

 ETF Insights

From Evolution
to Revolution:
The Power of Active
Fixed Income ETFs

J.P.Morgan
ASSET MANAGEMENT

Authors

Jon Maier

Chief ETF Strategist

Ryan Szakacs

Global Head of ETF Capital Markets

Shayan Hussain, CFA

Head of U.S. Investment Specialists,
Global Fixed Income,
Currency & Commodities Group

Jemma Clee

Head of International Investment Specialists,
Global Fixed Income,
Currency & Commodities Group

Kay Herr, CFA

U.S. Chief Investment Officer,
Global Fixed Income,
Currency & Commodities Group

Iain Stealey, CFA

International Chief Investment Officer,
Global Fixed Income,
Currency & Commodities Group

Bryan Lysiak

Global Head of Trading,
Global Fixed Income,
Currency & Commodities Group

Mark Willauer, CFA

Global Head of Systematic Portfolio
Management and Implementation,
Global Fixed Income,
Currency & Commodities Group

Key takeaways

1 Fixed income is made for active management

The fixed income market is large, complex and inefficient, and it requires investors to account for a multitude of factors, including interest rate sensitivity and credit risk. Active managers can navigate these challenges for investors and potentially deliver higher yields and better risk management compared to well-known benchmarks.

2 ETFs bring structural benefits to fixed income

The ETF structure was one of the most consequential developments in fixed income investing over the past two decades because it provides investors with a liquid investment vehicle in a market not always known for its liquidity. The ETF structure also offers cost efficiencies that mutual funds and other vehicles may lack.

3 The future of fixed income ETFs is here, and it's active

Without the constraint of replicating an index, active fixed income ETFs offer portfolio managers the flexibility to tailor and optimise investments. This will be important in today's higher interest environment, providing active managers with greater ability to deliver income, diversification and stability in fixed income.



In recent decades, the fixed income market has undergone significant transformation in terms of its size, use cases, and execution methods, driven by a series of key innovations. One transformative innovation was the introduction of an increasingly diverse suite of exchange-traded funds (ETFs) and the liquidity that they have contributed to the global fixed income market. Among the ETF type gaining market share is actively managed fixed income ETFs. Active management allows portfolio managers the opportunity to find market inefficiencies and access segments not typically available to portfolio managers of passive strategies.

Fixed income ETFs are a large and growing market

The widespread electrification of the bond market in the early 2000s, combined with the Securities and Exchange Commission's (SEC) Rule 6c-11 in 2019—commonly known as the ETF Rule, accelerated the modernisation of bond trading and paved the way for new debt instruments. Initially, fixed income ETFs emerged as passive investment vehicles, serving as low-cost building blocks for asset allocators and model managers to construct diversified portfolios. Over time, innovation has permeated all ETF categories, including fixed income, leading to the development of more sophisticated products. Active ETFs are increasingly shaping the next wave of industry growth.

Globally, 85% of fixed income assets in mutual funds are actively managed but only 17% of fixed income ETF assets are actively managed. This gap indicates meaningful potential for growth in active strategies within the fixed income ETF space. This transition to active management is already happening, with approximately 33% of fixed income ETF flows globally and about 40% of the flows in the U.S. through October, having gone into active strategies.

By 2030, we forecast the global fixed income ETF market to grow to \$6 trillion, currently \$3.2 trillion, and the active fixed income ETF market to grow to \$1.7 trillion, currently \$528 billion, with the U.S. market capturing a significant portion of that growth. The Federal Reserve's (Fed) rate cutting cycle and steepening of the US Treasury yield curve is one reason why the current environment is conducive for further growth. With over \$7 trillion currently held in money market funds, investors are likely to experience lower yields on their cash as the Fed continues to cut interest rates, prompting a shift toward fixed income markets in search of more attractive yield.

Global fixed income ETF assets have more than doubled in the past five years to over \$3 trillion

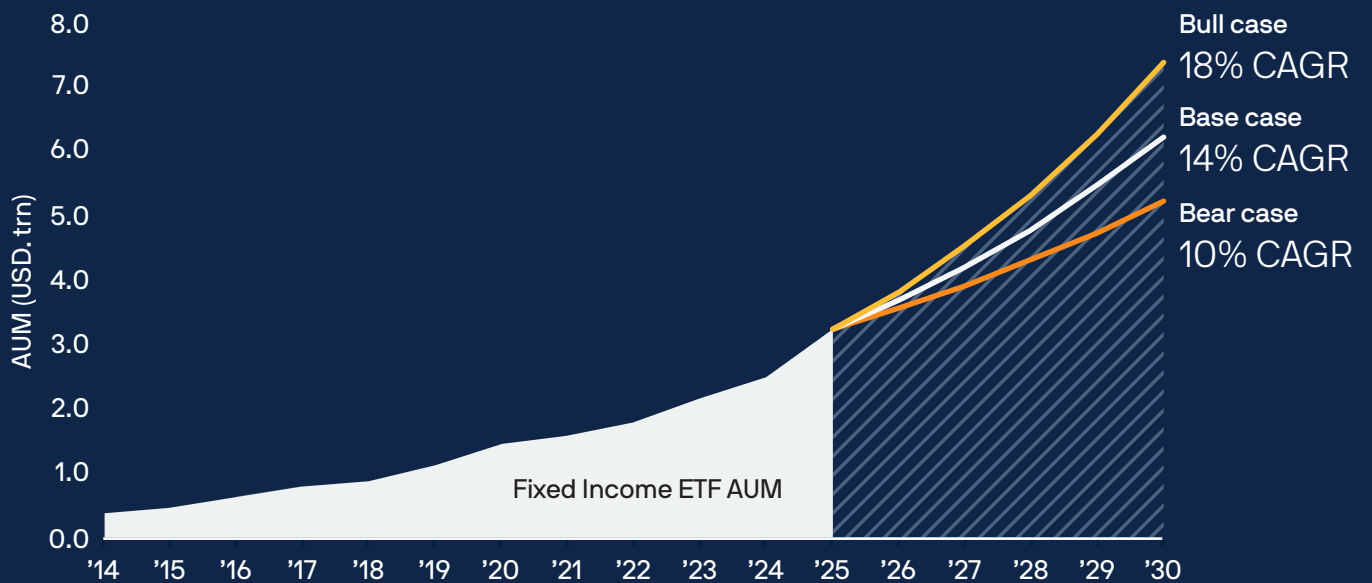
Exhibit 1: U.S. and rest of the world AUM growth by calendar year



Source: Bloomberg, J.P. Morgan Asset Management; data as of October 31, 2025.

