Institutional Investors Embrace Bond ETFs
Executive Summary

The difficult trading environment in bond markets is fueling the use of bond ETFs in institutional portfolios.

The institutional investors participating in the Greenwich Associates 2016 U.S. Bond ETF Study are experiencing longer execution times, increased execution costs and more difficulty sourcing fixed-income securities and completing trades—especially large ones.

These challenges have become so pronounced that they are causing institutions to alter their investment processes. Not only are institutions adding resources and upgrading systems, but they are also increasing the importance of liquidity when assessing an investment. Furthermore, institutions are looking beyond individual bonds to alternative vehicles that can provide required fixed-income exposures.

Bond ETFs are emerging as an important alternative for institutions implementing trades and adjusting portfolios. Growing numbers of institutions are incorporating ETFs into their investment universe, using them as tools to rotate sector allocations, increase or reduce risk levels, and adjust duration.
Investors’ need for liquidity has played a major role in driving institutional adoption of ETFs. Eighty-four percent of bond ETF users in the study name liquidity and low trading costs as main reasons for investing in ETFs. ETF usage rates have climbed to their highest levels in sectors experiencing liquidity challenges, including high-yield and investment-grade corporate credit.

Beyond liquidity, institutions cite a range of additional ETF benefits, including ease of use, operational simplicity, quick access, and speed of execution. As a result, they are employing the funds in an expanding list of applications ranging from managing cash positions and rebalancing to transitioning between investment managers.

Bond ETF growth rates could accelerate in coming years, as demand emerges from new institutional segments like insurance companies and as other institutions become more comfortable using the funds. Currently, the single biggest factor preventing institutions from increasing their use of bond ETFs is internal investment guidelines that restrict or prohibit investment, although this dynamic is shifting. While about half the institutions participating in the 2015 U.S. Bond ETF Study said their internal guidelines limit ETF investments, by 2016 that share had dropped to just 24%.

Together, these developments are contributing to the continued proliferation of bond ETFs in institutional portfolios:

- Among institutions in the study, 68% have increased their use of bond ETFs over the past three years.
- Institutions are executing larger bond ETF trades. In 2015, only 19% reported executing a trade of $50 million or more. In 2016, that share jumped to 31%.
- Thirty percent of investors say they are considering replacing individual bond positions with bond ETFs in the next year.
- Of institutions that use fixed-income derivatives, 88% say they are considering or have considered using bond ETFs as an alternative.
- One-third of institutions plan to increase their use of bond ETFs in the coming year. Of these, 30% expect to boost ETF usage by more than 10%.
BASED ON THE RESULTS of its third annual bond ETF survey, Greenwich Associates finds that a confluence of forces is behind the rapid growth in bond ETF usage.

1. Institutions are adapting to a tough trading environment by employing ETFs.
2. Institutions are starting to rely on ETFs to adjust portfolios in difficult conditions.
3. Bond ETFs are rapidly attracting new users but are still in the early stages of adoption.
4. Institutions are evaluating ETFs as alternatives to credit derivatives.
5. Concerns about ETFs are abating as familiarity grows.

Institutions Are Adapting to a Tough Trading Environment by Employing ETFs

Liquidity challenges in bond markets are forcing institutions to rethink their investment processes.

It has been well documented and reported on that a combination of regulatory and structural shifts have made trading bonds more difficult in recent years. In particular, post-crisis rules have increased capital costs for banks, causing many fixed-income dealers to respond by slashing inventories and pulling back from their traditional roles as providers of secondary market liquidity, effectively sapping liquidity from global markets. While trading has always been an issue for smaller investors in bond markets, the extent to which it is affecting large, well-resourced institutional investors is a new development.

