99.46	10
10	99.20	99.47	10

MTS Live updates  
Full order book depth ordered by best bid/ask.  
Aggregated quantity is for illustration only. Includes entry ID.

Bid Price	Bid Qty	Aggregated Qty	Entry ID	Ask Price	Ask Qty	Aggregated Qty	Entry ID
99.25	10		900000464	99.42	5	5	900000389
99.25	10		900000405	99.42	10		900000594
99.25	10	40	900000594	99.43	10		900000594
99.25	10		900000594	99.43	10		900000415
99.24	10		900000166	99.43	10	30	900000464
99.24	10	20	900000501	99.44	10		900000594
99.24	10		900000405	99.44	10	20	900000166
99.23	10		900000169	99.44	10		900000501
99.23	5	15	900000010	99.45	10		900000405
99.21	10	10	900000312	99.45	5		900000169
99.20	10	10	900000565	99.45	10	25	900000010
99.19	10		900000296	99.47	10	10	900000405
99.03	5		900000420	99.48	10		900000312
99.02	5		900000420	99.49	10		900000565
98.44	5		900000389	99.72	5		900000296
98.43	5		900000389	99.73	5		900000420
98.26	5		900000375	100.42	5		900000420

Current aggregated order book  
Second order book update within time series.

14:04:10:816.327

CMF DEPTH update			
Bid Qty	Bid Price	Ask Price	Ask Qty
40	99.25	99.42	5
20	99.24	99.43	30
15	99.23	99.44	20
10	99.21	99.45	25
10	99.20	99.47	10

**Graph Key:**

- Un-aggregated bid – Unique to MTS Live
- Un-aggregated ask – Unique to MTS Live
- Depth outside aggregated order book – Unique to MTS Live
- Proposal updated and no longer active – Unique to MTS Live



**Find out how we can enhance your fixed income trading business by speaking to our expert team:**

### MTS Live Data

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## About MTS Group

MTS Group facilitates a number of regulated electronic fixed income markets across Europe and the US that are managed centrally to ensure optimum levels of global harmonisation and consistency. Over 500 unique counterparties trade an average volume of €130 billion each day on these platforms.

The individual companies within the MTS Group are regulated by financial services regulators in a number of European jurisdictions, including Financial Conduct Authority (FCA), Italian Ministry of Finance, Banca d'Italia and Consob, Autorité des Marchés Financiers (AMF). In the United States MTS Markets International Inc. is a member of FINRA and the SIPC and operates MTS BondsPro which is an ATS registered with the SEC.

MTS Cash is a comprehensive and professional cash securities trading environment for the interdealer marketplace. MTS cash includes several domestic markets regulated in different jurisdictions enabling primary dealers to access unparalleled liquidity, transparency and coverage.

MTS Repo provides an order-driven market for the electronic transaction of repo agreements and buy/sellbacks in Italy.

MTS BondVision is a trusted and efficient multi-dealer-to-client electronic bond trading platform, delivering exceptional access for institutional investors direct to dealers. MTS BondVision is accessible in Europe either from the Bank of Italy/Consob supervised regulated market/MTF or the MTF supervised by FCA, and in the US through the SEC/FINRA authorised ATS. BondVision provides institutional investors with real-time pricing and the ability to trade with the major dealers.

MTS Data is sourced directly and exclusively from the MTS interdealer market and includes benchmark real-time data, reference data, reference prices and historical data, providing the benchmark data source on the fixed income market.

MTS BondsPro is a trading platform that supports Corporate Bond trading. MTS BondsPro is an Alternative Trading System registered with the Securities and Exchange Commission (SEC) and operated by MTS Markets International Inc.

For more information, visit [www.mtsmarkets.com](http://www.mtsmarkets.com).



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