Global fixed income ETF assets are projected to grow to more than \$6 trillion in 2030

Exhibit 2: Growth projection of global fixed income ETF AUM



Source: Bloomberg, J.P. Morgan Asset Management; data as of October 31, 2025.



Why active fixed income

The fixed income market, characterised by a wide range of debt issuances differing in maturity, quality and type, is vast, intricate and contains structural inefficiencies.

The global fixed income market is about \$145 trillion in size, encompassing over 3 million unique securities. In comparison, the \$125 trillion global equity market includes only 55,000 securities.

When investing in fixed income, investors must account for a host of factors, including interest rate sensitivity, credit risk, structural market inefficiencies, concentrations in portfolios to the most indebted issuers, and liquidity. Whereas passive fixed income strategies must absorb these challenges, active managers have the freedom to navigate them. This approach has proven effective, with 80% of core and core plus managers outperforming the Bloomberg U.S. Aggregate Index over the past five years.

Global fixed income market

\$145 trillion

3M

unique securities

vs.

Global equity market

\$125 trillion

55K

securities

Source: Left: SIFMA as of July 28, 2025. Right: World Federation of Exchanges, as of July 2025.

Fixed income investing presents challenges

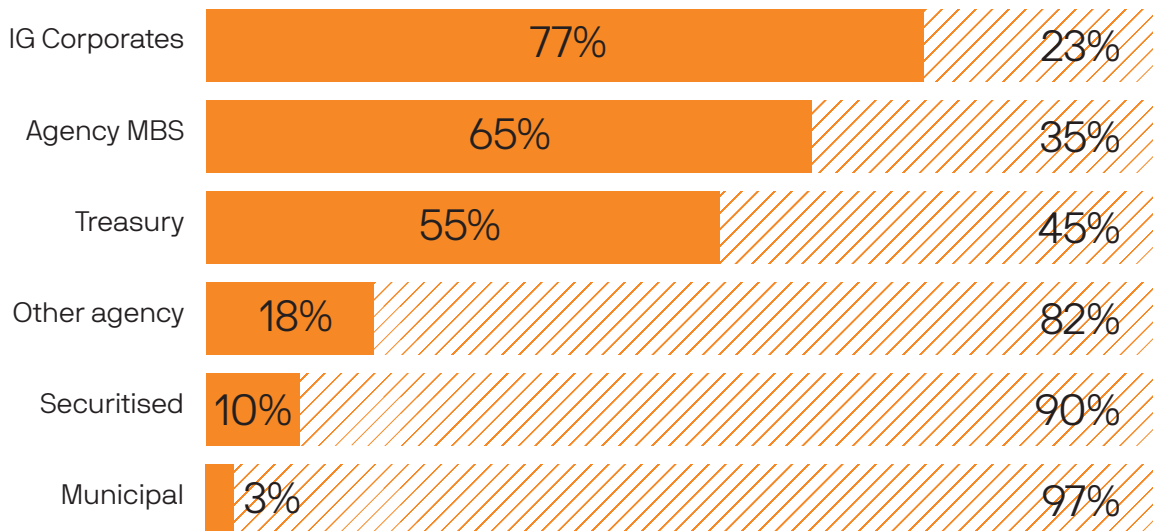
Achieving meaningful diversification is difficult

Purchasing individual bonds for a portfolio demands considerable time, expertise, and capital. Additionally, replicating a benchmark typically involves sampling, which can result in differences from the benchmark's actual holdings. Consequently, even passive ETF strategies incorporate an active element, as the selection of securities is strategically optimised relative to the benchmark.

Another obstacle to diversification is that fixed income benchmarks are becoming outdated due to their rule-based construction. The Bloomberg U.S. Aggregate Index is often viewed as representing the U.S. bond market, yet it excludes about 49% of the \$58 trillion U.S. public bond market (**Exhibit 3**). Certain asset classes, such as high yield corporates and non-agency mortgage-backed securities, are not included at all, while others, such as asset-backed and agency securities, have only limited exposure within the index. A large part of the growing securitised market is completely excluded.

Nearly half of the U.S. bond market is not represented in the Bloomberg U.S. Aggregate Index

Exhibit 3: Segments of the \$58 trillion U.S. bond market

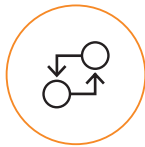


Source: Bank of America, Bloomberg, SIFMA, J.P. Morgan Asset Management; data as of June 30, 2025. The investable universe for Treasuries, municipals and other agency securities is sourced from SIFMA and reflect par value outstanding. The investable universe for agency MBS, CMBS, CMOs, CLOs, CDOs, ABS, investment grade corporates and high yield corporates is sourced from Bank of America and reflect market value outstanding. Treasuries include outstanding bills, bonds and notes. Agency MBS includes MBS, CMBS and CMOs. Securitised includes ABS, CLOs, CDOs, non-agency CMBS and non-agency RMBS. Sector classifications for constituents in the Bloomberg U.S. Aggregate are based on classifications provided by Bloomberg.

