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All systems go

As bond ETFs turn 20 years old, we believe four trends will propel global AUM to \$6 trillion by 2030

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Foreword



Rob Kapito
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Salim Ramji
Global Head of ETF
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Twenty years ago, computerized stock trading was reshaping the unseen market plumbing that connects buyers with sellers. Pit-style trading floors were going digital, and global stock exchanges were becoming electronic. These advances were delivering greater convenience and efficiency to the world of equity investing.

The pace of change was slower in fixed income markets. Most bonds trade through over-the-counter (OTC) markets and, back then, individuals often had no way to get real-time price quotes for thousands of bonds. Big investors typically phoned or messaged bond dealers, hoped for inventory on hand, then negotiated terms. Buying or selling in this way could be cumbersome and opaque.

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Over 20 years, bond ETFs have become fundamental to fixed income investing.”

Then, in the summer of 2002, iShares launched the first U.S.-domiciled bond ETFs, innovations that went on to break down many barriers to fixed income investing.¹ Bond ETFs connected the fragmented fixed income markets with transparent and liquid on-exchange trading, creating an entirely new class of building blocks for assembling fixed income portfolios. For the first time, all investors could buy a portfolio of bonds, with the click of a button, for a known bid-ask spread and relatively low fee.

It was a point of no return. A movement that started with four iShares bond ETFs has now grown to \$1.7 trillion in assets under management (AUM) and more than 1,400 products around the world.² Global investor assets in bond ETFs have grown by 23% annually—double the growth of open-end bond mutual funds and triple the growth of the global market for bonds itself.³

Bond ETFs simplified how investors all over the globe access fixed income markets. Millions of individuals and financial advisors now use ETFs for convenient, low-cost exposure to thousands of global bonds, while large discretionary wealth managers, asset managers, and asset owners use a broad array of bond ETFs to make specialized calibrations to their multi-billion-dollar portfolios. The convenience of bond ETFs makes them prime candidates for use in strategies that seek to take investment losses to offset taxable gains.

The future looks bright for the growth of bond ETFs because they help all types of investors take on the thorniest problems in fixed income. In fact, we think that the challenges associated with high inflation and rising interest rates will attract more first-time ETF investors and prompt existing investors to find new ways use these versatile investment tools. **The reason:** Over 20 years, bond ETFs have become fundamental to fixed income investing.

¹ iShares launched the first bond ETFs in the U.S. in July 2002 (LQD, SHY, IEF, TLT).

² BlackRock, Bloomberg, Morningstar (as of March 31, 2022).

³ Simfund for U.S. MFs (as of December 2021), Broadridge for non-US MFs (as of November 2021), BlackRock GBI iShares for global ETFs (as of December 2021), Bank of International Settlements and Securities Industry and Financial Markets Association for global bond market (as of July 2021). Bond ETF average annualized growth rate of 23.4% compares with open-end mutual fund growth rate of 9.5% in the five years ended Dec. 31, 2021. Per BIS and SIFMA, the value of the outstanding global bond market grew 7.3% annually in the five years ended Dec. 31, 2020, the most recent data available.

