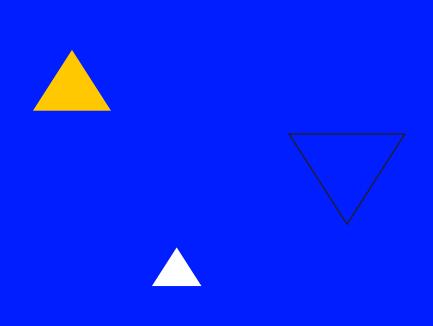


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PAPER ONE OF FOUR

EXECUTIVE SUMMARY

Defining fixed income data – the value of centralizing and normalizing

Produced in collaboration with Greenwich Associates, this paper – the first in a series of four reports that will analyze current trends and challenges in the fixed income space – takes an in-depth look at the burgeoning availability of fixed income market data and unpacks some of the attendant opportunities and challenges.

Fixed income as an asset class comprises a truly diverse amalgamation of securities and asset types.

Against this backdrop, the recent proliferation of available data in this space delivers a range of potential benefits, including increased price transparency, but the fixed income arena remains characterized by complexity.

Identifying and accessing trusted and relevant data can be highly challenging as data types are numerous and data sources tend to be fragmented, meaning that market participants must very often engage several data providers, multiple trading platforms, and different regulatory bodies. Furthermore, data can be difficult to integrate into existing workflows, as different datasets tend to be delivered in different formats.

These factors all combine to create a scenario in which developing a holistic view of the entire market at any given time is highly complex, and moreover,

we cannot forget that the ultimate goal of optimizing alpha is unlikely to be achieved if only basic fixed income trading data is being accessed. To remain on the cutting edge and continue to refine their investment and execution strategies, traders must ensure that they take full advantage of the new data sources available.

The paper goes on to examine what can be done to simplify the collection and aggregation of the needed data and how execution management systems (EMSs) and third-party data and analytics platforms can play a crucial role as pre- and post-trade data aggregators.

Finally, we will look at how collaboration and the more open sharing of information mean that some platforms now allow both EMSs and data/analytics platforms to ingest their market data so that end users can aggregate and analyze multiple data sources in one environment, and look at the benefits this brings for all market participants.



Jon WilliamsHead of Fixed Income
Refinitiv

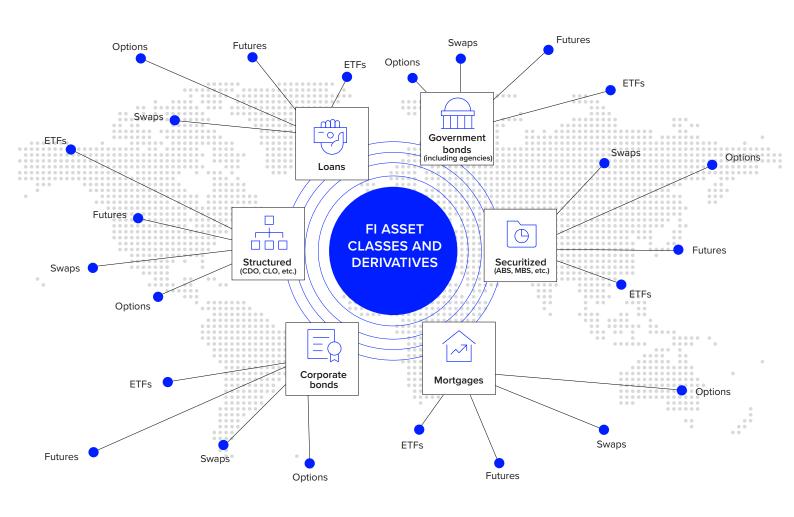
INTRODUCTION

he U.S. bond market is currently valued at \$43 trillion, the European sovereign debt market at nearly \$11 trillion and the global interest rate derivatives market at \$436 trillion (at the end of 2018). Looked at in a slightly different way, the mix of instrument types (i.e., corporate bonds, mortgages, loans), major regions (i.e., North America, Europe, Asia);

and related derivative instruments (i.e., swaps, futures, ETFs) creates 72 different market classifications that all have their own market structures, participants and data needs.