Active management provides exposure to skill, flexibility and options

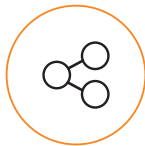
Research is a game changer

Active managers can be selective in the debt issuers that they opt to hold and adjust top-down positioning, including sector rotation, duration exposures and overall portfolio risk positions based on changing market conditions. They can analyse correlations among asset classes and interest rate sensitivity of different sectors. To assess the merits of one sector over another and compare opportunities across different markets, active managers leverage a research framework that combines:



Fundamental analysis

Macroeconomic data, such as growth and inflation, and corporate health figures, such as default rates, earnings, and leverage metrics



Quantitative analysis

Spreads, yields and other measures that determine the extent to which a sector or security is rich or cheap—on an absolute basis, versus history and relative to other sectors



Technical analysis

Supply and demand dynamics (issuance, maturities, and flows), and investor positioning, sentiment, and liquidity

Expanded opportunity sets

Instead of strictly following an index, active managers can invest in a more expansive universe to find more opportunities to generate alpha.

Managers have the flexibility to go and find meaningful yield in corners of the fixed income market that are not accessible to everyday investors, such as the securitised and high yields.

Securitised



Agency MBS

- + Agency mortgage-backed securities (MBS) is the largest segment in the securitised market.
- + Active managers can select specific collateral profiles and agency collateralised mortgage obligations to optimise portfolio convexity and duration stability.
- + To assess whether bonds or bond attributes are priced below their intrinsic value requires detailed analysis.

Securitized credit

- + The securitized credit subset carries credit risk, requiring a dedicated research team to underwrite each deal. This can lead to a material spread advantage over comparable credit quality corporate debt.
- + Debt outstanding in this market totals over \$3 trillion, but nearly 90% of it is not represented in the Bloomberg U.S. Aggregate Index.
- + This market is diverse, offering exposure to residential and commercial mortgages and business and consumer loans.

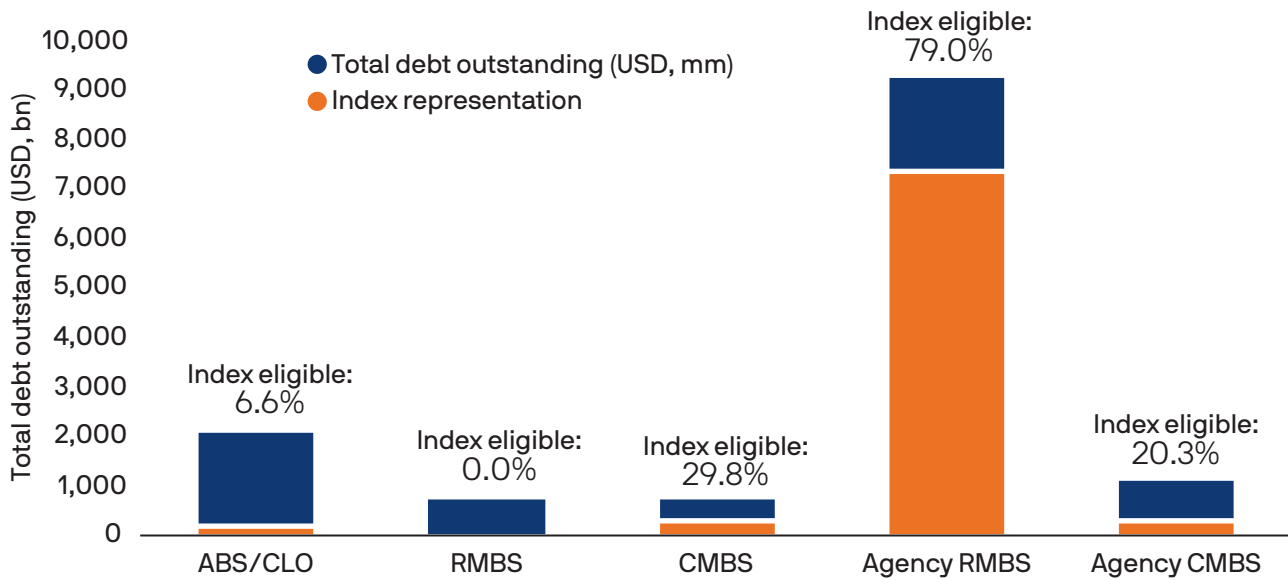
High Yield



- + The asymmetrical return profile of high yield bonds makes active management crucial.
- + CCC bonds can be volatile, and passive ownership may not add to long-term performance. Defaults are a risk.
- + CCC bonds account for about 15% of the high yield market but they can be volatile, and passive ownership may not add to long-term performance.
- + Active managers can avoid defaults and achieve higher recoveries through strong security selection and expertise in restructurings.
- + Passive exposure to highly levered companies in secularly challenged businesses can result in credit loss, whereas active managers can navigate these risks.