BOND TRADING EXPERIENCE IN THE PAST THREE YEARS

Trading, Liquidity, or Sourcing Securities in Fixed-Income Markets

Trading Costs

Execution Times

Trading Large Sizes

Note: 1 Based on 70 respondents. 2 Based on 58 respondents. 3 Based on 55 respondents. 4 Based on 57 respondents. Source: Greenwich Associates 2016 U.S. Bond ETF Study
Seventy-one percent of the institutions participating in Greenwich Associates 2016 U.S. Bond ETF Study say the trading and sourcing of securities have become more difficult in the past three years. That compares to only 34% who reported issues the previous year. Today, 6 in 10 note that it has become more difficult to complete large-sized bond trades, close to 40% have experienced higher trading costs, and about the same share say execution times have slowed.

Almost three-quarters of institutions that have experienced these challenges say the increasing difficulty and cost of trading have forced them to change their investment process. In response to the new challenges, institutions are building out internal resources, upgrading systems, and making other changes to their investment operations. More than half say they have added systems or infrastructure to help navigate these new impediments.

Furthermore, almost 90% of institutions that have experienced these developments say deteriorating market conditions over the past three years have caused them to make the liquidity of an investment or security a more important factor when considering an exposure. Most striking, though, is that 97% of institutions in the study say the increased difficulties in bond liquidity have forced them to consider other vehicles, such as ETFs or derivatives, instead of individual bonds to gain exposure. Overall, 30% of institutions in the study say they are considering replacing individual bond positions with bond ETFs in the next year.

It appears that institutions are making a long-term shift in the tools they use to manage their portfolios, because many institutions do not expect conditions to improve. In fact, 60% of the institutions in the study expect bond market conditions to become even more challenging in the next three years.

“There is less opportunity and less flow in the market,” explains one insurance company respondent. “People are holding onto the better bonds while selling the ones they are concerned about. It has made the selection process more challenging.”

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**CHALLENGING CONDITIONS FORCE INSTITUTIONS TO CHANGE INVESTMENT PROCESSES**

<table>
<thead>
<tr>
<th>Have challenges impacted management of investments?¹</th>
<th>How was investment process affected?²</th>
</tr>
</thead>
<tbody>
<tr>
<td>No 28%</td>
<td>Had to consider other trading vehicles for exposure 97%</td>
</tr>
<tr>
<td></td>
<td>Made liquidity more important when considering exposure 88%</td>
</tr>
<tr>
<td></td>
<td>Added more systems/infrastructure 52%</td>
</tr>
<tr>
<td></td>
<td>Added more internal personnel/resources 18%</td>
</tr>
<tr>
<td></td>
<td>Other 21%</td>
</tr>
</tbody>
</table>

Note: ¹Based on 46 respondents. ²Based on 33 respondents. Source: Greenwich Associates 2016 U.S. Bond ETF Study
Institutions Are Starting to Rely on ETFs to Adjust Portfolios in Tough Conditions

As a consequence of thinning liquidity in the market, many institutions are faced with the disadvantage of having less flexibility in their portfolio management process. However, more than half the institutions participating in the study plan on making significant changes to their fixed-income allocations—and a growing number are using ETFs to do so.

Institutional investors are not waiting for a rebound in liquidity levels or a more general improvement in market conditions to adjust their portfolios. Facing unorthodox central bank policies, historically low yields and a muted economic picture, institutions are putting renewed focus on ways to adjust the sector allocations and risk profiles of their strategies.

About 1 in 5 institutions in the study made a significant change to the size of their overall bond portfolio (+/− at least 10%) in the past three years. Another 36% significantly altered sector allocations within their bond portfolios.

Institutions project additional changes in the next 12 months. About 30% of the institutions plan to significantly adjust portfolio duration in the coming year, with respondents evenly divided on direction. Forty-one percent plan to adjust portfolio credit risk, including 23% planning to increase their risk levels and 18% planning to reduce risk levels.

Institutions also plan to continue with major adjustments to portfolio allocations, with big changes in store in investment-grade corporate credit, high yield, and emerging markets sectors:

- About a third of the institutions plan to make significant changes to investment-grade corporate credit allocations. Two-thirds of those are increasing exposure.
- Approximately 31% of institutions are planning meaningful changes to high-yield allocations, with 18% of the total planning reductions and 13% planning increases.
- Nearly 30% of institutions expect to make a meaningful change in emerging markets, with most of those planning to increase their allocations.

