Charles River

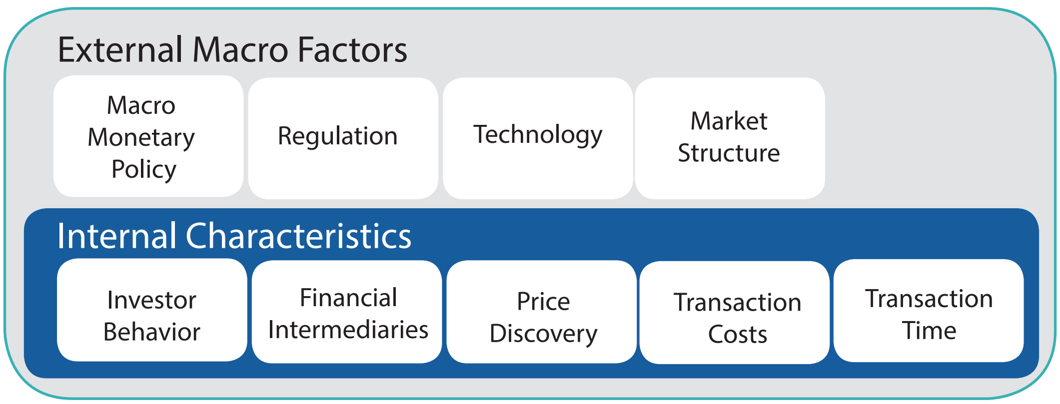
THOUGHT LEADERSHIP

TABB FORUM

WHERE CAPITAL MARKETS SPEAK

# Measuring and Sourcing Fixed Income Liquidity with a Buy Side OEMS

*Liquidity in fixed income markets has been impacted by several macro factors. These include central banks' monetary policies, fragmentation driven by a proliferation of new trading venues, and changes to market structure resulting from post-2008 regulations. Lack of liquidity is often associated with higher execution costs, an inability to execute trades quickly, and difficulty trading large volumes.*



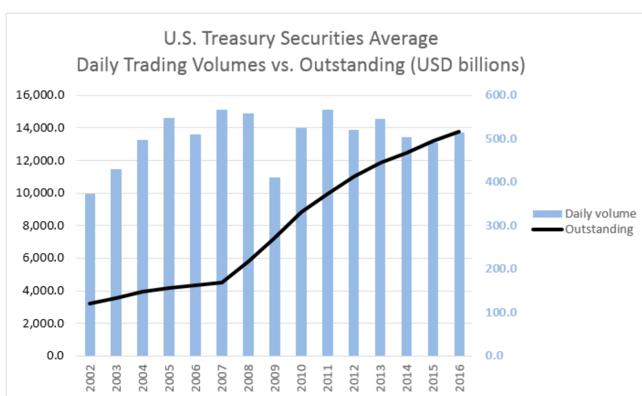

*Key factors impacting liquidity in fixed income markets*

Technology vendors have responded with new solutions to help traders access liquidity and gain greater price transparency in opaque markets. By supporting electronic trading and enabling critical data to be captured and utilized at the point of trade, these solutions benefit not only buy-side traders, but also broker-dealers, alternative trading systems (ATSs) and regulators. This article discusses the current state of liquidity in global fixed income markets, and the role that a buy-side order and execution management system (OEMS) plays in helping asset managers navigate liquidity-challenged markets.

> "Market liquidity is a concept with multiple dimensions that cannot be sufficiently described by any single measure. Assessing liquidity conditions, therefore, requires measures of immediacy, tightness, depth and resilience as well as indicators of market breadth if comparing liquidity across similar instruments."
>
> Fixed Income Market Liquidity, Jan. 2016
> *BIS Committee on the Global Financial System*

## Measuring Liquidity

The diversity of fixed income sectors makes general statements on liquidity difficult. Growing investor acceptance of bond ETFs and asset managers' use of derivatives further complicate the discussion. The liquidity spectrum across global fixed income markets has broadened considerably over the past decade, with huge disparities between fixed income sectors and geographies. The U.S. Treasury market lies at one end of that spectrum, and is considered the most liquid government bond market in the world. Total outstanding Treasuries have grown to nearly $14 trillion, which includes Bills, Notes, Bonds, TIPS and FRNs. According to SIFMA, average daily trading volume has remained steady at the $500 billion level for the past decade, excluding 2009.