The U.S. securitised market is a \$13.8 trillion market, but much of it is not eligible for the Bloomberg U.S. Aggregate Index

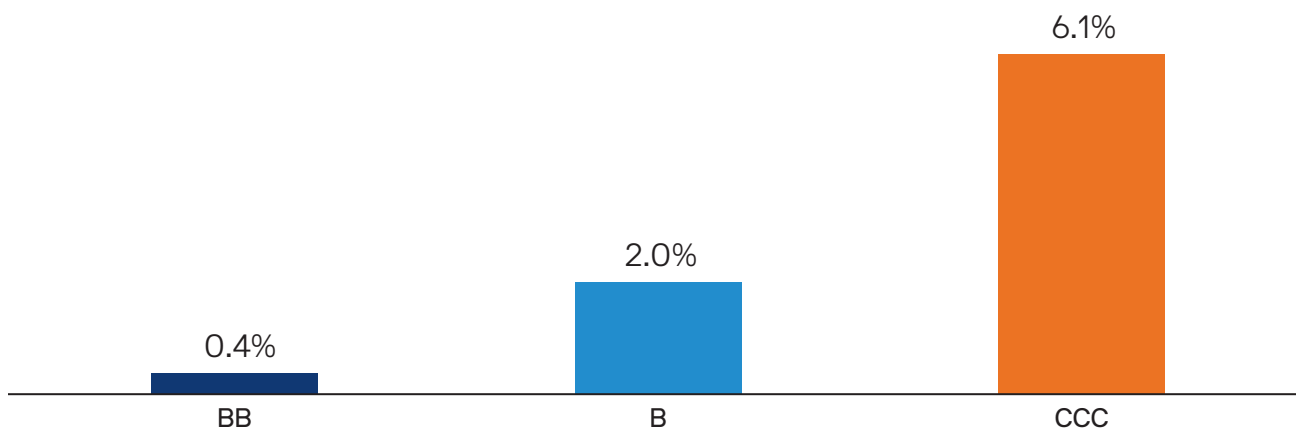
Exhibit 4: Total U.S. securitised debt outstanding versus index representation



Source: J.P. Morgan Asset Management, BAML, Bloomberg, SIFMA; data as of June 30, 2025. Debt outstanding reported in billions (\$bn); index eligibility is relative to the Bloomberg US Aggregate Index.

Active management helps investors respond to the swings and default risks associated with CCC-rated bonds in the high yield sector

Exhibit 5: Default rates by rating — 12 months prior to default (23-year average)



JPMorganChase Commercial & Investment Bank (CIB). All data as of December 31, 2024.

Proof is in performance and active managers have outperformed

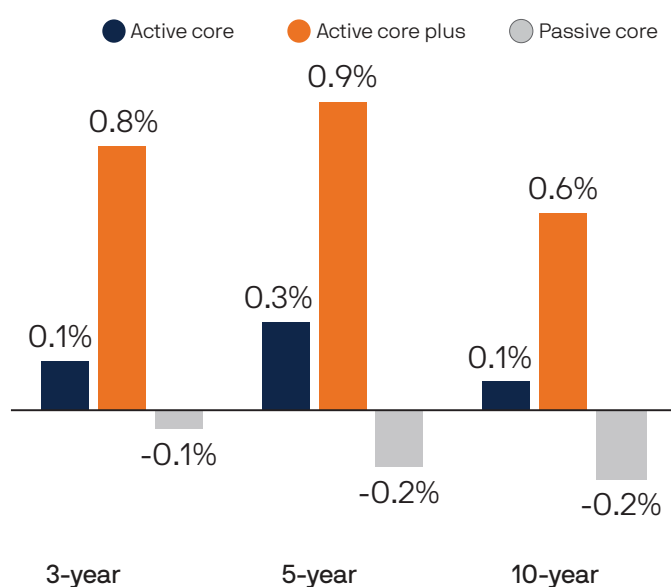
Over trailing 3-, 5-, and 10-year periods, active core plus and active core managers deliver average annualised net of fee returns that exceed those of the Bloomberg U.S. Aggregate Index. However, manager selection is vital, given the wide dispersion in returns between the

top- and bottom-performers. Past performance is not indicative of future results, but identifying managers with well-established research philosophies, processes, and experience across market cycles can increase the chances of positive outcomes.

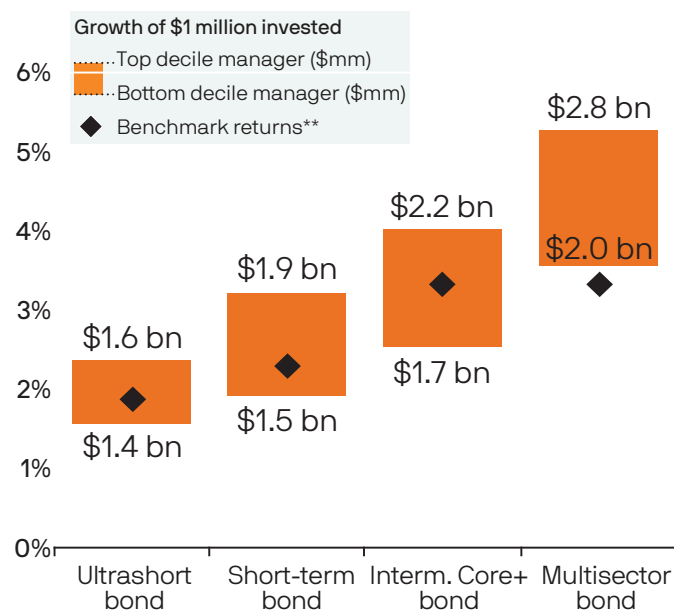
Active fixed income managers typically outperform passive strategies, though there is a wide dispersion of returns between top and bottom managers

Exhibit 6: Average active performance versus the Bloomberg U.S. Aggregate Index and range of manager returns

6A: The active advantage — Average excess annualised returns



6B: Manager selection matters — 20-year manager performance dispersion and growth of initial \$1 million investment



Source: Morningstar, J.P. Morgan Asset Management analysis; Guide to ETFs – U.S.; data as of September 30, 2025. Charts reflect the most recently available data as of September 30, 2025. Analysis includes mutual funds and ETFs in the Morningstar intermediate core and intermediate core plus categories with a primary prospectus benchmark of the Bloomberg U.S. Aggregate Bond Index. Only includes oldest share class. Past performance is not indicative of future returns. Core bonds typically hold less than 5% in below investment grade debt.



