Insights
Liquidity

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Developments in Fixed Income ETF Trading

Fixed income exchange traded funds (ETFs) are transforming the traditionally fragmented and opaque fixed income marketplace. This paper highlights how developments in fixed income ETF trading are providing users with additive liquidity benefits and implementation flexibility.

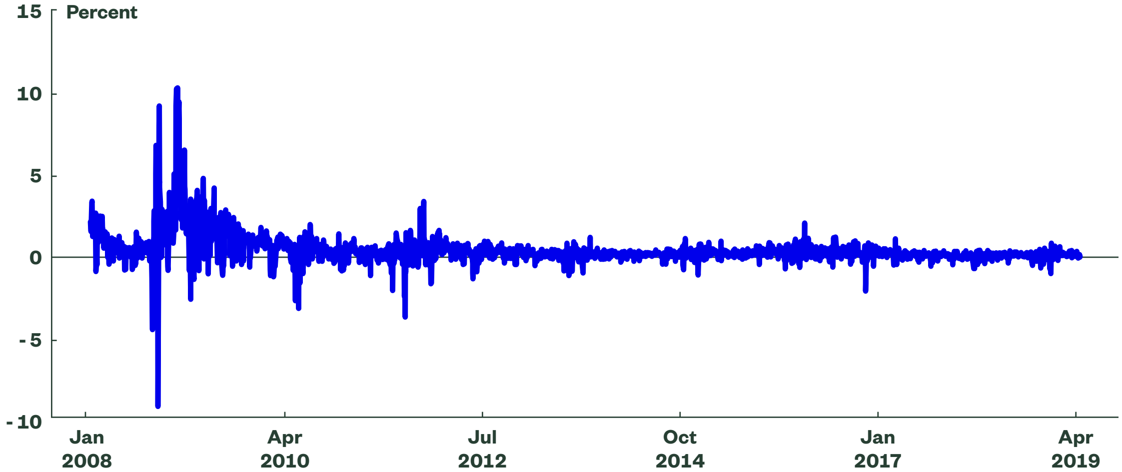
The first fixed income ETF was launched in 2002 and today there are 384 US-listed fixed income ETFs with $763.9 billion in assets under management.[1] Many consider the financial crisis to be a central catalyst in fixed income ETFs' growth. Driven by the tighter post-crisis regulatory environment, the shifting market structure of secondary fixed income trading has helped to steer investors toward additional sources of liquidity. These dynamics combined with progress toward electronic trading led many banks to transition from a principal-based dealer to an agency trading model.

Corporate Bond Market Developments

The US corporate bond segment has contributed significantly to overall ETF asset and liquidity growth. This segment of the bond market relies heavily on principal-based market making services. As dealer bond inventories have declined from regulatory initiatives and overall corporate bond issuance has varied dramatically over time, corporate bond ETFs have experienced significant increases in secondary trading. This progress can be attributed to greater focus on inventory management and market making services, integration of fixed income ETFs as a derivative alternative, technological advancements — and a broadening client user base.

Developments in corporate bond ETF trading are evident in the secondary trading profile of the SPDR Bloomberg Barclays High Yield Bond ETF (JNK). As illustrated in Figure 1 JNK's average annual premium and discount volatility has declined over the last 10+ years. Given these dynamics, JNK's continuous market price has become a price discovery tool for the underlying constituents.

Figure 1
JNK Premium/ Discount



Source: Bloomberg Finance L.P. As of April 30, 2019.