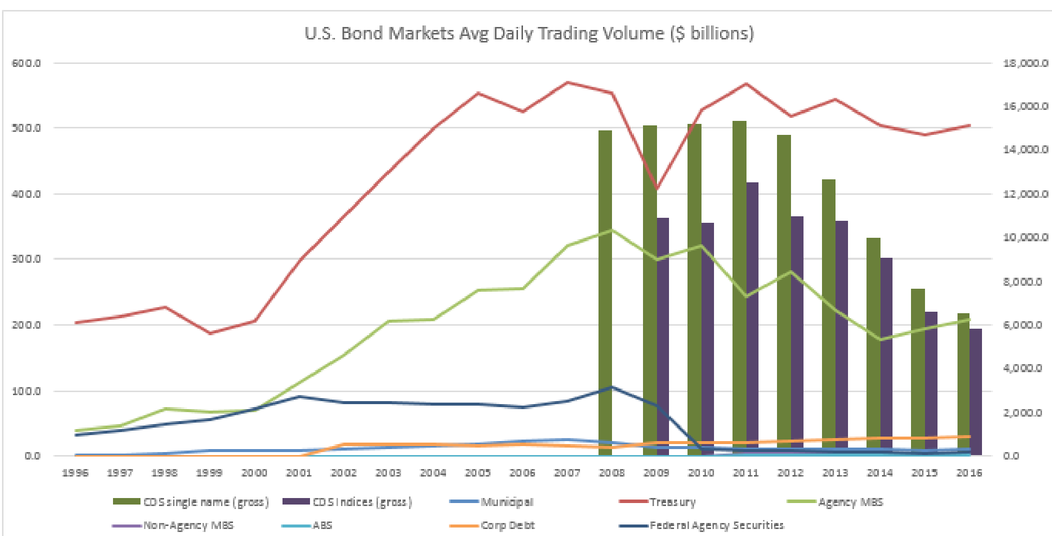
Moving down the spectrum, global private debt issuance reached a record high of $3.9 trillion in 2016, according to Dealogic data cited in **Moody's Investors Service** credit research report, as issuers took advantage of low rates before the start of U.S. rate hikes in late 2015. But increases in market size don't necessarily result in a healthy turnover ratio. Other factors have a far larger impact on liquidity. Broker-dealer inventories dropped nearly 70% across corporate bond sectors from 2007 to 2014, based on Federal Reserve data. Due to increased capital requirements, broker-dealers have been cutting their holdings and are moving from principal to agency or riskless principal trading models. The number of block trades has dropped as well, according to TRACE.

**MARKET LIQUIDITY METRICS**

- Bid-Ask spread: a gauge of transaction cost -- the tighter the spread, the lower the premium to trade
- Best-to-cover ratio: the difference between trading prices and the second best bid/ask
- Broker-dealer inventory: the willingness or ability to warehouse bonds on broker-dealers' balance sheets
- Dealer quote count: records the number of dealer quotes, which reflects the market depth and breadth for a given security
- Price impact: the ability to transact without moving the market

In European markets, studies conducted by the International Capital Markets Association (ICMA) and Intercontinental Exchange (ICE) suggest liquidity in both euro and sterling investment-grade and high-yield bond markets has declined since early 2016. **ICE Data Services** has established a liquidity tracking system in response to a request from ICMA. According to its December 2016 report, both the EUR and GBP markets showed steep declines in liquidity last summer, right after the Brexit vote. While European markets improved in Q4, US IG and HY markets experienced drops in liquidity around the presidential election.

Bond ETFs have become a growing source of liquidity, as transactions don't require exchanging the underlying assets. Credit default swaps are yet another form of liquidity, providing a cost-effective means to hedge or gain credit exposure.




*Swap-related market data published by the Securities Industry and Financial Markets Association (SIFMA), ISDA and various swap data repositories (SDRs)*

Fixed income presents portfolio managers and traders with complexities not seen in equity markets, such as optionality and duration. Processing bond covenants requires additional legal resources and adds costs to pre- and post-trade operations. To complicate matters, liquidity becomes even more disparate as we move from primary to secondary markets, and from "on the run" to "off the run" designations.

## The Buy-Side OEMS

Working closely with their institutional clients, technology vendors have launched a new generation of buy-side order and execution management systems (OEMS) designed to help traders address liquidity-related challenges. These emerging solutions allow traders to discover opportunities, aggregate trade and market information across multiple data sources, and establish communication channels between buy side firms, broker-dealers and the growing number of electronic trading venues. The OEMS provides traders with five key capabilities needed for successfully navigating rapidly changing fixed income markets.

## 1. Ensuring venue and broker connectivity

The growth of electronic communication networks (ECNs) and alternative trading systems (ATS) as traditional broker-dealers downsized their trade facilitation services has left buy-side firms navigating a bewildering maze of potential liquidity providers. With more than 100 venues now operational, determining which venues are suitable for a particular fixed income sector, and capable of consistently providing liquidity at institutional scale, has become challenging.

OEMS vendors bear the cost of establishing connectivity with these venues, providing their buy-side clients with an aggregated, venue-agnostic view of liquidity. As some venues inevitably merge or cease operations, the buy side feels little if any impact. Vendors also ensure that the three mainstream trading models and their variants are supported, including Request for Quote, Central Limit Order Books, and the emerging All-to-All.

