

# H2O.ai Empowers MarketAxess to Innovate in Capital Markets



## Highlights:

- ✓ Real-time scoring of 24,000 corporate bonds globally
- ✓ Increased accuracy of pricing accuracy prediction
- ✓ Reduced model scoring errors on average by \$.66 per bond

“ H2O is an integral part of Composite+ pricing engine and provides some of the fundamental machine learning that makes our algorithms run better and to fulfill our clients’ critical liquidity needs with more accurate and timely pricing data within the MarketAxess electronic trading workflow. ”

– David Krein, Global Head of Research at MarketAxess

## Executive Summary

MarketAxess is the operator of a leading electronic trading platform for fixed-income securities and the provider of market data and post-trade services for the global fixed-income markets. MarketAxess’ Composite+, powered by H2O open source, delivers greater insight and price discovery in real-time, globally, for over 24,000 corporate bonds. Composite+ has won several awards for its use

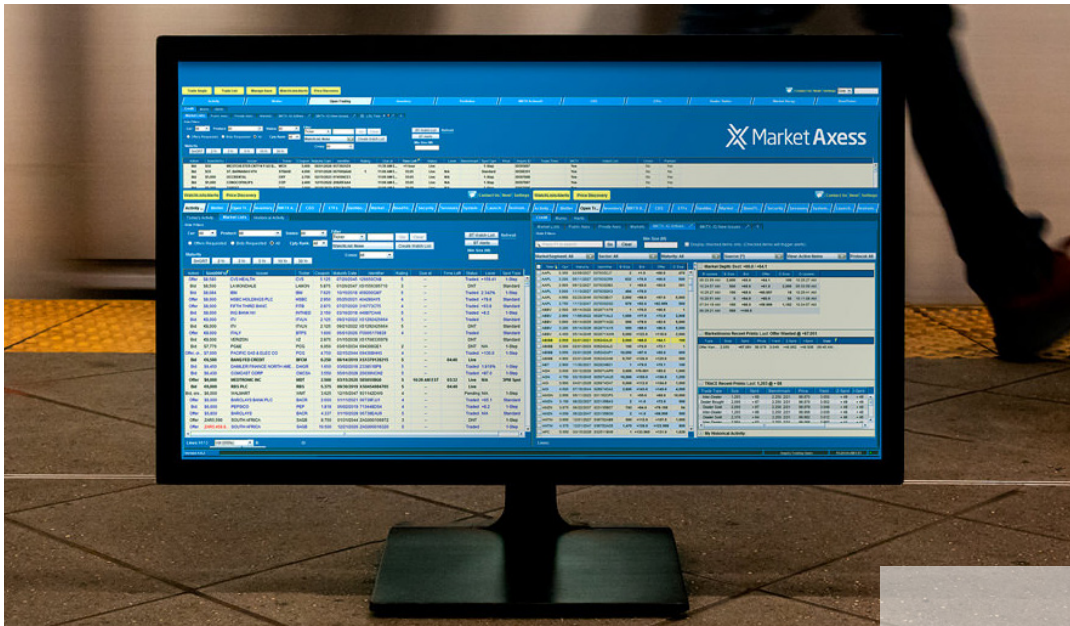
of AI including the Risk Markets Technology Award for Electronic Trading Support Product of the Year and the Waters Technology American Financial Technology Award for Best Artificial Intelligence Technology Initiative. MarketAxess is transforming itself to become an AI company in capital markets with H2O.ai.

## Challenges

The lack of liquidity in bond markets has traditionally made predicting bond prices challenging. In order to provide higher transparency and find the most consistent and accurate prices to help traders become more confident as price makers, MarketAxess relied on machine learning to develop Composite+, a proprietary algorithmic pricing engine for corporate bonds that leverages a range of proprietary and industry data sources, with updates up to every 15 seconds.

## Solution Powered by H2O Driverless AI

Powered by H2O-3, Composite+ applies artificial intelligence (AI) and machine learning to predict accurate two-way reference prices for more than 24,000 bonds globally. When the most proximate signals are missing, the Composite+ algorithm can still learn to triangulate less predictive features successively. Composite+ is designed to support a variety of trading functions such as pre-trade price discovery, liquidity provision, transaction cost analysis, auto-execution, and crossing. The pricing engine is seamlessly incorporated into all aspects of MarketAxess’ trading workflow, including within its all-to-all Open Trading™ marketplace and request for quote (RFQ) inquiry screens. It is also integrated into the company’s BondTicker® and Axess All® web-based data platforms.



**Results**

H2O-3 empowered Composite+ to transform low-quality data points into high-quality market data to drive automation and efficiency.

The solution that the MarketAxess team has developed over the years offers key benefits to their business:

- At Scale: MarketAxess is able to reprice and track over 24,000 bonds globally.
- High Speed: With Composite+, bonds are repriced at near-time speed (24,000 bonds repriced every 15 seconds)
- Composite+ increased the accuracy of pricing accuracy prediction and reduced model scoring errors on average by \$.66 per bond.

**Key Use-Cases at MarketAxess**

- Real-time bond pricing
- Liquidity provision

**Get Started Today**

H2O.ai is helping companies achieve real business benefits using AI. To learn more about H2O.ai and to get a 21-day free trial of Driverless AI visit us at [www.H2O.ai](http://www.H2O.ai).

About H2O.ai

H2O.ai is an open source leader in AI with a mission is to democratize AI for everyone. H2O.ai is transforming the use of AI with software with its category-creating visionary open source machine learning platform, H2O. More than 18,000 companies use open-source H2O in mission-critical use cases for Finance, Insurance, Healthcare, Retail, Telco, Sales and Marketing. H2O Driverless AI uses AI to do AI in order to provide an easier, faster and cheaper means of implementing data science. H2O.ai partners with leading technology companies such as NVIDIA, IBM, Intel, AWS, Microsoft Azure and Google Cloud Platform and is proud of its growing customer base which includes Capital One, Progressive Insurance, Comcast, Walgreens and MarketAxess. For more information about how H2O.ai is driving an AI transformation, visit [www.h2o.ai](http://www.h2o.ai)