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The path to \$6 trillion

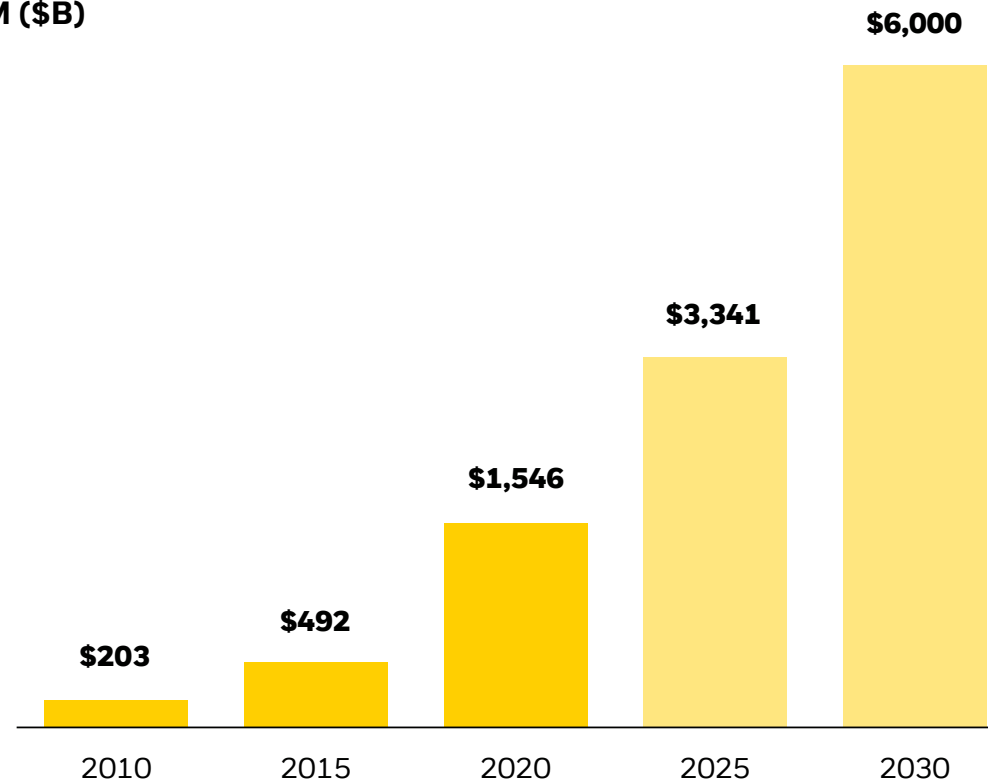
The global bond ETF industry is growing even faster than we expected. The pandemic era accelerated bond ETF adoption in ways that are self-reinforcing and, we believe, enduring. It took 17 years for bond ETF industry AUM to reach \$1 trillion. In 2019, as the industry approached this milestone, we forecasted that global bond ETF AUM would double by the end of 2024.⁴ Yet we believe the global bond ETF industry is poised to reach \$2 trillion in 2023—18 months early—despite currently challenging macroeconomic conditions.

To reflect the faster-than-expected growth trajectory and the acceleration of four secular trends:

We are upgrading our outlook and projecting that global bond ETF AUM will reach \$6 trillion by the end of 2030.

⁴ BlackRock, “Primed for Growth: Bond ETFs and the path to \$2 trillion,” June 2019.

Actual and projected growth of global bond ETF AUM (\$B)



Source: BlackRock, as of March 31, 2023. Estimates include 2025 and 2030 scenario calculations based on proprietary research. Subject to change. The figures are for illustrative purposes only and there is no guarantee the projections will come to pass.

Tripling global AUM is achievable this decade, and the acceleration in bond ETF adoption will be fueled by four powerful trends that broaden and deepen their usage. In 2021, Bond ETFs accounted for just 2% of the \$124 trillion global fixed income marketplace, up from about 0.3% of global assets the 10 years prior.⁵ At \$6 trillion in AUM, bond ETF penetration would amount only to around 5% of the global fixed income market.⁶

Building blocks in evolved 60/40 portfolios:

More investors are blending bond ETFs with active strategies to better meet investment objectives and avoid unwanted risks.

Catalysts for modernizing bond markets:

Bond ETFs are reshaping fixed income market structure by helping to drive electronication, algorithmic bond pricing, and portfolio-oriented trading.



Tools for seeking active returns:

Institutional investors including active asset managers are turning to bond ETFs for transparency, access, liquidity, and portfolio efficiency.

Increasingly precise sources of potential returns:

New bond ETFs are providing more precise fixed income exposures that allow investors to build increasingly customizable portfolios, hedge risks, and capture opportunities.

⁵ Current global bond market size: Bank of International Settlements, Securities Industry and Financial Markets Association estimates found in 2021 SIFMA Capital Markets Fact Book, July 28, 2021; See also: BlackRock, "Transforming the Bond Markets with Fixed Income ETFs," July 2021.