> "Asset managers can interact directly with dealers and other asset managers with whom they may not have a direct trading relationship. The result: lower costs and additional sources of liquidity.
>
> Also, these networks enable traditional buy-side firms to participate as "price makers" (but not market makers) when in the best interest of clients."
>
> Innovation and Evolution in the Fixed Income Market, *Vanguard Commentary, October 2016*

## 2. Real-time market data consolidation

Gaining price transparency in fragmented and illiquid markets requires a careful synthesis of real-time, historic and evaluated pricing, and quotes from broker-dealers. The OEMS consolidates data feeds from TRACE, MSRB, and TRAX and quote data from multiple venues and brokers to provide traders with a real-time assessment of bid/ask spreads for a particular sector or issue. The MiFID II consolidated tape, once implemented, will be an additional data source. Several data vendors offer continuous evaluated pricing services that provide additional context. The OEMS incorporates a number of useful metrics for assessing market liquidity to help guide trading decisions (see Market Liquidity Metrics sidebar).

Brokers can target clients by their trading volume and sector concentration and can send their runs and axes based on client tiers. The OEMS allows both sides to filter out the unwanted dissemination of information, ensuring that negotiations and trading activities are not happening unintentionally or shared unnecessarily. Vendors are also establishing connectivity to a growing number of inventory hubs that give broker-dealers the ability to advertise their offerings to a wide audience.

## 3. Pre-trade decision support and compliance

Before the OEMS became commercially available, traders relied on multiple applications for trade decision support. Disparate price and quote feeds, spreadsheets, chat windows, and broker execution summaries have now been replaced by a centralized interface that makes key information instantly accessible to the trader and eliminates switching between applications.

The OEMS captures and archives firm-wide transaction history, broker quotes, market conditions and broker performance. For each order, the system draws from this database to propose an execution broker list based on account agreements and execution history. Broker quote counts are provided to indicate likelihood of execution for illiquid markets. Traders can also view the computed broker hit ratio, best-to-cover ratio, and historically executed prices and sizes with a given broker. This level of pre-trade information is difficult if not impossible for traders to synthesize from multiple applications.

Pre-trade regulatory indicators and thresholds are displayed in the OEMS to ensure trader compliance with the relevant jurisdiction for that instrument and venue. These include block size indicators, size specific to instrument (SSTI), large-in-scale (LIS) and System Internalizer (SI) thresholds. This is especially important given the focus on OTC instruments codified by Dodd-Frank and eventually MiFID II.

## 4. Facilitating front-office collaboration

An OEMS allows portfolio managers and traders to work from a single system and database, providing the front office with a shared, consistent view of market pricing, orders and trade analytics. Fixed income portfolio managers increasingly rely on traders to search for liquidity and conduct market research.

Liquidity challenges make it difficult and sometimes impossible for portfolio managers (PMs) to fully express their investment views by purchasing desired securities. The OEMS supports generics – a group of bonds that adhere to certain criteria – providing the portfolio manager with a list of securities matching the specified maturity, sector, coupon, issuer name and rating. Traders then use search capabilities in the OEMS to locate specific issues and venues that fulfill the criteria.

This enables PMs and traders to collaborate effectively and find investment alternatives quickly. Traders can also use interactive visualization capabilities to provide PMs with trading and market insights by monitoring broker inventory and identifying actively traded securities across sectors.

## 5. Ensuring Flexibility Across Markets

The growing disparity in liquidity across fixed income market sectors requires solutions with the flexibility to support both automated, low-touch algo trading and traditional voice-based negotiation for more complex trades or less liquid markets. While electronic trading automates data capture, a well-designed EMS also simplifies archiving the significant amount of pre- and post-trade data generated by manual trades.

> "Highly skilled traders are now seen as a vital source of information for portfolio managers, in an environment where it has become increasingly difficult to find suitable buyers or sellers at the opposite end of complex fixed income trades."
>
> Liquidity crunch elevates bond traders, *FT.com, March 20, 2016*

Fixed income markets are following the trend toward smaller trade sizes seen in equities markets decades ago. This poses another set of challenges for institutional traders accustomed to transacting large block trades with a single broker-dealer. A large trade needs to be split, potentially filled across multiple time points and venues, and then allocated appropriately across client accounts. The increased complexity in order generation and post-trade allocation workflows is largely automated in the OEMS, with integrated compliance ensuring that allocations are conducted fairly.

## An Effective Buy-Side Solution

While much has been written about the challenges facing institutional fixed income traders, the development of the OEMS provides the buy side with an effective solution for addressing those challenges:

- A venue-agnostic view of liquidity ensures asset managers are shielded from the inevitable consolidation and evolution that lies ahead for the 100+ venues competing for buy-side order flow.
- The complex synthesis of multiple pricing and quote feeds provides traders with unparalleled price transparency.
- A single, shared workspace facilitates closer collaboration between traders and portfolio managers.
- Extensive pre-trade decision support and execution analysis ensures traders maintain compliance with increasingly complex regulations.