

Liquidity in the Post-Crisis Era: The Difference a Decade Makes

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The 10TH anniversary of the global financial crisis serves as a reminder of how all-to-all trading continues to transform the liquidity landscape in credit markets

Credit market veterans will recall the spring of 2007, when the first signs of the global financial crisis appeared. Amid reports of problems in the mortgage-backed and asset-backed securities markets, the Fed embarked on a series of interest rate reductions that took the effective federal funds rate from 5.29% on May 27, 2007, to 3.06% on December 31, 2007, and then to zero by the end of a historically volatile 2008.

The events of 2007-08 have been described as more of a liquidity crisis than a credit crisis. In the post-crisis years, liquidity has remained a persistent concern as regulators raised banks' capital requirements and adopted other measures that prompted many dealers to reduce market-making activities even as the buy side's bond holdings grew rapidly.

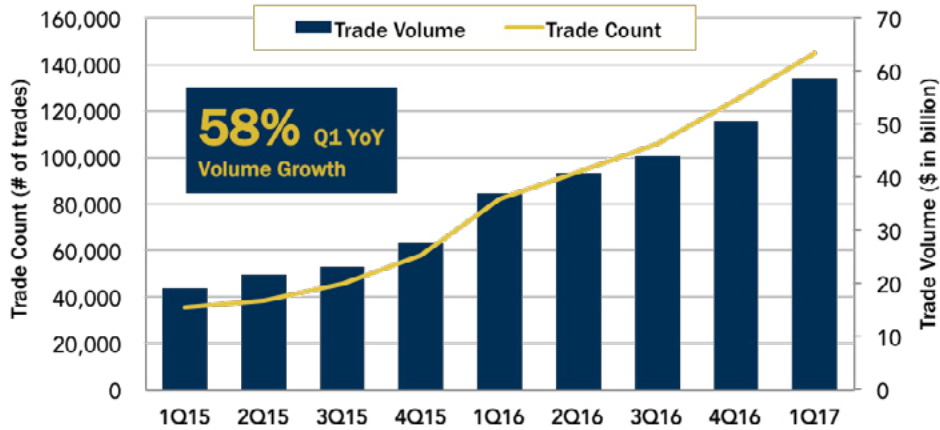
Primary dealers' corporate bond inventory, which pre-crisis stood at about \$250 billion, fell to around \$58 billion by mid-2013. As central banks held interest rates near or even below zero, corporate issuance surged. From 2007 to 2016, the value of U.S. corporate bonds outstanding increased 70%, to \$8.5 trillion.

The credit market now finds itself at an important juncture in the post-crisis period. After nearly 10 years of accommodative monetary policy, the Fed is on a path to higher interest rates and poised for a reduction in its balance sheet. Trading volume in U.S. corporate debt is starting to quicken even though volatility and portfolio turnover rates remain at low levels. In the first three months of 2017, TRACE reported average daily secondary volume (ADV) for high grade and high yield bonds totaled about \$32 billion, up significantly from the \$26.8 billion ADV for all 2016 and nearly double 2007's ADV.

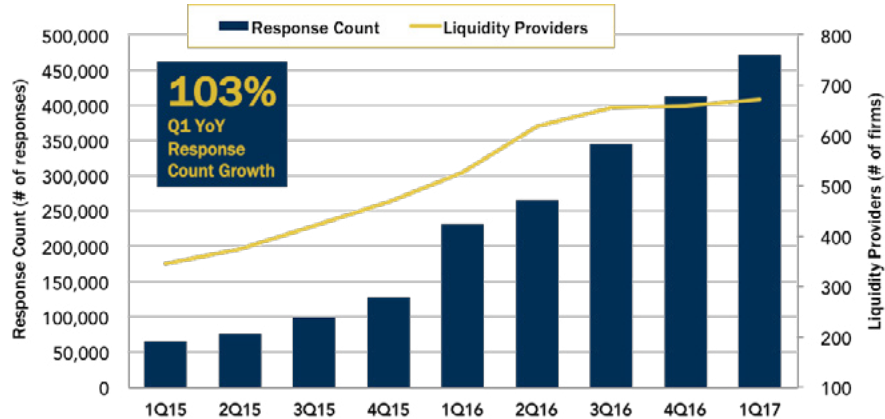
In this shifting environment, it's worth pausing to note the significant differences in the credit market's current liquidity landscape compared with that of the pre-crisis period. At the top of the list of those differences is the emergence of a fully electronic, all-to-all market in global credit as one solution to the post-crisis liquidity equation. Today, liquidity options are vastly broader and more diverse, compared with the traditional model of bilateral trading with a limited set of dealer counterparties.

