

# Systematic Hedge Funds

The New Frontier for Alpha: Fixed Income





## Sharpen your edge by combining data with trading.

As pioneers of electronic credit trading, we built MarketAxess® so you can trade exactly how you want to.

A growing number of hedge funds are discovering that access to high-quality data alongside sophisticated trading tools enhances their systematic fixed income trading strategies – hence, they are increasingly adopting our solutions.

### Pursuing Fixed Income Alpha

Whether you're diversifying into fixed income for the first time or considering expanding existing trading operations, your sophisticated trading strategies can now reliably act on the signals generated by the market.

Thanks to Open Trading®, our all-to-all marketplace, you can source new liquidity from a global pool of participants – investors, dealers, everybody. Transparency has increased dramatically, and with it, efficiency—our platform saves participants hundreds of millions of dollars every year.

None of this would be possible without an abundance of high-quality data, the lifeblood of systematic trading. As the world's leading credit platform, we are uniquely positioned to harvest the best trading data; as a technology company, we use our resources to provide a suite of enhanced data services adding value to external data sets. All of which you can readily access via easy to use APIs or Excel add-ins.

### Where strategy, data and liquidity merge

We've been building the trading desk of the future since the beginning of the twenty-first century. Now, we are one of the fastest-growing companies in the S&P 500. The reason? Anticipating the needs of modern traders is in our DNA. This is why systematic trading operations can access the data they need to generate and capture alpha with extensive execution tools, all-in-one marketplace.

#### World's largest credit trading platform

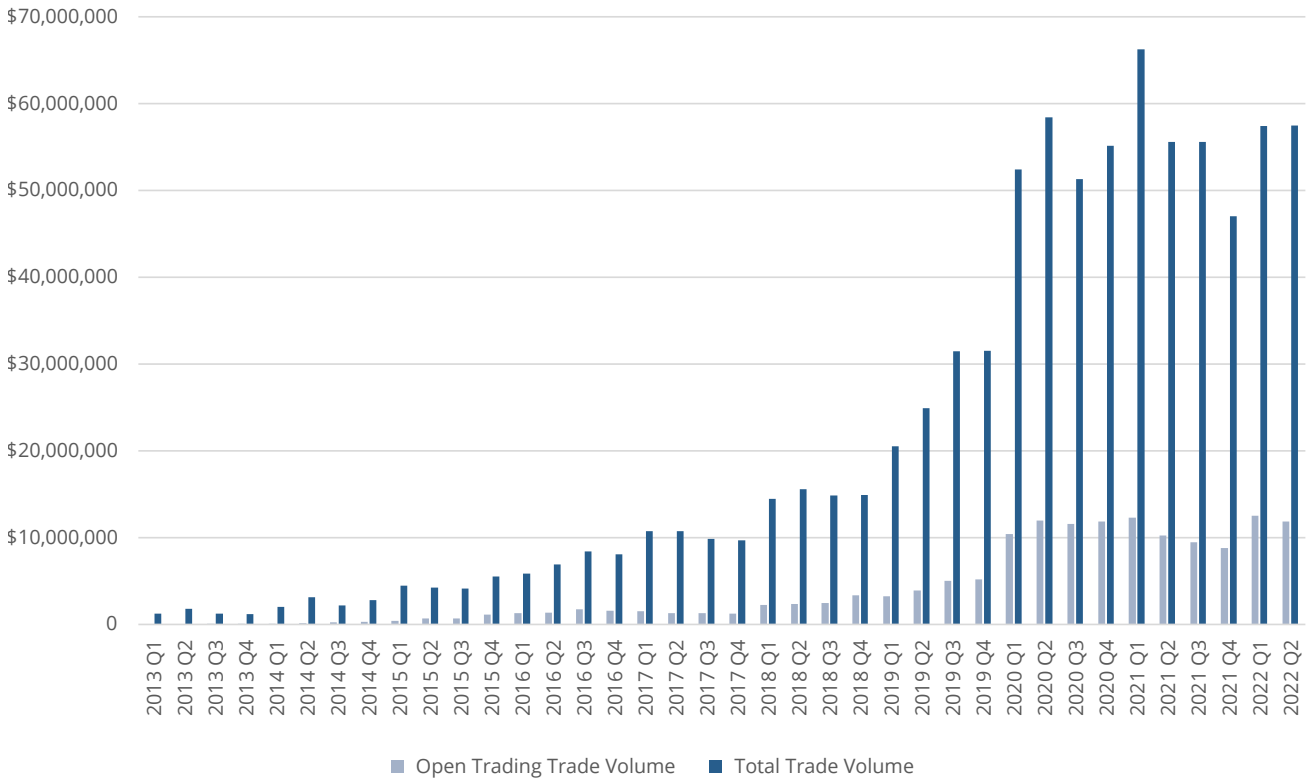
- A global network of 1,800 market players
- 500+ active hedge funds
- Award-winning trading platform
- Innovative technology
  - **Composite+™** AI predictive pricing engine
  - **Open Trading** Global all-to-all trading
  - **Axess All™** First European intra-day tape
- 300MM+ cost savings in H1 2022
- 21.5% market share of US HG in H1 2022