Why ETFs for active fixed income

ETFs revolutionised fixed income markets because they provide a quick, simple and reliable way to access bond markets. While ETFs represent less than 2.5% of the total \$145 trillion global bond market, they are an emerging growth story with significant momentum. They have an impressive track record of adding liquidity, particularly during times of market stress, a point that increasingly resonates with investors. The benefits we discuss below collectively provide flexibility, positioning ETFs as a modern structure that resolves many issues inherent in the mutual fund structure. Stemming from their liquidity and transparency, ETFs offer several advantages to investors, portfolio managers and the overall market.

Benefits of the ETF structure

The externalisation of trading costs

ETFs and mutual funds aggregate assets from many investors, providing access to a diversified portfolio that may not be achievable through individual investments or SMAs. While ETFs and mutual funds offer benefits of scale, an important distinction between the two is that the transaction costs for buying and selling mutual funds are borne by all shareholders. Conversely, ETF transaction costs are borne only by the individual investor entering or exiting the fund.



ETFs provide additional tools for our portfolio managers to more effectively invest in the best interests of our clients.

Bob Michele, CFA
Head of Global Fixed Income,
Currency & Commodities

For example, when an investor places an order to purchase shares of a mutual fund, cash is delivered into the fund to be invested across any number of securities in the portfolio. Transaction costs incurred from investing this cash reduces the end-of-day net asset value (NAV). On the other hand, ETF creations received in-kind or via cash with a fee assessed to cover the cost to purchase underlying securities do not negatively affect the fund's NAV. Therefore, when an investor buys shares of an ETF, they do so in the secondary market at prices that already reflect these transaction costs. This structure isolates any realised cost to the shareholder buying or selling the ETF and insulates the NAV from other shareholder's trading activity.

Lower all-in costs than mutual funds

As trading volume increases, bid-ask spreads often tighten, leading to lower transaction costs for investors. **Exhibit 7** highlights the top 10 U.S. high yield ETFs within Morningstar's High Yield category and approximates the cost investors pay to enter and exit an ETF compared to the costs associated with buying and selling the tradable universe of underlying bonds. ETFs delivered an average spread of 4.0 basis points versus 19 basis points for the underlying high yield securities. During periods of market stress, ETF spreads have been significantly tighter than basket spreads, including during the COVID-19 pandemic. This trend was especially evident in less liquid fixed income segments, such as high yield bonds. Trading volume in ETFs increased during these periods, while it declined in the high yield bond market. In addition to spread savings, ETFs generally offer lower total expense ratios than mutual funds.

ETF creations received in-kind or via cash with a fee assessed to cover the cost to purchase underlying securities do not negatively affect the fund's NAV.

Greater liquidity, especially during market stress

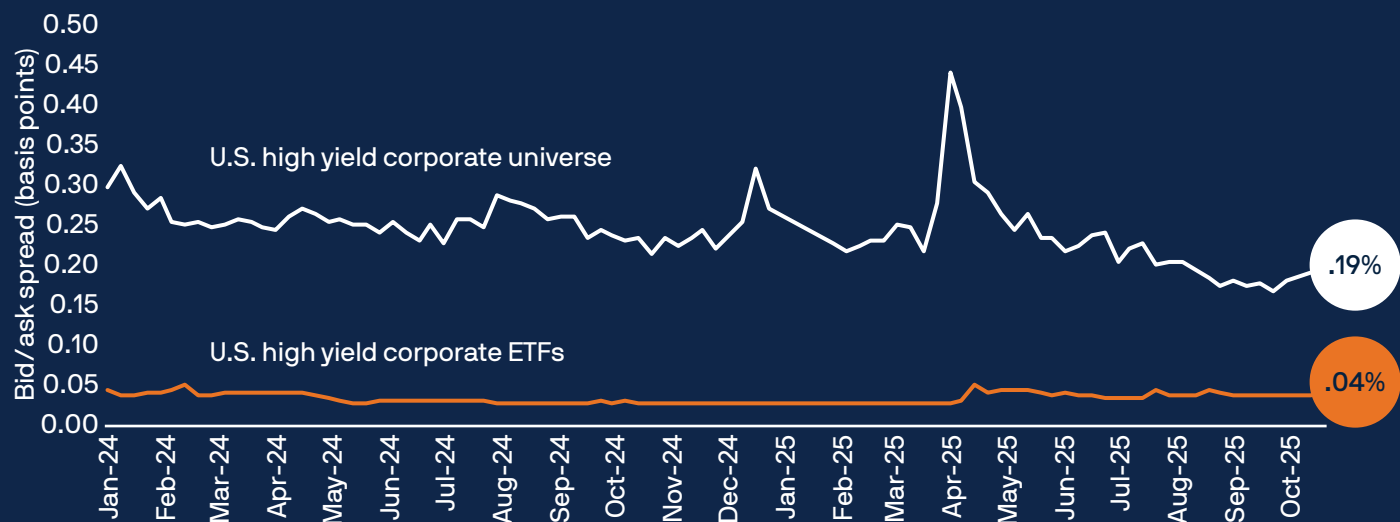
ETFs trade on exchanges, where investors can buy or sell shares at readily available prices throughout the day. The exchanges serve as centralised markets to match trading partners efficiently and transparently, and every dollar traded that does not flow into the primary market is considered additional liquidity. In fact, when looking at the top 10 U.S. high yield ETFs, approximately 13% of their volume led to primary market flows.

Secondary markets can also facilitate large trades. Where robust secondary volumes exist with narrow bid-ask spreads, large trades can be executed at minimal costs. When additional liquidity is needed, market makers can tap the primary market to create or redeem shares, enabling them to offer more liquidity than an ETF's average daily volume.