Interestingly, the need to make such broad changes in a slower trading environment is generating fresh demand for ETFs. As the following graphic demonstrates, large numbers of institutions plan to use ETFs in the process of altering sector allocations in the next year.
### INSTITUTIONS USING ETFs TO ADJUST SECTOR ALLOCATIONS

<table>
<thead>
<tr>
<th>Sector</th>
<th>Plan to use ETFs to decrease</th>
<th>Plan to decrease allocations</th>
<th>Plan to increase allocations</th>
<th>Plan to use ETFs to increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasuries</td>
<td>38%</td>
<td>13%</td>
<td>5%</td>
<td>80%</td>
</tr>
<tr>
<td>Securitized</td>
<td>50%</td>
<td>5%</td>
<td>21%</td>
<td>33%</td>
</tr>
<tr>
<td>Treasury inflation-protected securities (TIPS)</td>
<td>100%</td>
<td>2%</td>
<td>21%</td>
<td>76%</td>
</tr>
<tr>
<td>Investment-grade credit/corporate</td>
<td>75%</td>
<td>12%</td>
<td>22%</td>
<td>87%</td>
</tr>
<tr>
<td>Municipals</td>
<td>50%</td>
<td>2%</td>
<td>18%</td>
<td>58%</td>
</tr>
<tr>
<td>High yield</td>
<td>93%</td>
<td>13%</td>
<td>18%</td>
<td>63%</td>
</tr>
<tr>
<td>International developed</td>
<td>44%</td>
<td>9%</td>
<td>10%</td>
<td>80%</td>
</tr>
<tr>
<td>Emerging markets</td>
<td>40%</td>
<td>5%</td>
<td>24%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Note: Based on 104 respondents.  
Source: Greenwich Associates 2016 U.S. Bond ETF Study

### NEW DEMAND FROM INSURERS BOOSTS ETF GROWTH

ETF growth is getting a boost from insurance companies experimenting with new investment approaches as they search for better returns.

Historically low interest rates and investment returns have created a challenging environment for insurance companies. As part of their effort to preserve profitability, many insurers are allocating more assets to external investment management firms and trying other approaches to improve the returns they had been generating by managing investments internally.

As they do so, more insurance companies are investing in ETFs for the first time. Almost half the insurance companies participating in the Greenwich Associates 2016 U.S. Bond ETF Study started investing in ETFs in the past two years, and nearly a quarter have been investing in ETFs for 12 months or less. Across both new and existing insurance company ETF investors, approximately 80% increased their use of ETFs over the past three years.

Insurance companies are employing ETFs in a broad range of applications. Approximately two-thirds of insurers in the study are using ETFs in manager transitions, and about 60% use the funds to make tactical adjustments to their portfolios. More than half the insurance companies are using ETFs to obtain passive investment exposures in the core component of their portfolios, and 44% are employing ETFs as liquidity enhancers in overlay strategies and liquidity sleeves.

The study data suggest insurance company demand for ETFs will not just continue, but could actually accelerate. Of insurers in the study, 52% expect to increase their use of ETFs in the next year.
Eighty percent of respondents planning to increase allocations to U.S. Treasuries and/or emerging markets expect to use ETFs in doing so, as do 93% of institutions planning to cut high-yield allocations.

Additionally, institutions are using ETFs to help manage credit risk and duration in many portfolios. Approximately 40% of institutions that plan to adjust their duration in the next year are considering using an ETF for implementation, as are nearly 60% of institutions planning to alter portfolio credit risk levels.

“We use ETFs to get into areas that we don’t have active management covering it. A good example would be TIPS and long duration. To tailor the portfolio characteristics to specific targets, ETFs are much better than mutual funds.”

- RIA

“We use ETFs to gain quick exposures and to manage our credit risk.”