## Success breeds success

The recent surges in volume and data on the MarketAxess platform are exerting a gravitational pull. As more players enter the marketplace, it grows ever more efficient, encouraging even greater electronic and data transparency.

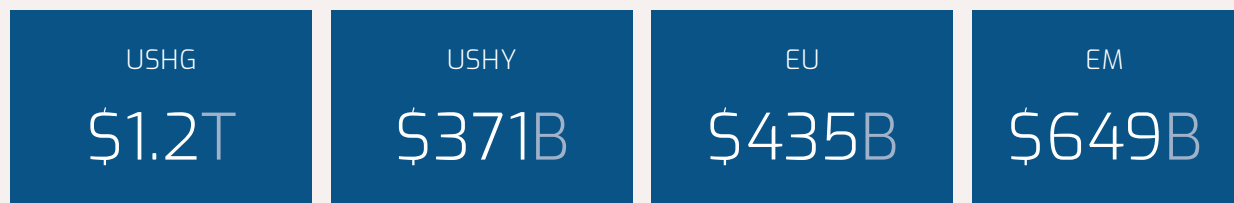
### MarketAxess quarterly Hedge Fund Bond Trading activity

Products included: IG, HY, EM, EUR, AGY, MUNI



Credit trading volume from hedge funds reached \$88.1B in H1 2022, up 10% vs. H1 2021

### Record trading volumes from all market participants 2021



2021 Overall Trading Volume – **\$2.6T**

2021 Overall Open Trading Volume – **\$869B**

## Signal not noise

As the largest marketplace for credit trading, our abundance of clean historical and real-time data means you can generate clearer signals. This enables systematic strategies to enjoy a greater quality of execution using our sophisticated trading protocols to tap into unparalleled liquidity.

With simple to use APIs, you can connect to some of the broadest and deepest datasets in the fixed income universe.

Get everything you need to research, build, deploy and benchmark your strategies in one place.

### Simple connectivity

The data and trading you need, the way you want it.

- Easy to use APIs
- A wide range of protocols and products
- Seamless integration front-to-back

### Sophisticated execution

More efficiency, more liquidity, more alpha.

- All-to-all trading
- Auto execution
- Diverse liquidity sources

### Superlative data

Greater market insight and transparency in real-time.

- Predictive pricing tools
- Near real-time tapes
- Enriched and raw data

## Trade the broadest range of Fixed Income Products

Your team can diversify its fixed income strategies across all the major credit markets with real-time access to global liquidity.

US Investment Grade

High Yield

Eurobonds

Emerging Markets

Credit Default Swaps

US Agencies

Municipal Bonds

Leveraged Loans

US Treasuries

European Government Bonds



## The new world of Fixed Income—Open Trading

Our global all-to-all marketplace offers systematic investors the ability to trade anonymously with a unique range of counterparties. By connecting dealer to investor and investor to other investors, your systematic strategies can source or offload assets to better capture or defend alpha in this cutting-edge market structure.

Putting more counterparties in competition improves pricing and also lowers transaction costs. We estimate Open Trading generated \$323+ million in total savings, last year alone.