⁶ Bloomberg (as of March 31, 2022) for stocks. Market capitalization of the Russell 3000 Index, STOXX Europe 600 Index, and MSCI Asia Pacific All Country Index equals \$74.6 trillion; Markit, BlackRock for ETFs (as of March 31, 2022). AUM for U.S., European, and Asia-Pacific equity ETFs market was \$7.6 trillion.

Building blocks in evolved 60/40 portfolios

Bond ETFs are highly useful building blocks to help maximize the “40” portion of the standard “60/40” portfolio made up of stocks and bonds.

Increasingly sophisticated analytics are shedding light on how to efficiently combine strategies to pursue specific investment and risk objectives. Adding or subtracting exposures through bond ETFs, for instance modulating between high yield and government bonds, can help investors build evolved portfolios by calibrating objectives such as income, capital preservation, or equity risk diversification.

Historically, most investors building portfolios made binary choices between an index-tracking strategy and an actively managed one. Those favoring active management often chose a few of the “best” managers to represent their fixed income allocations. One drawback of this approach is that multiple actively

managed strategies may pursue objectives that are in opposition to one another, which can effectively cancel out high-conviction views at the portfolio level.⁷

Another important drawback is that the traditional approach also may leave investors exposed to unexpected risks. For example, many active fixed income managers sought to generate income in recent years by loading on riskier, high-yielding bonds. Between 2015 and 2021, the correlation between the average intermediate core bond fund tracked by Morningstar and the U.S. stock market tightened, eroding the potential diversification benefits typically sought in fixed income.⁹ Fast-forward to 2022 and a traditional 60/40 portfolio with a riskier bond profile may have resulted in surprisingly poor performance in the first quarter as both equity and bond markets sold off.

78% of professional investors globally stated in a 2022 survey that they plan to increase exposure to bond ETFs over the next year, up from 66% in 2021.⁸

We have long believed that the active/index choice was a false dichotomy.¹⁰ Our conversations with wealth investors increasingly recognize the advantages of blending index bond ETFs with actively managed strategies. We have observed an increasing number of wealth investors looking to diversify risk assets at the portfolio level with simple bond “barbell” strategies consisting of broad, index bond ETFs and actively managed fixed income mutual funds that seek non-correlated returns.¹¹

⁷ BlackRock, “Time to get your core in shape: Regulation, technology and evolving client needs demand a re-think of portfolio construction that will revolutionise the role of index strategies in portfolios,” Oct. 8, 2018.

⁸ Brown Brothers Harriman, “2022 Global ETF Investor Survey: Pace of investor demand for ETFs accelerates, closing the gap with other investment products.” March 17, 2022. In January 2022, the firm surveyed 386 institutional investors, financial advisors, and fund managers from the U.S. Europe (including U.K.) and Greater China.

⁹ Morningstar (as of March 31, 2022). The correlation between the S&P 500 Index and the Morningstar Intermediate Core-Plus Bond Category was 0.41 on March 31, 2022, compared with 0.09 for the Bloomberg U.S. Aggregate Bond Index. Correlation ranges between +1 and -1. A correlation of +1 indicates returns moved in tandem, -1 indicates returns moved in opposite directions, and 0 indicates no correlation.

¹⁰ BlackRock Investment Institute, “Blending returns – a refresh,” April 21, 2022.

¹¹ BlackRock, based on total pageviews of sales slides used with U.S. Wealth Advisory clients in 2022 through April 29, 2022.

Barbell your bonds to help evolve fixed income portfolios

Blending index-tracking bond ETFs with actively managed strategies can help investors calibrate portfolio objectives such as income, capital preservation, or equity risk diversification.

Bond ETFs

High transparency, easy customization

Flexible/Alternative MFs

Seek new sources of return



Investment objectives:

-  **Equity diversification**
Core bonds, investment grade, longer duration
-  **Capital preservation**
Low duration, flexible strategies
-  **Income**
Credit, high yield

Source: BlackRock (as of March, 2022.) This figure is for illustrative purposes only. There can be no assurance that an active trading market for shares of an ETF will develop or be maintained.