- Insurance company

Note: 1 Based on 86 respondents. 2 Based on 26 respondents.
Source: Greenwich Associates 2016 U.S. Bond ETF Study
ETFs Are Rapidly Attracting New Users but Are Still in the Early Stages of Adoption

Despite recent rapid growth, bond ETFs remain a relatively new tool in the institutional channel.

Although the first U.S. bond ETFs were launched in 2002, institutions did not start adopting them in significant numbers until the start of the global financial crisis in 2008.1 About a quarter of the institutions in the study have been investing in ETFs for less than two years. Almost a quarter of participating insurance companies have been active in ETFs for 12 months or less.

Over the course of its ETF research among institutions around the world, Greenwich Associates has documented a clear pattern: Institutions usually first experiment with a small investment in equity ETFs. In these initial investments, institutions often find ETFs to be simple and effective tools for obtaining needed investment exposures. They then begin expanding their use of ETFs to additional functions within their equity portfolios and potentially to new asset categories.

### INSTITUTIONAL USE OF BOND ETFs, BY SECTOR

<table>
<thead>
<tr>
<th>Sector</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate (total market)</td>
<td>64%</td>
</tr>
<tr>
<td>Investment-grade corporate credit</td>
<td>74%</td>
</tr>
<tr>
<td>High yield</td>
<td>73%</td>
</tr>
<tr>
<td>Treasuries</td>
<td>53%</td>
</tr>
<tr>
<td>Treasury inflation protected securities (TIPS)</td>
<td>41%</td>
</tr>
<tr>
<td>Emerging markets</td>
<td>38%</td>
</tr>
<tr>
<td>Municipals</td>
<td>34%</td>
</tr>
<tr>
<td>International developed</td>
<td>33%</td>
</tr>
<tr>
<td>Securitized (ABS, MBS, or CMBS)</td>
<td>31%</td>
</tr>
</tbody>
</table>

Note: Based on 88 respondents.
Source: Greenwich Associates 2016 U.S. Bond ETF Study

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1 Source: BlackRock Global Business Intelligence, Bloomberg, as of 6/30/16.
Among the institutional ETF users participating in the Greenwich Associates 2015 U.S. ETF Study, 95% used equity ETFs. Meanwhile, after several years of gradual but steady growth, use of bond ETFs has now reached approximately two-thirds.

Investors’ need for liquidity has played a major role in attracting these new institutional investors. Approximately 85% of ETF users in this year’s study name liquidity and low trading costs as main reasons for investing in bond ETFs. In recent months, ETF usage rates have climbed to their highest levels in sectors experiencing liquidity challenges. For example, while 53% of the institutions in the study use ETFs in Treasuries, usage jumps to nearly three-quarters in high yield and investment-grade corporate credit. As one investment manager explains, “We are using ETFs as a liquidity buffer.”

ETFs’ emerging role as a potential liquidity enhancer is demonstrated by a sharp year-over-year increase in the share of institutions using ETFs in overlay strategies or liquidity sleeves that are designed to enhance liquidity and flexibility and reduce implementation and trading costs. Forty-two percent of the institutions in the 2016 study are using ETFs in these applications, up from just a third in 2015.

**WHY DO YOU INVEST IN BOND ETFs?**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquidity—low trading costs</td>
<td>84%</td>
</tr>
<tr>
<td>Easy to use—operationally simple</td>
<td>84%</td>
</tr>
<tr>
<td>Quick access—speed of execution</td>
<td>81%</td>
</tr>
<tr>
<td>Single-trade diversification</td>
<td>59%</td>
</tr>
<tr>
<td>Avoid need for single security analysis</td>
<td>45%</td>
</tr>
<tr>
<td>Other</td>
<td>17%</td>
</tr>
</tbody>
</table>

Note: Based on 96 respondents. Source: Greenwich Associates 2016 U.S. Bond ETF Study

**INSTITUTIONS ARE TRADING ETFs IN LARGER SIZES**

Ninety-five percent of institutions that have invested in a bond ETF were satisfied with the trading experience, and 99% say they would trade an ETF again. These positive experiences help explain why institutions tend to expand their use of ETFs throughout their investment portfolios after making an initial investment.