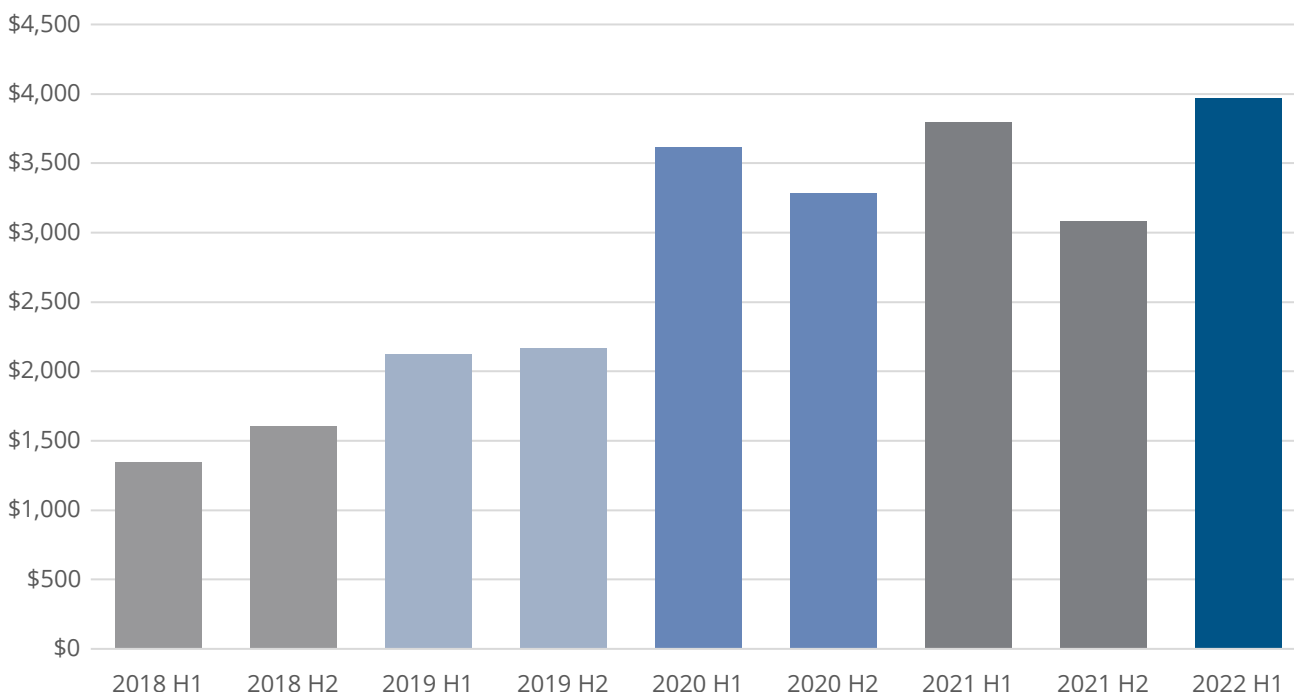
### Composition of Open Trading volume



### Liquidity Taker OT cost savings

	Average savings per trade	Total cost savings (MM)
US IG (Spread)	\$0.10	\$111
US IG (Yield)	\$0.04	\$2.9
US HY	\$0.25	\$102
EM (Hard Currency)	\$0.25	\$59
EU	\$0.15	\$14

### Average daily trade volume (MM)



## Continuously available liquidity in live markets

Live Markets™, an extension of Open Trading, is our dynamic solution for streaming execution on liquid, recently issued paper and/or actively traded bonds giving participants access to live, actionable prices. By bringing live orders and live market maker prices together anonymously, you can trade in a unique institutional liquidity pool.