An enduring bond: strong ETF inflows in 1Q 2022

More than \$40 billion moved into global bond ETFs in the first quarter of 2022 even as a generational rise in inflation and tighter monetary policy resulted in sharp price declines for closely followed bond benchmarks.¹² First-quarter flows also show that bond ETFs can be useful for navigating challenging markets: while \$10 billion moved out of high-yield bond ETFs in the first quarter of 2022, another \$22 billion moved into government bond-focused ETFs.¹³ For comparison, an estimated \$150 billion moved out of global bond mutual funds over the same period.¹⁴

12 ETF flows: BlackRock, Bloomberg (as of March 31, 2022).

The Bloomberg U.S. Aggregate bond index fell 6% in the first quarter of 2022—the biggest quarterly loss since 1980, according to The Wall Street Journal, “Bond Market Suffers Worst Quarter in Decades,” March 31, 2022.

13 BlackRock, Bloomberg (as of March 31, 2021).

14 Morningstar (estimate as of May 5, 2022 for the first quarter of 2022).

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Modern bond portfolio management requires the use of multiple instruments to gain efficient exposure and manage risk, and as bond ETFs have grown in scale and liquidity, their qualities of low trading costs, execution speed, and exposure granularity have made them integral to bond portfolios in Europe.”

Michael Krautzberger

Head of Fundamental Fixed Income in EMEA

Tools for seeking active returns

The world's largest and most influential institutional investors became among the fastest-growing adopters of bond ETFs based on the resilience and liquidity the products convincingly demonstrated in the early days of the pandemic.¹⁵ Institutional adoption is becoming broader and deeper: according to a 2022 survey, 65% of institutions globally have allocated more than 30% of their portfolio to bond ETFs.¹⁶

Asset managers, pension funds, insurers, and central banks are turning to bond ETFs for four reasons:

01

Transparency in terms of holdings and pricing, which remains in stark contrast to the underlying OTC bond market.

03

Efficiency, since bond ETFs allow for instantaneous and cost-efficient exposure to hundreds or thousands of individual bonds in a single trade on exchange. This attribute has been recognized by central banks, for example, as they look to rapidly scale up or down holdings.

02

Historically durable and consistent liquidity as compared with individual bonds, particularly in stressed markets.¹⁷

04

Increasingly granular access to a variety of fixed income exposures across credit, sectors, duration, factors, sustainable and defined outcomes, such as hedged exposures.

¹⁵ Risk.net, Jane Street Capital, "Institutional ETF trading: Innovation, efficiency and versatility fuel growth," Fourth quarter 2021. Firm surveyed 380 global ETF traders at buy-side firms via telephone between March and September 2021.

¹⁶ Brown Brothers Harriman, "2022 Global ETF Investor Survey: Pace of investor demand for ETFs accelerates, closing the gap with other investment products." March 17, 2022. In January 2022, the firm surveyed 386 institutional investors, financial advisors, and fund managers from the U.S. Europe (including U.K.) and Greater China.

¹⁷ BlackRock, "Turning point: How volatility and performance in 2020 accelerated institutional adoption of fixed income ETFs," July 2020.

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Traditionally we used individual bonds to express our tactical views. Today we increasingly use ETFs as liquidity solutions in our portfolios alongside bonds, futures, and other investment vehicles.”

James Keenan, CFA

Chief Investment Officer
and Global Head of Credit

Scores of institutional clients bought bond ETFs for the first time in 2020 and, since that time, many have found new ways to use bond ETFs. Active managers who historically built portfolios exclusively with individual bonds are using bond ETFs as tools for liquidity management, portfolio efficiency, and potential portfolio-level alpha generation. While many managers have consistently used bond ETFs to rapidly dial up or down tactical risk exposures, some are beginning to realise that bond ETFs can also represent “betas” (long-term, core market exposures) and “tilts” (a persistent allocation to a specific return exposure, for example high yield) that can replace a cumbersome number of individual bonds in portfolios. Managers are also increasingly using bond ETFs as risk management alternatives to futures or swaps, as cash and liquidity management instruments, and as tools for large-scale portfolio transitions.