Institutions satisfied with past trading experiences also have another tendency: They tend to increase the size of subsequent trades. The 2016 study results show that institutions are indeed stepping up to execute larger ETF trades. Half the institutions participating in the Greenwich Associates 2015 U.S. Bond ETF Study said the biggest ETF trade they had completed was $10 million or less, and only 19% reported doing a trade of $50 million or more. In 2016, the share of institutions reporting trades in excess of $50 million jumped to 31%, and the share at less than $10 million dropped to just 36%.

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**TRADE SIZE AND EXPERIENCE USING BOND ETFs**

<table>
<thead>
<tr>
<th>Trade Size</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0–$5M</td>
<td>25%</td>
</tr>
<tr>
<td>$6–$10M</td>
<td>11%</td>
</tr>
<tr>
<td>$11–$50M</td>
<td>33%</td>
</tr>
<tr>
<td>$51–$100M</td>
<td>18%</td>
</tr>
<tr>
<td>More than $100M</td>
<td>13%</td>
</tr>
</tbody>
</table>

**Were you satisfied with trading experience?**

- Yes: 95%
- No: 5%

**Would you trade a bond ETF again?**

- Yes: 99%
- No: 1%

Note: 1 Based on 87 respondents. 2 Based on 88 respondents. 3 Based on 88 respondents. Source: Greenwich Associates 2016 U.S. Bond ETF Study
ETF users cite a range of reasons beyond liquidity for investing in the funds, with ease of use, operational simplicity, quick access and speed of execution topping the list.

These attributes are not only attracting new institutional users, they are also prompting existing investors to find new applications and broaden their own use of bond ETFs. Although a quarter of the investment managers participating in the study allocate more than half of overall fixed-income assets to ETFs (with most of these firms running multi-asset funds), ETFs as a whole remain a relatively small component of institutional portfolios.

Most ETF users allocate less than 10% of total fixed-income assets to ETFs. However, 68% of institutions in the study say they have increased their use of ETFs over the past three years. That share tops 80% among insurance companies. Following those increases, half the institutions in the study now invest in three or more ETFs.

Half the ETF users in the study say they now employ ETFs throughout their fixed-income portfolios for both broad investment exposures such as aggregate strategies and narrow exposures like high yield. As in past years, institutions are using ETFs most frequently to obtain passive exposures to the core component of their fixed-income portfolios and to make tactical portfolio adjustments. However, institutions are employing the funds for a host of additional applications ranging from managing cash positions and rebalancing to transitioning between external investment managers.

This steady expansion to new applications has helped keep ETFs on a solid growth trajectory in terms of both usage and allocations.
Institutions are evaluating bond ETFs as alternatives to credit derivatives. Following the global financial crisis, regulators created an entirely new regulatory regime for derivatives involving central clearing and other major compliance and reporting requirements. Now that the legislation has begun to take shape, 56% of study participants believe these new rules will make it harder to trade and hold derivatives. As a consequence, growing numbers of investors are now examining the potential of bond ETFs as a less cumbersome alternative from a regulatory and compliance standpoint.

Almost 40% of the institutions in the 2016 study use derivatives, such as credit defaults swaps, treasury futures and total-return swaps, to gain fixed-income exposures. Of these, 88% say they have considered or would consider using bond ETFs as an alternative to derivatives. Seventeen percent have already replaced a derivatives position with bond ETFs in the last year. Almost a quarter of institutions that have replaced derivatives with bond ETFs say they did so to avoid complex trading and compliance issues.

Although derivatives are commonly used by many fixed-income investors, institutions say ETFs can represent an improvement over derivatives in several important ways. Approximately 70% of institutions that have replaced a derivatives position with a bond ETF say they did so to reduce tracking differences versus underlying exposures. Sixty-two percent say the switch from derivatives to ETFs reduced operational complexity, and 46% said it reduced the trading and ongoing costs associated with maintaining the derivatives position.