When looking more closely at liquidity across U.S. high yield bonds and ETFs during various periods of stress, we find that more volume was transacted in the secondary market than in the ETF's underlying securities. Despite this relationship, ETF trading in the underlying bonds still represents less than 5% of trading in the U.S. high yield bond market, debunking a popular myth that ETF volume materially impacts its underlying securities market. In addition, during periods of inflation concerns in 2022 and 2023, secondary market trading of the U.S. high yield ETF market represented nearly 50% of the total U.S. high yield trading volume during this period, despite primary volume from these ETFs representing less than 10% of the total U.S. high yield market volume.

High yield bond ETFs have tighter spreads than underlying high yield bonds

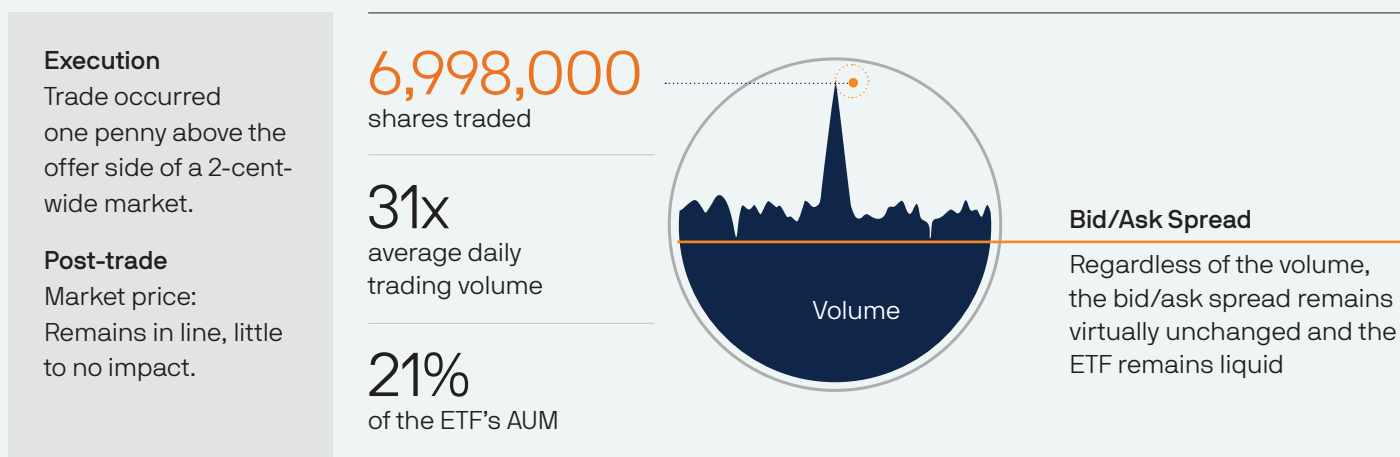
Exhibit 7: HY bond universe vs. HY Bond ETFs – bid/ask spreads



Source: MarketAxess, Bloomberg, J.P. Morgan Asset Management. High yield bond ETFs are represented by the top 10 high yield ETFs by AUM in the high yield Morningstar category. Data is as of 10/31/2025.

Secondary market liquidity facilitates large trades with minimal share price impact

Exhibit 8: Historical intraday trade execution of 7 million shares of Active Core Plus ETF



Source: Bloomberg, J.P. Morgan Asset Management; as of November 2023. The manager seeks to achieve the stated objectives. There can be no guarantee the objectives will be met.

Price discovery

Premiums and discounts are a normal occurrence across all ETFs. In fixed income ETFs, premiums are often more prevalent as most issuers mark their NAVs at the bid side of the underlying bonds. While other factors can lead to premiums such as investor positioning and underlying transaction costs, the fact that a premium exists provides valuable intelligence about where the bonds in the portfolio are trading. This is referred to as price discovery.

This intraday price discovery brings efficiencies, which are often more noticeable in less liquid sectors of the fixed income market and during times of market stress. During these periods, an ETF may trade at an elevated premium or discount level, but this market price is often quicker to react and a more accurate reflection of the underlying bond values than its NAV.

Nasdaq's report, "Bond Markets vs. Bond ETFs During COVID," highlights a Bank for International Settlements (BIS) study that found ETF NAVs become "stale" during market stress. The study suggests that ETFs, with their continuous trading and liquidity, absorb information faster than NAVs. Instead of indicating problems with ETFs, the price divergence shows that ETFs are superior for price discovery, while bond market prices are outdated and less accurate (**Exhibit 10**).

Portfolio management

Secondary markets can serve as an efficient mechanism for alleviating turnover in the underlying bond portfolio. Less turnover means fewer trading costs that can eat into a fund performance. In addition, portfolio managers do not have to continue to source similar bonds, especially as prices change. Based on trading data for the high yield funds mentioned in Exhibit 7, from a nine-month period ending September 2024, only approximately \$1.30 out of every \$10 transacted on exchange resulted in a flow to the primary market in the form of a creation or redemption. This means that 13% of investor trading activity in the ETF wrapper led to trading by the portfolio manager. This percentage is often reduced further during market stress and prevents portfolio managers from having to trade at inopportune times.