Live Markets

US High Grade US High Yield

Market Axess Live Markets™ - USHY

All Tickers All Sectors All Maturities All Watchlists All Sizes CLEAR ALL

TICKER	SECTOR	MATURITY	WATCHLISTS	SIZE				
Shortname	CUSIP	RTS Buy Order (M)	Bid Size (M)	Bid Price	Offer Price	Offer Size (M)	RTS Sell Order (M)	
<input type="checkbox"/> AAL 11.750 7/25 (144a)	023771S58	-	1,200	122.4375	122.6875	4,600	-	
<input type="checkbox"/> AAL 5.500 4/26 (144a)	00253XAA9	-	900	94.3750	94.6250	2,800	-	
<input type="checkbox"/> AAL 5.750 4/29 (144a)	00253XAB7	-	3,600	109.5625	109.8125	5,000	-	
<input type="checkbox"/> ACM 5.125 3/15/27 c26	00774CAB3	-	3,600	112.8125	113.0625	4,400	-	
<input type="checkbox"/> ADNT 4.875 8/26 c21 (144a)	00687YAA3	-	3,200	104.5000	104.7500	800	-	
<input type="checkbox"/> ADT 4.875 7/32 (144a)	74166NAA2	-	1,800	96.1875	96.4375	1,200	-	
<input type="checkbox"/> ALSN 5.875 6/29 c24 (144a)	019736AF4	-	1,900	106.9375	107.1875	4,300	-	
<input type="checkbox"/> ALTICE 5.000 1/28 c23 (144a)	02154CAF0	-	1,600	101.0625	101.5625	500	-	
<input type="checkbox"/> AMCX 5.000 4/1/24 c21	00164VAD5	-	3,500	104.2500	104.5000	2,400	-	
<input type="checkbox"/> AMCX 4.750 8/1/25 c21	00164VAE3	-	3,300	92.3750	92.6250	1,600	-	
<input type="checkbox"/> AMCX 4.250 2/15/29 c24	00164VAF0	-	1,500	94.3125	94.5625	3,200	-	
<input type="checkbox"/> AMKR 6.625 9/27 c22 (144a)	031652BK5	-	800	101.5625	101.8125	1,400	-	
<input type="checkbox"/> ARGID 4.125 8/26 c22 (144a)	03969AAN0	-	4,200	103.9375	104.1875	1,900	-	
<input type="checkbox"/> ARGID 5.250 8/27 c22 (144a)	03969AAP5	-	2,700	114.5625	114.8125	2,600	-	
<input type="checkbox"/> ARMK 6.375 5/25 c22 (144a)	038522AR9	-	4,000	103.7500	104.0000	4,800	-	
<input type="checkbox"/> ASCRES 5.875 6/29 c24 (144a)	04364VAU7	-	3,300	93.3750	93.6250	2,700	-	
<input type="checkbox"/> ASGN 4.625 5/28 c23 (144a)	00191UAA0	-	1,100	98.0625	98.3125	2,100	-	
<input type="checkbox"/> ATGE 5.500 3/28 c24 (144a)	00737WAA7	-	4,700	114.8750	115.1250	3,100	-	
<input type="checkbox"/> ATI 4.875 10/1/29 c24	01741RAL6	-	2,200	104.3125	104.5625	1,900	-	
<input type="checkbox"/> ATI 5.125 10/1/31 c26	01741RAM4	-	2,700	98.1250	98.3750	2,300	-	
<input type="checkbox"/> AVTR 4.625 7/28 c23 (144a)	05352TAA7	-	2,500	85.1875	85.4375	2,900	-	
<input type="checkbox"/> AXL 6.500 4/1/27 c22	02406PAU4	-	2,000	98.9375	99.0625	1,500	-	
<input type="checkbox"/> AXL 5.000 10/1/29 c24	02406PBB5	-	1,500	89.6250	90.6875	1,800	-	
<input type="checkbox"/> BBWI 5.250 2/1/28	501797AN4	-	750	104.4375	104.6875	1,300	-	
<input type="checkbox"/> BBWI 7.500 6/15/29 c24	501797AR5	-	100	109.7500	110.1250	3,900	-	
<input type="checkbox"/> BCULC 4.000 10/30 c25 (144a)	68245XAM1	-	-	-	120.8125	4,800	-	
<input type="checkbox"/> BGS 5.250 4/1/25 c21	05508RAE6	-	100	101.7500	102.0625	3,600	-	
<input type="checkbox"/> BGS 5.250 9/15/27 c22	05508WAB1	-	4,000	102.0000	102.1875	4,700	-	
<input type="checkbox"/> BHCCN 5.500 11/25 c21 (144a)	91911KAN2	-	3,500	102.5000	102.8750	4,400	-	