It is within this context that we must then examine the proliferation of data in fixed income markets. Catalyzed by swaps reporting requirements from Dodd-Frank and MiFID II's pre- and post-trade transparency requirements, the growing availability of data across many corners of the fixed income market is nothing short of amazing. The corporate bond market, for instance, has progressed from a market where trades reported on a 15-minute delay were the only real source of hard data to continuously updated prices streamed to nearly every market participant for every tradeable CUSIP.

FIXED INCOME AS AN ASSET CLASS IS GIGANTIC AND GLOBAL





THE TANGLED WEB

Despite this progress, gaining access to all of the most useful new data sets, let alone putting them to use, remains a complex endeavor.

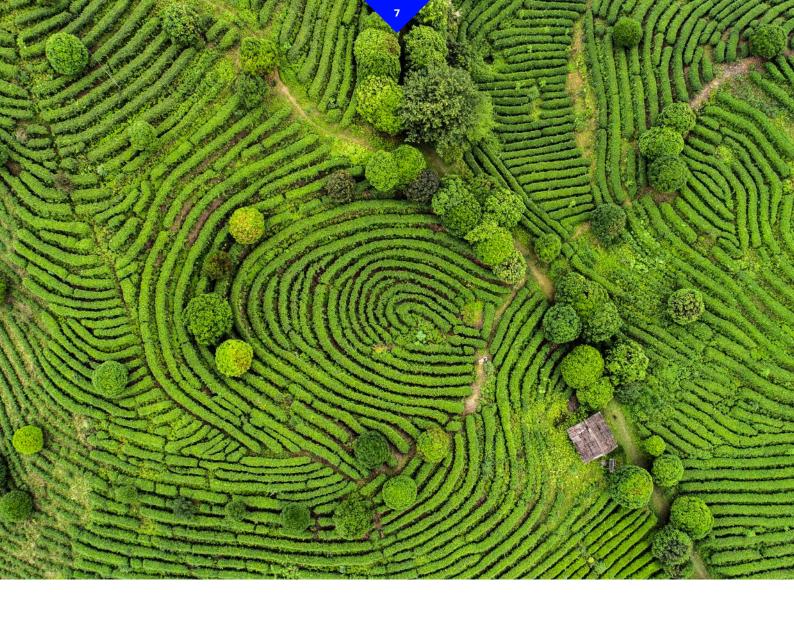
o begin with, data types are numerous. Real-time pre- (i.e., pricing streams, evaluated prices, top-of-book prices, RFQ responses) and post-trade data (i.e., regulatory reporting, platform-specific execution reports, counterparty interactions), historical data, risk-related data; reference data and even alternative data are all required by market participants. Multiply those data types by the 72 individual product buckets and the complex web gets even more complex.

Not only are the data types numerous, but the data sources are also quite fragmented. Even for a single security type within the fixed income universe, market participants need to look to several data providers, multiple trading platforms (who each have unique data sets) and regulatory bodies who often collect and disseminate trading and holdings information in different formats. Even in cleared markets like swaps and futures, gaining access to historical and reference data still leaves users looking to multiple providers. Each provider has different data types.

And even regulated transparency, whether it be MiFID II in Europe or TRACE reporting in the U.S., creates challenges. Fixed income traders in Europe now get access to posttrade reporting, but the data can be difficult to use, analyze and integrate into their workflow, as each Approved Publication Arrangement (APA) delivers that data in a different way. And the raw data feed from Financial Industry Regulatory Authority (FINRA), despite years of improvements, still requires a high level of cleaning and processing before it can be used for actionable results.