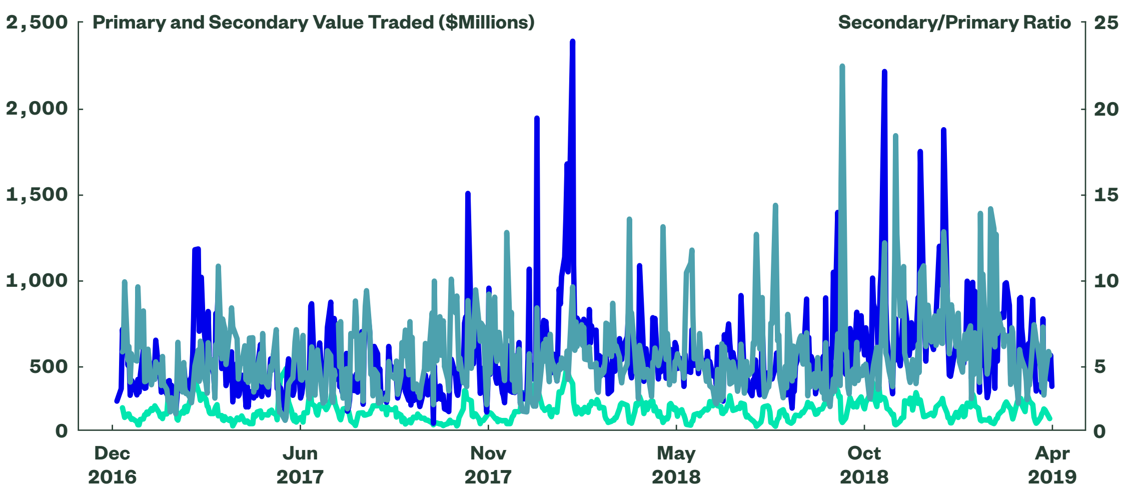
What Is Additive Liquidity?

The centralized marketplace and price transparency features offered through exchange trading becomes particularly pronounced during periods of market stress. In these environments, traditional fixed income market structure makes it difficult to source liquidity as dealers may be less willing to commit capital — at exactly the time when investors need it most. Amid this uncertainty, investors have gravitated away from attempting to trade many individual corporate bond line items and leaving open orders (with low confidence of execution) on what they cannot sell immediately, and toward the ETF as a dependable source of liquidity.

As illustrated in Figure 2, JNK has experienced significant increases in secondary trading volume during periods of higher relative volatility. The volume spikes can be contextualized by comparing the notional value traded to that of the underlying bonds. The ratio of secondary to primary trading increases as the ETF is used as a preferred vehicle to transfer risk during these periods. JNK secondary market value traded has averaged roughly 5.7% of the underlying high yield bond dollar volumes over the previous four year period, but that percentage historically increases to 10–20% during times of market stress.[2]

Figure 2
JNK Primary and Secondary Activity

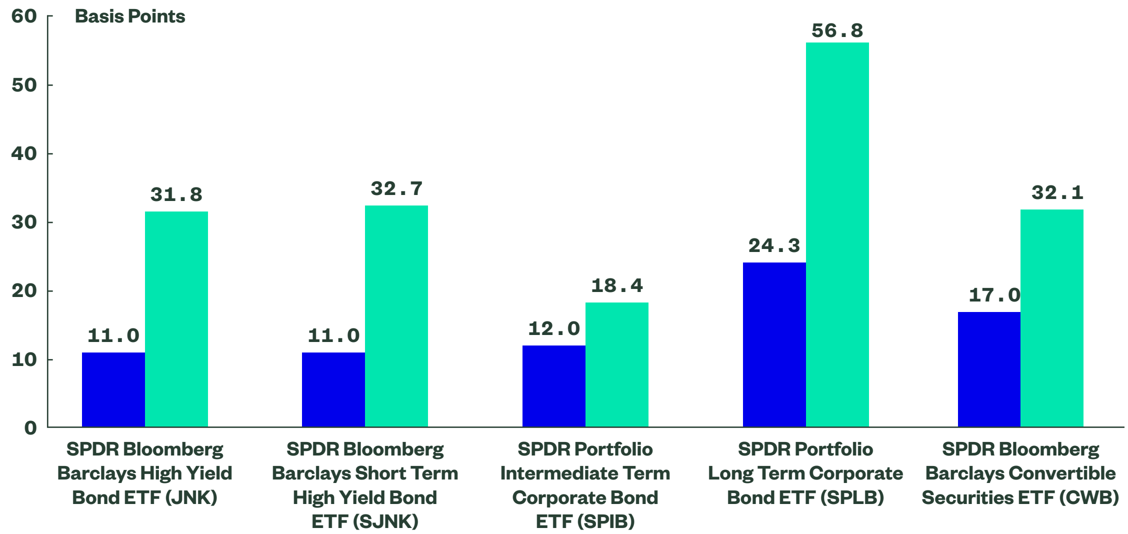
Primary
Secondary
5 Day Rolling Avg Secondary/ Primary Ratio



Source: Bloomberg Finance L.P. As of March 31, 2019.