Over the long term, bond ETFs may be increasingly used as alternatives to many credit derivatives that are used to attain market exposure.

### Institutions Consider Dropping Derivatives for ETFs

<table>
<thead>
<tr>
<th>Use derivatives to gain fixed-income exposure?</th>
<th>If yes, would you consider using fixed-income ETFs as an alternative?</th>
</tr>
</thead>
<tbody>
<tr>
<td>No 62%</td>
<td>Yes 38%</td>
</tr>
<tr>
<td>Yes 38%</td>
<td>Yes 88%</td>
</tr>
<tr>
<td>No 12%</td>
<td></td>
</tr>
</tbody>
</table>

Note: Based on 100 respondents. Source: Greenwich Associates 2016 U.S. Bond ETF Study

### Reasons for Replacing Derivatives Position with Bond ETFs in Past Year

**Replaced derivative positions with bond ETFs?**

- No 83%
- Yes 17%

**If yes, for what reason?**

- Tracking differences vs. underlying exposure 69%
- Operational complexity 62%
- Trading or ongoing costs of derivatives* 46%
- Regulatory or compliance constraints 23%
- Other 15%

Note: Based on 86 respondents. Source: Greenwich Associates 2016 U.S. Bond ETF Study
Concerns About ETFs Are Abating as Familiarity Grows

The fact that roughly two-thirds of the institutional ETF users participating in the Greenwich Associates 2016 U.S. Bond ETF Study invest in bond ETFs shows how quickly the funds have spread through the institutional channel since they began to be broadly adopted in 2008. The pace of that proliferation could actually accelerate in coming years, as many of the factors that had impeded or even prevented institutions from investing in bond ETFs break down, clearing the path for more widespread usage.

The single biggest factor preventing institutions from increasing their use of bond ETFs is internal investment guidelines that restrict or prohibit investment. Over two-thirds of the institutions participating in the 2014 U.S. Bond ETF study said their internal guidelines limit ETF investments. By 2016, that share had dropped to just 26%.

Concerns About ETFs Are Abating as Familiarity Grows

Three-quarters of the institutions participating in the Greenwich Associates 2016 Bond ETF Study name iShares/BlackRock as their preferred provider of bond ETFs.

The institutions say their choice of a particular ETF or ETF provider is driven first by liquidity considerations and next by an assessment of which fund will best meet their needs for a specific benchmark exposure.

Liquidity is by far the most valued characteristic. Eighty-four percent of the institutions ranked liquidity as a “very important” factor in picking an ETF. “Specific benchmark exposure” is rated as “very important” by 62%. After these two criteria, institutions assess fees and trading volume, followed by the fund’s AUM and tracking error. In addition, institutions place considerable stock in the overall reputation of ETF providers, with 91% of study participants ranking provider reputation as “somewhat important” or “very important” in selecting a specific ETF.

Based in large part on these factors, 75% of the institutions participating in the study name iShares/BlackRock as their preferred provider of bond ETFs. That share is up meaningfully from the 57% of study participants that selected the firm as their provider of choice last year. Thirteen percent of the institutions in the 2016 study name Vanguard as their preferred provider of ETFs.

**iSHARES/BLACKROCK STRENGTHENS POSITION AS INSTITUTIONS’ PREFERRED BOND ETF PROVIDER**

<table>
<thead>
<tr>
<th>Preferred Bond ETF Providers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>iShares/Blackrock</td>
<td>75%</td>
</tr>
<tr>
<td>Vanguard</td>
<td>13%</td>
</tr>
<tr>
<td>Other</td>
<td>12%</td>
</tr>
</tbody>
</table>

Note: “Other” includes PIMCO, PowerShares, State Street/SPDRs, Van Eck, and others. Based on 87 respondents. Source: Greenwich Associates 2016 U.S. Bond ETF Study.
That decline reflects the recent evolution of bond ETFs into a standard and accepted investment tool for institutions. In this environment, a number of institutions are eager to revisit broad investment guidelines and allocation limits to give portfolio managers more leeway.