This is unlikely to change. The majority of fixed income markets, despite the growing use of electronic trading platforms, are still over-the-counter (OTC). That means there is no central nor required venue for trading. Trade reporting (if it exists at all) often resides within the trading platforms, and creating a view of the entire market at any given time is complex, if not impossible. And while we expect this to change over time, the major trading venues largely reserve the data they collect and the analysis of that data for their client base, who pays via commission rather than directly for the data itself.

Even in cleared markets like swaps and futures, gaining access to historical and reference data still leaves users looking to multiple providers.



PROVIDER DATA TYPES



Reference data



Risk data



Historical trade data



Real-time post-trade data

- Regulatory reporting
- Platform-specific data
- Dealer-specific data



Real-time pre-trade data

- Pricing streams
- Evaluated prices
- Top of book
- RFQ



Alternative data





YOU'RE MISSING

he ability to purchase and access data from major trading venues has left the buy side feeling relatively well served, particularly the needs of the front office. Buy side trading desks have access to more data than ever before, with each desk spending on average \$225 thousand annually on direct data costs (or roughly 15-20% of their total technology budget), according to Greenwich Associates data. Our research has also found that most traders on both the buy and the sell side now feel it is the buy side that has the information advantage today; a stark change from two decades ago when the broker/dealer community was the buy side's only window into the fixed income market.

The story, however, does not end there. The major broker/dealers in the fixed income market are effectively subsidizing the cost of data for their clients. For instance, the data and analytics that a major asset manager has access to via their trading venue is funded by the commissions/fees their dealers pay to trade on that platform.

This model has worked for quite some time, but as the data gets more robust (and more valuable), it is unlikely the big banks will be willing to absorb datarelated price increases as the platforms look to up their data revenues (which only account for around 5% of total revenue today). This will leave the buy side incented to pony up for data access; data that has dramatically increased in quality, utility and that they have come to rely on.

It is also easy to make the case that money is being left on the table by those that are only utilizing the most basic fixed income trading data. Conversations with top tier hedge funds and asset managers have shown us that those on the cutting edge are in endless pursuit of new data sources, using them to further refine both their investment and execution strategies. Lack of a full market view means every piece of data available helps these investors to inch a little bit closer to that utopian goal.

SIMPLIFYING AGGREGATION

view of any fixed income market isn't likely anytime soon, more can be done to simplify the collection and aggregation of the needed data. Leaving aside reference data for the moment, which presents its own unique set of challenges, aggregating both pre and post trade data across fixed income markets will go a long way to market transparency and leave both liquidity makers and liquidity takers more informed about the market

and the trade at hand.

et while a complete

Execution management systems (EMS), which are new to the fixed income market, and third-party data and analytics platforms are both well placed to play the role of pre and post trade data aggregator. MarketAxess, Tradeweb and other trading venues have proven to be particularly adept at providing their clients with unique pre and post trade information based on that client's trading activity and anonymized activity from the entire venue. However, one is unlikely to share data with the other and as such a complete view remains elusive.

Over the last 12 months however some platforms have opened up their borders a bit more allowing both EMSs and data/analytics platforms such as Refinitiv's Eikon (that now has access to both MarketAxess and Tradeweb/ Dealerweb data) to ingest their market data allowing those end users to

both aggregate and analyze multiple data sources in one environment. This allows portfolio managers and traders on the buy and sell side to run more robust transaction cost analysis calculations, counterparty analysis and risk assessments of their portfolios. The result of such analysis is often more trading which is then directed back to the underlying platforms leaving everyone better off.

This process, of course, is much easier said than done. On top of the data normalization and other data cleansing processes best left to the data scientists, managing data licensing and privacy issues between three constituents - the provider, the aggregator and the client - often proves to be an even bigger challenge. The benefits to tackling these tough tasks should more than outweigh the time and costs in the long run. The buy side is certainly more informed than ever, but by all accounts we've only scratched the surface with regards to the fixed income market's data transformation.

> The growing availability of data across many corners of the fixed-income market is nothing short of amazing.

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