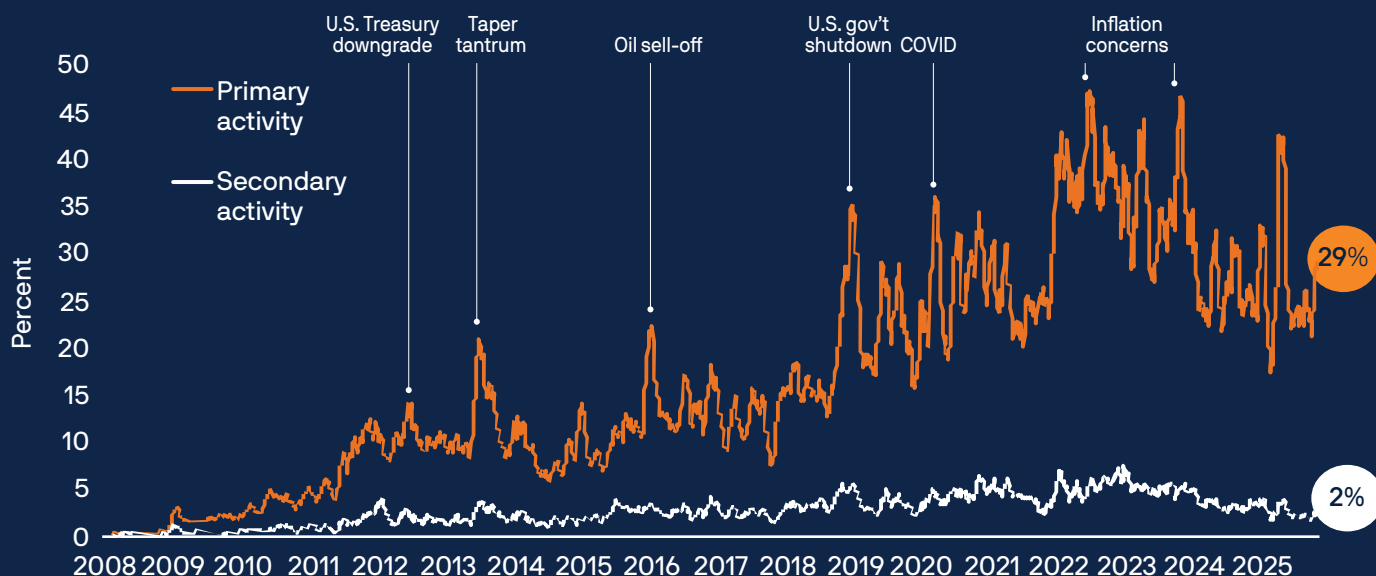
For products that utilise the in-kind mechanism, portfolio managers can manage the underlying portfolio's composition by accepting the delivery of bonds for creations and distributing certain bonds during redemptions. These transactions reduce the portion of the flow portfolio managers would otherwise need to trade, increasing the size of a flow that they can accept into or deliver out of the fund without incurring higher transaction costs.

Daily transparency and access

Most ETFs disclose their holdings daily, whereas mutual funds typically disclose holdings monthly or quarterly. Additionally, mutual funds have up to 60 days after the end of a quarter to publish their holdings, which can result in a delay of up to two months for investors to see the fund's allocation. Daily disclosure of ETF holdings provides a clear view of the underlying securities and enables investors to easily perform portfolio attribution to analyse their investment's performance. SMAs may provide similar daily transparency, but they often require higher investment minimums and possibly larger management fees. ETFs simply require access to a brokerage account and enough funds in their account to purchase one share.

During market stress, transaction volumes tend to be higher in the secondary market than in high yield bond ETFs' underlying securities

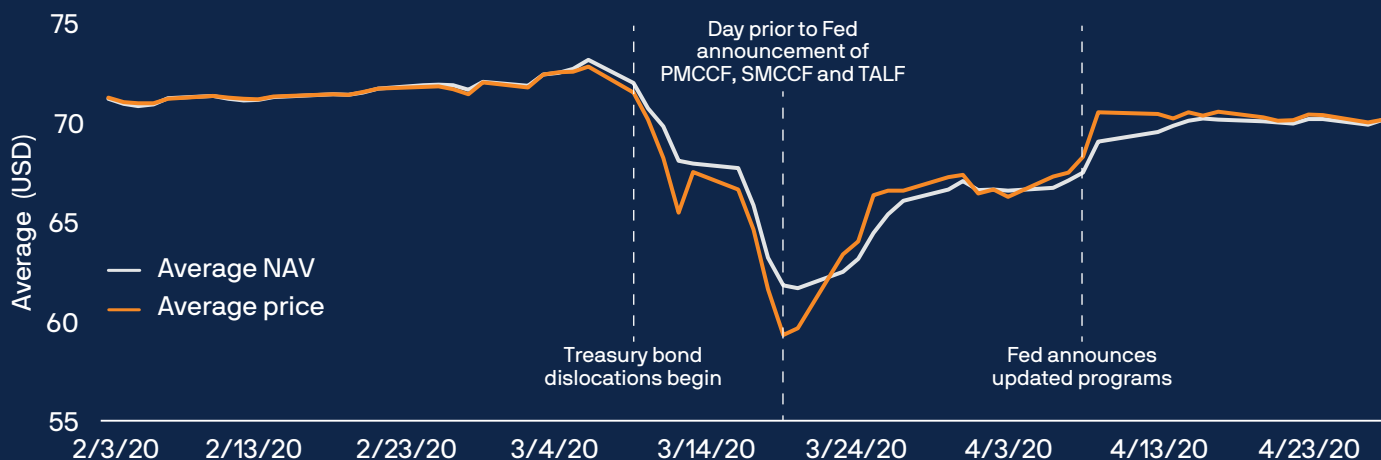
Exhibit 9: High yield bond ETF trading volume as a percentage of 20-day rolling trading volume of the overall high yield bond market



Source: Bloomberg, J.P. Morgan Asset Management *Guide to ETFs*; data as of October 31, 2025. High yield ETF market is represented by HYG, JNK, PHB, HYL, SJNK, SHGY, USHY, HYL, ANGL, HYS, BSJL, BSJM, BSJK and BBHY. High yield bond market is represented by FINRA TRACE Market Breadth High Yield Bond Dollar Volume (NTMBHV) and FINRA TRACE 144a HY \$ Vol (NTMB4HYV).