Institutions cite several other specific factors related to ETF structure and trading that they say limit their use, and slightly less than a quarter say they hear similar concerns from clients or investment committees. Forty-seven percent of the institutions report high levels of concern about “an ETF’s ability to handle large redemptions,” and the same share expresses that level of concern about the “liquidity in an ETF’s underlying bonds.” Large majorities of the institutions say they remain concerned about “premiums or discounts to net asset value” and “ETFs with low trading volumes.” Twenty-three percent of participants state explicitly that concerns about “low trading volumes or assets” prevent them from increasing their use of ETFs.

Some of these concerns represent real risks that investors must guard against. Others, however, are specific to the particular ETF that is being evaluated. For example, concerns over low trading volumes can be a good reason to pass on a particular ETF if its underlying bonds are also illiquid and the ETF provider does not have the appropriate risk measures in place.

However, looking at the category more broadly, liquidity in bond ETFs has steadily increased. Trading volumes represent approximately $7 billion a day, with much of the share in trading volume in a subset of very large and liquid funds.¹ Rather than shying away from the entire category of bond ETFs due to liquidity fears, many institutions are now becoming more discerning among the variety of funds available in the market.

“Our knowledge of ETFs is not fully developed. We still need more education, however this has improved over the past few years.” – Insurance company

¹ Bloomberg, as of June 30, 2016
Conclusion: More Growth Ahead

The findings from the Greenwich Associates 2016 U.S. Bond ETF Study highlight five powerful forces that are driving growth of institutional ETF usage:

- It is getting harder for institutional investors to execute fixed-income trades. The pullback by major fixed-income dealers from their traditional role as providers of broad market liquidity has forced institutions to change their trading behavior. While liquidity has decreased within the cash bond market, ETF liquidity has been increasing dramatically, prompting many institutional investors to adopt ETFs to replace individual bonds.

- Institutional investors are adapting their investment processes in order to make significant changes to their portfolios. As investors alter sector allocations, adjust duration, increase or decrease risk, and implement other moves, they are using ETFs to add flexibility to the implementation process.

- Institutional bond ETF use, while accelerating, is still in the early stage of the adoption curve. As new users experiment with the funds, it is likely that they will follow their peers and begin to integrate ETFs more deeply into their management process.

- Institutional investors increasingly view ETFs as an effective and cost-effective alternative to derivatives, and institutions are using ETFs as a replacement for derivatives positions. This trend could accelerate given institutions’ concerns that new regulations could make derivatives positions more complex to actively trade.

- Concerns over bond ETFs are abating. Institutions are revising investment guidelines to permit greater use of ETFs. As institutions gain experience and familiarity with ETFs, many are becoming more discerning when choosing an ETF to meet a specific investment objective.

As a result of these trends, one-third of the institutions participating in the 2016 U.S. Bond ETF Study plan to increase their use of bond ETFs in the coming year. Of these, 30% expect to boost ETF usage by 10% or more. These results suggest institutional use of bond ETFs will remain on a strong growth trajectory in years to come.

33% OF INSTITUTIONS PLAN TO INCREASE USAGE OF ETFs

<table>
<thead>
<tr>
<th>Stay the same</th>
<th>Increase</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>64%</td>
<td>33%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Note: Based on 95 respondents. Source: Greenwich Associates 2016 U.S. Bond ETF Study

Cover Photo: © iStockphoto/Huyangshu

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Investing involves risk, including possible loss of principal.

Fixed income risks include interest-rate and credit risk. Typically, when interest rates rise, there is a corresponding decline in bond values. Credit risk refers to the possibility that the bond issuer will not be able to make principal and interest payments. Non-investment-grade debt securities (high-yield/junk bonds) may be subject to greater market fluctuations, risk of default or loss of income and principal than higher-rated securities.

There can be no assurance that an active trading market for shares of an ETF will develop or be maintained.

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