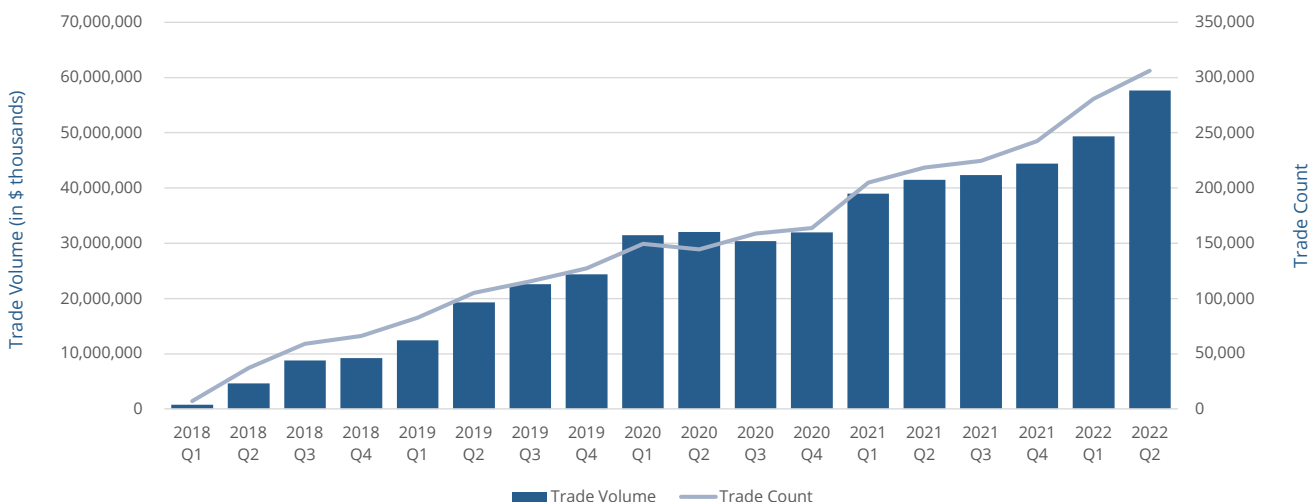
## A simple yet powerful automatic execution tool

Our automated execution tool, Auto-X™, was built to improve efficiency while reducing execution costs and has proven extremely popular for buy-side firms.

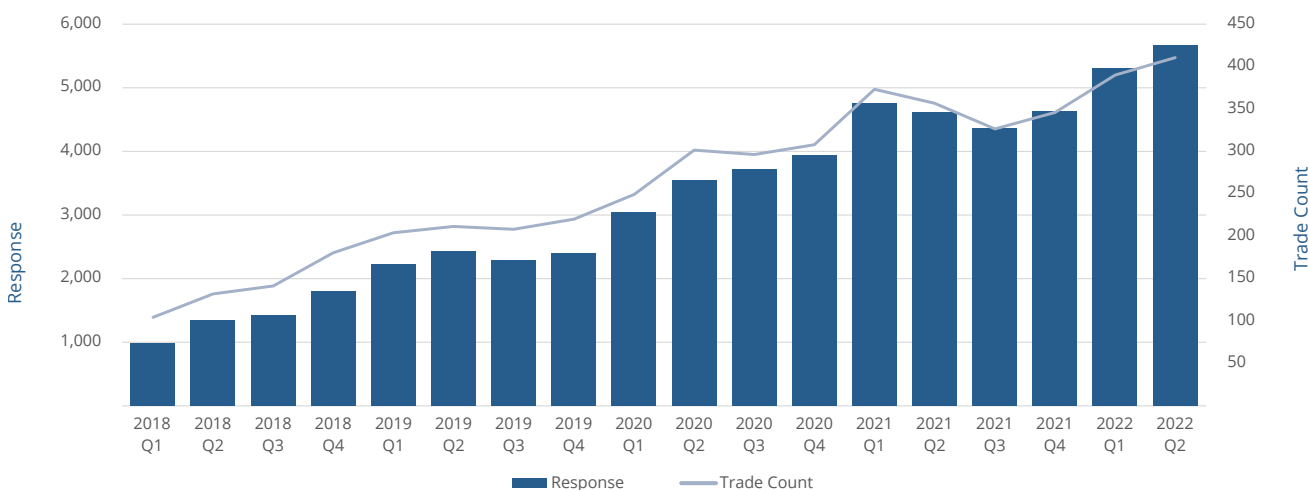
Auto-X RFQ is supported by our data services, including Composite+ and Relative Liquidity Score and also taps into the diverse sources of liquidity available in our Open Trading marketplace. And with our Auto-Responder you can automatically respond to RFQ inquiries within set parameters.