In addition to providing an alternative source of liquidity from traditional over-the-counter (OTC) markets, ETFs provide an efficient wrapper in which secondary market trading may provide transactional cost efficiency relative to trading the underlying basket of bonds. As outlined below, spreads for high yield ETFs are significantly tighter than implied spreads of the underlying bonds based on Index Liquidity Cost Scores (LCS).

Figure 3
Reduced Transactions Costs



Source: Barclays, State Street Global Advisors, Jane Street Capital 09/30/2018. LCS as of September 30, 2018.
* "Institutional size" defined as $50mm for SJNK, JNK, SPIB, SPLB, CWB.
** As represented by the Barclays Liquidity Cost Score (LCS) metric for the respective index.
There can be no assurance that a liquid market will be maintained for ETF shares.

Net Asset Value (NAV) and Premium/Discount

As a result of the dynamics of fixed income pricing, bond-based ETFs generally trade at a premium to Net Asset Value (NAV). The reason for this is that the ETF will most often trade near the midpoint of the underlying basket bid-ask spread, while the NAV is priced on the bid side of the market. Fixed income premiums or discounts may reflect market sentiment as well as the liquidity risk market makers face to buy or sell the underlying cash bonds. This dynamic is frequently highlighted during fear-driven market environments in which the typical ETF premium may diminish or potentially result in the fund trading at a discount to NAV.

Trading Support From Our Capital Markets Team

In 2018, $8.79B traded notionally on a daily basis in the US-listed fixed income ETF space. Growth in secondary trading volume has enabled the ETF to be used as a tool to express many types of trading styles and priorities. Execution strategy decisions should take into consideration both primary market implied basket liquidity and secondary market ETF trading profile.

Our Capital Markets team offers trading education and support for a range of strategies, including:

Low-Touch Trading Strategies

ETFs, as equity securities, can be traded using low-touch strategies with potentially enhanced measurable execution results. Popular algorithmic equity execution strategies are available to fixed income investors including strategies benchmarked to the **Time Weighted Average Price (TWAP)** or the **Volume Weighted Average Price (VWAP)** in which investors can target execution participation strategies based on windows in time or alongside volume measured participation, respectively. In addition to these relatively common and straightforward strategies, there are a plethora of other algorithmic trading strategies available to investors across providers.

Risk Trading

For larger block trades, investors can engage liquidity providers for immediate execution. Market makers will offer a single price execution for the order, manage the risk, and create or redeem ETF shares as needed. Execution can be easily measured against the ETF indicative NAV calculation, national best bid and offer (NBBO), and/or arrival price.

The increase of **Request-For-Quote (RFQ)** platforms have created streamlined tools for buy-side clients to access large pools of liquidity providers anonymously. Many of these platforms offer additional services including built-in trade analysis and historical best execution reporting.

Other Trading Benchmarks

Orders can be benchmarked to official **NAV** pricing for investors seeking to benchmark their execution to bid/ask in fixed income terms or those whose performance is benchmarked to a broader index. It is also important to be aware that the ETF execution costs can be measured in traditional fixed income metrics, namely in terms of yield and spread. Additionally, more commonly utilized equity order types of **Market-On-Open (MOO)** or **Market-On-Close (MOC)** offer easily measurable execution targets based on the opening or closing US ETF market price; however, we recommend caution using these order types when trading ETFs as the market for MOO/MOC orders for the ETF may differ dramatically than that of the underlying securities and NAV calculations.

Transfer of Assets

Large institutional owners of underlying bonds have utilized the in-kind creation and redemption features of the ETF to exchange bonds for ETF shares. The exchange of bonds for ETF shares may help avoid associated transaction costs of selling the individual bonds by offering access to secondary market ETF trading. Additionally, an ETF offers a passively managed exposure in a single line item instead of multiple bonds for operational ease of use.

