

Building Meaningful Benchmarks in Fixed Income

By Michael Ruvo, President & CEO, BondWave

Throughout the 90s, the fixed income industry suffered from a scarcity of meaningful data and stale technology. Unlike their data-rich counterparts on equities desks, bond professionals were primarily dependent on physical documents, faxes, microfiche and often stale public filings.

As both data and technology have evolved over the past three decades, the turn of the century ushered in an era of the electronification of processes that, to that point, were largely manual. Concurrent with this electronification, various regulatory initiatives resulted in data becoming more broadly and readily available to market participants via the Financial Industry Regulatory Authority (FINRA), the Municipal Securities Rulemaking Board (MSRB) and others.

Notably, the MSRB's creation of Electronic Municipal Market Access (EMMA) established the first digital source of documents that described the material features of virtually every municipal security issued paired with the prices and other details of the security's trading history. The digitalization of the industry, through regulatory efforts like EMMA and FINRA's TRACE system, as well as significant improvements in technology, represented a substantial advancement for the fixed income industry by increasing overall efficiency and enhancing market transparency.

Most recently, the significant growth and application of data science, artificial intelligence and machine learning to these increasingly larger data sets has enabled us to surface new trading insights for fixed income. Our team has utilized advanced data science and algorithmic methods formerly used in equity trading into our existing suite of solutions. Innovations such as QTrades™ and QScores™ are two examples of these advancements. Utilizing a set of proprietary algorithms, we have developed methods that enrich corporate and municipal bond trade data. QTrades™ has significantly bolstered pricing confidence and mitigated the impact of time-consuming trading desk burdens. Similarly, QScores™ provides a quantitative approach to identifying comparable bonds based on machine learning algorithms first utilized by technology companies seeking "nearest neighbors" in large sets of unstructured data.



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This approach permits flexibility that allows each firm to define their own comparable bonds criteria. With the ongoing adoption of data science and artificial intelligence, the industry is propelling itself into its next wave of electrification and growth.

Parallel with these market developments, the number of performance-based asset management indices continues to grow at an astounding rate. This has been primarily driven by the proliferation of new packaged products. According to Bloomberg, the U.S. fixed income ETF market held \$672 billion in AUM as of early January 2019.¹ ETF.com also recently noted that the ETF industry has pulled in \$93.4 billion YTD as of mid-June with nearly \$58 billion of that money flowing directly into the U.S. fixed income category.²

The demand has never been greater for fixed income indices and products, further fueling regulators to scrutinize transaction costs, best execution and mark-up disclosure with the hope for quantitative and objective benchmarks from which the market can compare their executions. This increasing demand was recently showcased in the Index Industry Association's (IIA) 2nd annual global index survey as findings revealed that fixed income now represents 16 percent of the overall universe of over 3.7 million indices. Due to factors such as product innovation, the need for more precise measurement of exposure and consolidation, the IIA found that this space saw the largest growth over any other asset class in 2018.³ So, why don't we have more meaningful trading benchmarks for fixed income? What would the VWAP-equivalent be for the fixed income markets?

Perhaps a single VWAP-equivalent is not possible in fixed income due to the bifurcated and privatized nature of the pre-trade data and dearth of trading activity in certain securities such as U.S. municipal bonds. However, if we look at the mark-up disclosure regulation that went into effect in May 2018, the prescribed 'waterfall' methodology helps to account for this 'data desert' by leveraging other market observations and rules that support a more quantitative approach to arrive at a prevailing market price (PMP). Leveraging this 'waterfall' approach and combining it with data science makes it possible to create more precise benchmark data sets that can be applied on both a pre- and post-trade basis.

The application of advanced technologies and creation of enriched data sets makes it possible to develop quantitative and unbiased trading indices and benchmark data for the fixed income markets. Once adopted, these types of indices and data sets could standardize compliance processes as well as support mark-up disclosure, best execution and transaction cost analysis (TCA) while simultaneously enabling new trading insights to further enhance operational efficiencies.

While the evolution of the bond market seems to continue to move at a snail's pace, the convergence of regulation, market data and innovative technology is paving the way for new trading standards in fixed income securities. The importance of data has never been higher and will continue to grow as we work to build meaningful benchmarks in fixed income.

¹ Dan O'Connor, [Fixed-Income ETFs: A Rising Tide?](#), CFA Institute, February 28, 2019

² Heather Bell, [US Fixed Income Sees Inflows](#), ETF.com, June 14, 2019

³ Index Industry Association, [Index Industry Association Survey Reveals 3.7 Million Indexes Globally](#), November 14, 2018

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**To learn more, please visit www.bondwave.com,
email info@bondwave.com
or call 877.795.2929**

ABOUT BONDWAVE LLC

Founded in 2001, BondWave is a financial technology company specializing in fixed income solutions. We serve a wide range of customers, from small independent RIAs to some of the largest broker-dealers and custody providers in the financial services industry. Traders, portfolio and asset managers, advisors and compliance professionals use our tools to provide a superior fixed income experience to their clients while supporting critical compliance mandates.

Effi™, our Engine for Fixed Income, is the single platform through which we deliver all our solutions, including analytics and reporting, monitoring, trade opportunity mining, proposal generation, mark-up disclosure and oversight, best execution tools, and transaction cost analysis (TCA). BondWave leverages advanced data science and technologies to develop proprietary data that fuels our innovative solutions. We are agnostic to the liquidity pool or execution venue, so we can provide unbiased analytics that help our clients find the best bonds for their customers.