Auto-X helps make every second of your day count, so you can focus on more complex trades.

### Auto-X trade volume and count



### Total Algo trades & responses



### Automated trading is rapidly expanding

- Record \$57.6 billion in Auto-X volume in 2Q22, up 39% from 2Q21.
- Record 305,000 trades completed using automated execution, up from 218,000 trades in 2Q21, representing an increase of 40%.
- Auto-X represented 19% of credit trade count in 2Q22.



## Enhance your data toolbox

Use our state-of-the-art array of data services to build and refine your algorithms. With our array of flexible delivery methods—including API, FTP, Excel add-ins, and MDX—it’s easy to access exactly what you need.

Our position as the leading execution platform for global credit enables us to gather, analyze and enrich vast amount of data to provide you with a clear view of the market. And our technological prowess enables us to combine TRACE and other external data sources into intelligent tools for you to derive the insights you need to power your systematic trading operations.

### Composite+

#### Our award-winning AI-powered predictive price engine

Fully-automated prices generated by machine learning give you greater insight and pre-trade price discovery for over 32,000 bonds every 15 seconds across the global trading day.

With inputs from our trading system, post-trade reporting and trade confirmation engine plus TRACE, Composite+ provides coverage of 90-95% of global market trading (including voice trades). You can access over 30 million prices daily within our trading system or via a separate data feed.

In addition to Composite+, you can use Liquidity Score to measure the current relative liquidity for 20,000 individual bonds.



## TRACE

Real-time and historic data from FINRA, the standard source for nearly all OTC public and private fixed income trading activity.

### TRACE Context

Exclusive trading enrichment data to the TRACE data feed for trades completed both on and off the MarketAxess trading platform for greater control over your trading strategy.

### Global Relative Liquidity Score

Covering 20,000 bonds daily, it provides an intuitive measure of liquidity for individual bonds. It enables you to specify trade sizes and levels for automated trading.

### Axess All

The first intra-day tape for European fixed income, sourced from over 50,000 unique bonds covering 75% of the market, including a wide range of Emerging Market activity. You can view the most liquid fixed income instruments with the most up-to-date pricing, refreshed every 60 seconds. Axess All is integrated into the MarketAxess platform and is also available on our web-based BondTicker® platform.

### Trax Volume and Trax Pricing

Coverage of exchange-traded and OTC securities in primary and secondary markets to help you identify liquidity and ascertain reliable end-of-day prices.

### Let us handle your full trade lifecycle

Not only can you satisfy your algorithmic pre-trade and executional needs, but our end-to-end platform can simplify your post-trade and reporting needs too. As a pioneering financial technology company, we understand how to integrate your systems. You'll also benefit from our vast regulatory knowledge to upgrade and simplify your workflows.

## Expansive data and trading connectivity

With our easy-to-use APIs, you can access actionable intelligence and start trading on our trading platform right away.

### STP/PTM Session

Stage RFQ orders and receive post-trade execution reports

### Trading API

Submit RFQs and receive quotes to hit, lift, counter, pass on quotes via FIX

### Open Trading API

Receive, post axes and respond to IOIs for items on our anonymous trading community

### Live Markets data and order session

Aggress or post a firm executable anonymous orders entirely over FIX

### MID-X

Session based protocol to transact at mid-market, post-trade executions report available

### Attributed Inventory

Post Inventory as a client to MarketAxess

### Composite+ session

Receive our proprietary Composite+ algo data in real-time via FIX

### TRACE session

Receive TRACE enriched data via FIX

### Axess All

Receive the most up-to-date pricing, refreshed every 60 seconds, with the first intra-day tape for the European fixed income markets

### OMS/EMS connectivity

Direct integration to a growing number of vendors, now including: Charles River, Eze Castle, Perform®, Moxy®, BlackRock-Aladdin, Trading Screen, FlexTrade, Bloomberg, etc.

### Rates API

Both On The Run and Off The Run Treasury liquidity streaming with full execution functionality



Now you're in the market™



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