OTC Derivative Alternative

ETF options and securities lending markets have developed on many of the most liquid ETFs. The flexibility of the ETF wrapper and associated products supports usage as an efficient alternative to other derivative products. There has also been continued growth in relative value trading as investors compare fixed income ETFs to other vehicles.

Looking Ahead: Increased Liquidity and Flexibility

The centralized and transparent exchange trading versus the fragmented and opaque bond trading environment offers real-time and continuous pricing during US equity market trading hours. Developments in secondary ETF trading profiles provide investors spreads that may be tighter than the underlying basket of securities — resulting in transaction cost savings. The centralized exchange trading of the ETF wrapper attracts significant activity in times of uncertainty as fixed income investors utilize the ETF as a source of additive liquidity.

Finally, the ETF has dramatically expanded implementation flexibility for traditional fixed income investors. In addition to the ability to access equity order type management options, new and innovative uses of the ETF wrapper continue to gain traction. All of this activity builds a stronger ETF ecosystem that ultimately delivers trading efficiency benefits to all investors.

About SPDR Capital Markets

We are responsible for building relationships with SPDR ETF authorized participants, market makers, liquidity providers, execution trading desks/platforms and stock exchanges. Our team plays an active role in promoting competitive markets and maintaining the SPDR ETF liquidity ecosystem.

Given our insight into primary and secondary market activity as well as our access to a wide variety of pre-trade liquidity analytics tools, the SPDR Capital Markets team is dedicated to working closely with clients to help educate them about the nuances of ETF execution and ultimately ensure they are equipped with the knowledge necessary to most effectively trade SPDR ETFs.

Learn More Please contact the SPDR ETF Capital Markets Group with any questions regarding ETF liquidity and execution at SPDRCapitalMarketsUS@ssga.com

Endnotes

1 Bloomberg Finance, L.P., as of June 27, 2019.

2 It is also worth highlighting that new financial market regulation has been centered on liquidity stressed markets. One example of this is the “Liquidity Rule” for open-end funds registered under the Investment Company Act of 1940. ETFs may provide a liquidity enhancement tool for other open-end funds to comply with this new regulation and lead to further usage during these periods.

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Our clients are the world's governments, institutions and financial advisors. To help them achieve their financial goals we live our guiding principles each and every day:

Start with Rigor We take a highly disciplined and risk-aware approach built on exhaustive research, careful analysis and market-tested experience to meet client needs. Rigor is behind every decision we make.

Build from Breadth Today's investment problems demand a breadth of capabilities. We build from a universe of active and index strategies to create cost-effective solutions.

Invest as Stewards We help our portfolio companies see that what is fair for people and sustain-able for the planet can deliver long-term performance. As fiduciaries, we believe good stewardship is good investing.

Invent the Future We created the first ETF in the US and are pioneers in index, active, and ESG investing. Using data, insights and investment skill, we are always inventing new ways to invest.

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* AUM reflects approximately $36 billion (as of June 30, 2019), with respect to which State Street Global Advisors Funds Distributors, LLC (SSGA FD) serves as marketing agent; SSGA FD and State Street Global Advisors are affiliated

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ETFs trade like stocks, are subject to investment risk, fluctuate in market value and may trade at prices above or below the ETFs net asset value. Brokerage commissions and ETF expenses will reduce returns.

Investing in high yield fixed income securities, otherwise known as "junk bonds" is considered speculative and involves greater risk of loss of principal and interest than investing in investment grade fixed income securities. These lower-quality debt securities involve greater risk of default or price change due to potential changes in the credit quality of the issuer.

Non-diversified funds that focus on a relatively small number of issuers tend to be more volatile than diversified funds and the market as a whole.

Bonds generally present less short-term risk and volatility than stocks, but contain interest rate risk (as interest rates rise bond prices usually fall); issuer default risk; issuer credit risk; liquidity risk; and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

Passively managed funds invest by sampling the index, holding a range of securities that, in the aggregate, approximates the full Index in terms of key risk factors and other characteristics. This may cause the fund to experience tracking errors relative to performance of the index.

While the shares of ETFs are tradable on secondary markets, they may not readily trade in all market conditions and may trade at significant discounts in periods of market stress.

There can be no assurance that a liquid market will be maintained for ETF shares.

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