The accelerating growth in Open Trading™, MarketAxess' all-to-all solution, highlights how quickly market participants are moving to take advantage of these expanded liquidity options. In the first quarter of 2017, Open Trading™ volume totaled a record \$59 billion, up 58% from the year-earlier quarter.

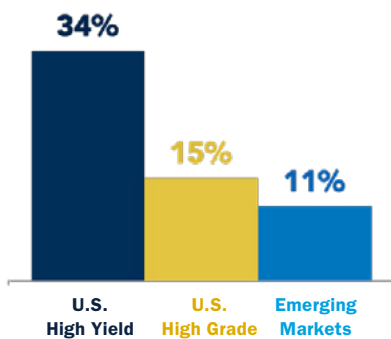
OPEN TRADING™ VOLUME AND TRADE COUNT



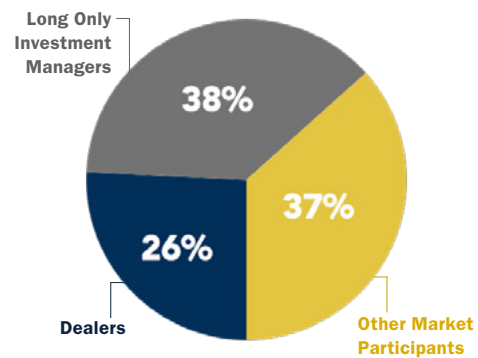
OPEN TRADING™ RESPONSE COUNT AND LIQUIDITY PROVIDERS



OPEN TRADING™ VOLUME AS PERCENT OF TOTAL PRODUCT VOLUME



OPEN TRADING™ CLIENT SEGMENTS*



*Client segments based on 1Q17 trade volume of firms winning Market List trades. Totals add up to more than 100% due to rounding.

Driving the volume increase is an expanding pool of liquidity providers making prices across a wide range of issues. This pool includes investment managers, global dealers, regional dealers and specialist market-making and proprietary trading firms.

In the first quarter of 2017, the number of unique liquidity providers on Open Trading™ rose to 672 firms from 527 a year ago. That's more than triple the participation in 2015's first quarter. Reflecting that growth, the number of Open Trading™ price responses is double the level of just a year ago. Just think about the radical change that has already taken place with 700 potential counterparties in one electronic marketplace versus the narrow funnel of liquidity in yesterday's credit trading model.

This innovative network opens the way for both dealers and investors to find natural matches and move orders more efficiently in a fully electronic trading environment. The results are significant improvements in execution quality and a clear trend to lower transaction costs.

Jim Switzer, Global Head of Credit Trading at AllianceBernstein, notes that Open Trading™'s impact can be seen in individual trades. "When we're a liquidity provider, we're buying closer to the bid side almost every time," he reports. "It's indisputable that it works."

Over the last two years, we estimate that institutions using Open Trading™ saved an estimated \$160 million in transaction costs, benefiting their clients. In 2016, using Open Trading™ to execute a \$5 million trade of high-grade corporate bonds saved an average \$10,250 on transaction costs. For a high-yield trade of the same size, savings would have averaged \$17,500.

These results imply impressive potential reductions in transaction costs across the industry as the "all-to-all" model gains broader acceptance. Based on just the current size of the market in high grade and high yield bonds, a 10-fold increase in Open Trading™ volume could generate cost savings of as

much as \$900 million annually. That future state would undoubtedly reduce liquidity risk in global credit markets and lead to higher trading velocity for dealers and investors.

Though growing rapidly, Open Trading™ is still in its early stages. The unique characteristics of the credit market means that its all-to-all model will develop in significantly different ways from those seen in equities and exchange-traded derivatives. But the accelerating pace of Open Trading™ participation underscores how far the market has come in addressing the post-crisis liquidity challenge.

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