Fixed income ETFs have been effective price discovery tools, with secondary market pricing generally being more actionable and leading NAVs, especially in stressed markets

Exhibit 10: Investment grade bond ETF average price and average NAV during the COVID-19 pandemic



Source: MarketAxess, Bloomberg, J.P. Morgan Asset Management; data as of December 31, 2024. High yield bond ETFs are represented by the top 10 high yield ETFs by AUM in the high yield Morningstar category.

Why active fixed income ETFs now

+

Diversification is essential for navigating changing market conditions, and fixed income ETFs offer an effective way to balance risk and capture yield.

As portfolios face shifting interest rates and economic uncertainty, these ETFs help investors build resilience across market cycles.

+

Managing active fixed income ETFs provides managers with new tools, including the ability to capitalise on market inefficiencies, access a broader range of market sectors and improve liquidity management.

The secondary market volumes associated with ETFs allow portfolio managers to focus on their core expertise: managing portfolios for the benefit of shareholders.

+

ETFs have played a key role in modernising the fixed income market. As investors reassess their fixed income allocations in response to declining cash rates, active fixed income ETFs have emerged as a valuable tool for capturing attractive yield and return opportunities.



ETF Insights provides comprehensive data and commentary on global markets without reference to products. Designed as a tool to help clients understand the markets and support investment decision making, the program explores the implications of current economic data and changing market conditions.

For the purposes of MiFID II, the JPM Market Insights and Portfolio Insights programs are marketing communications and are not in scope for any MiFID II / MiFIR requirements specifically related to investment research. Furthermore, the J.P. Morgan Asset Management Market Insights and Portfolio Insights programs, as non-independent research, have not been prepared in accordance with legal requirements designed to promote the independence of investment research, nor are they subject to any prohibition on dealing ahead of the dissemination of investment research.

This document is a general communication being provided for informational purposes only. It is educational in nature and not designed to be taken as advice or a recommendation for any specific investment product, strategy, plan feature or other purpose in any jurisdiction, nor is it a commitment from J.P. Morgan Asset Management or any of its subsidiaries to participate in any of the transactions mentioned herein. Any examples used are generic, hypothetical and for illustration purposes only. This material does not contain sufficient information to support an investment decision and it should not be relied upon by you in evaluating the merits of investing in any securities or products. In addition, users should make an independent assessment of the legal, regulatory, tax, credit and accounting implications and determine, together with their own financial professional, if any investment mentioned herein is believed to be appropriate to their personal goals. Investors should ensure that they obtain all available relevant information before making any investment. Any forecasts, figures, opinions or investment techniques and strategies set out are for information purposes only, based on certain assumptions and current market conditions and are subject to change without prior notice. Investment involves risks, the value of investments and the income from them may fluctuate in accordance with market conditions and taxation agreements and investors may not get back the full amount invested. Both past performance and yields are not reliable indicators of current and future results.

J.P. Morgan Asset Management is the brand name for the asset management business of JPMorgan Chase & Co. and its affiliates worldwide. To the extent permitted by applicable law, we may record telephone calls and monitor electronic communications to comply with our legal and regulatory obligations and internal policies. Personal data will be collected, stored and processed by J.P. Morgan Asset Management in accordance with our privacy policies at <https://am.jpmorgan.com/global/privacy>.

This communication is issued by the following entities: In the United States, by J.P. Morgan Investment Management Inc. or J.P. Morgan Alternative Asset Management, Inc., both regulated by the Securities and Exchange Commission; in Latin America, for intended recipients' use only, by local J.P. Morgan entities, as the case may be; in Canada, for institutional clients' use only, by JPMorgan Asset Management (Canada) Inc. is a registered Portfolio Manager and Exempt Market Dealer in all Canadian provinces and territories except the Yukon, and an Investment Fund Manager in British Columbia, Ontario, Quebec, and Newfoundland and Labrador. It is also a Derivatives Adviser in Manitoba, a Commodity Trading Manager in Ontario, and a Derivatives Portfolio Manager in Quebec. In the United Kingdom, by JPMorgan Asset Management (UK) Limited, which is authorized and regulated by the Financial Conduct Authority; in other European jurisdictions, by JPMorgan Asset Management (Europe) S.à r.l. In Asia Pacific ("APAC"), by the following issuing entities and in the respective jurisdictions in which they are primarily regulated: JPMorgan Asset Management (Asia Pacific) Limited, or JPMorgan Funds (Asia) Limited, or JPMorgan Asset Management Real Assets (Asia) Limited, each of which is regulated by the Securities and Futures Commission of Hong Kong; JPMorgan Asset Management (Singapore) Limited (Co. Reg. No. 197601586K), this advertisement or publication has not been reviewed by the Monetary Authority of Singapore; JPMorgan Asset Management (Taiwan) Limited; JPMorgan Asset Management (Japan) Limited, which is a member of the Investment Trusts Association, Japan, the Japan Investment Advisers Association, Type II Financial Instruments Firms Association and the Japan Securities Dealers Association and is regulated by the Financial Services Agency (registration number "Kanto Local Finance Bureau (Financial Instruments Firm) No. 330"); in Australia, to wholesale clients only as defined in section 761A and 761G of the Corporations Act 2001 (Commonwealth), by JPMorgan Asset Management (Australia) Limited (ABN 55143832080) (AFSL 376919).

For all markets in APAC, to intended recipients only – NOT FOR RETAIL USE OR DISTRIBUTION.

For U.S. only: If you are a person with a disability and need additional support in viewing the material, please call us at 1-800-343-1113 for assistance.

Copyright 2026 JPMorgan Chase & Co. All rights reserved.

LV-JPM57560 | 01/26 | EMEA | 01f47e7e-f79a-11f0-8521-4d541d238507





J.P.Morgan
ASSET MANAGEMENT

Let's Solve It[®]