Institutions are now among the fastest-growing users of bond ETFs.

- **The 10 largest global asset managers all use bond ETFs.¹⁸**
- **37 official institutions use iShares bond ETFs, including 10 central banks.¹⁹**
- **95% of public pensions surveyed reported either increasing their usage of bond ETFs during volatility in early 2022 or that they are likely to increase their usage of bond ETFs in the future.²⁰**
- **8 of the 10 largest U.S. insurers use bond ETFs, and 5 of them adopted bond ETFs after the volatile markets of March 2020.²¹**

¹⁸ BlackRock analysis of SEC 13-F filings for U.S.; BlackRock analysis of self-reported holdings by asset managers in Europe and Asia. Top 10 global asset managers determined by Pensions & Investments in 2021.

¹⁹ BlackRock estimate based on client engagement (as of April 20, 2022).

²⁰ Institutional Investor and BlackRock global survey of 59 public pension respondents conducted in the first quarter of 2022.

²¹ S&P Global Intelligence, BlackRock analysis of filings with the National Association of Insurance Commissioners (NAIC) and the Securities and Exchange Commission.

Regulation is unlocking U.S. bond ETF adoption

We see regulatory change as a catalyst for the institutional adoption of bond ETFs in the U.S. For example, the New York State Department of Financial Services in 2021, amended its rules to grant certain bond ETFs a risk-based capital classification that is similar to that of individual bonds. This updated treatment reflects the growing regulatory and policy view that bond ETFs should be treated as bonds for risk-based capital and accounting reasons.²² Similar rule changes may prompt more insurance companies to use bond ETFs to meet their policyholder objectives.²³

22 BlackRock, “Unlocking new opportunities: How the evolving regulatory and market environment is creating new opportunities for insurers to use fixed income ETFs,” April 14, 2022.

23 Fitch Ratings, “Regulatory Change to Drive Insurance Demand for Fixed Income ETFs,” Jan. 20, 2022.

Catalysts for modernizing bond markets

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ETFs are the single most important driver to the evolution of fixed income market structure and liquidity.”

Dan Veiner

Global head of Fixed Income Trading

The growth of bond ETFs and their ecosystem has helped drive advances in electronic trading and algorithmic pricing of individual bonds, which together have helped improve transparency and liquidity in underlying bond markets.

These advances are creating a virtuous cycle that enables more primary and secondary ETF market transactions and expands the number of individual bonds that can be priced and traded daily.²⁴ The pandemic quickened the pace of ETF-driven market modernization, and we expect bond ETFs will play an even greater role in the way investors access fixed income markets for the foreseeable future.

Critically, the new architecture increasingly pivots around trading baskets of bonds, particularly high yield and investment grade holdings in liquid ETFs. Electronic trading and sophisticated pricing allow broker-dealers to simultaneously buy or sell large numbers of individual bonds through so-called portfolio trades. This basket-centred marketplace favors even greater acceleration of bond ETF adoption since a growing number of fixed income transactions either directly or indirectly involve bond ETFs for sourcing or hedging risk.

²⁴ BlackRock, “The Next Generation Bond Market,” July 2017.

How ETFs modernized fixed income market structure

Mainstream adoption of bond ETFs initially took off amid the 2008–2009 global financial crisis in part due to major changes to the prevailing market structure. Extreme volatility and stricter regulatory oversight after the crisis raised funding and capital costs for traditional market intermediaries.²⁵ In turn, these intermediaries—banks and broker-dealers—found it less economical to warehouse bond inventories and stepped back from this principal approach to market making.²⁶

Investors needed to adapt to diminishing volumes and availability of individual bonds; many shifted to bond ETFs because of their on-exchange tradability. This trend led to the rise of specialized market makers that interact with the open market and ETF providers—referred to as “authorized participants” (APs). In turn, APs developed

electronic trading technologies with algorithmic pricing models to handle rapidly growing volumes.

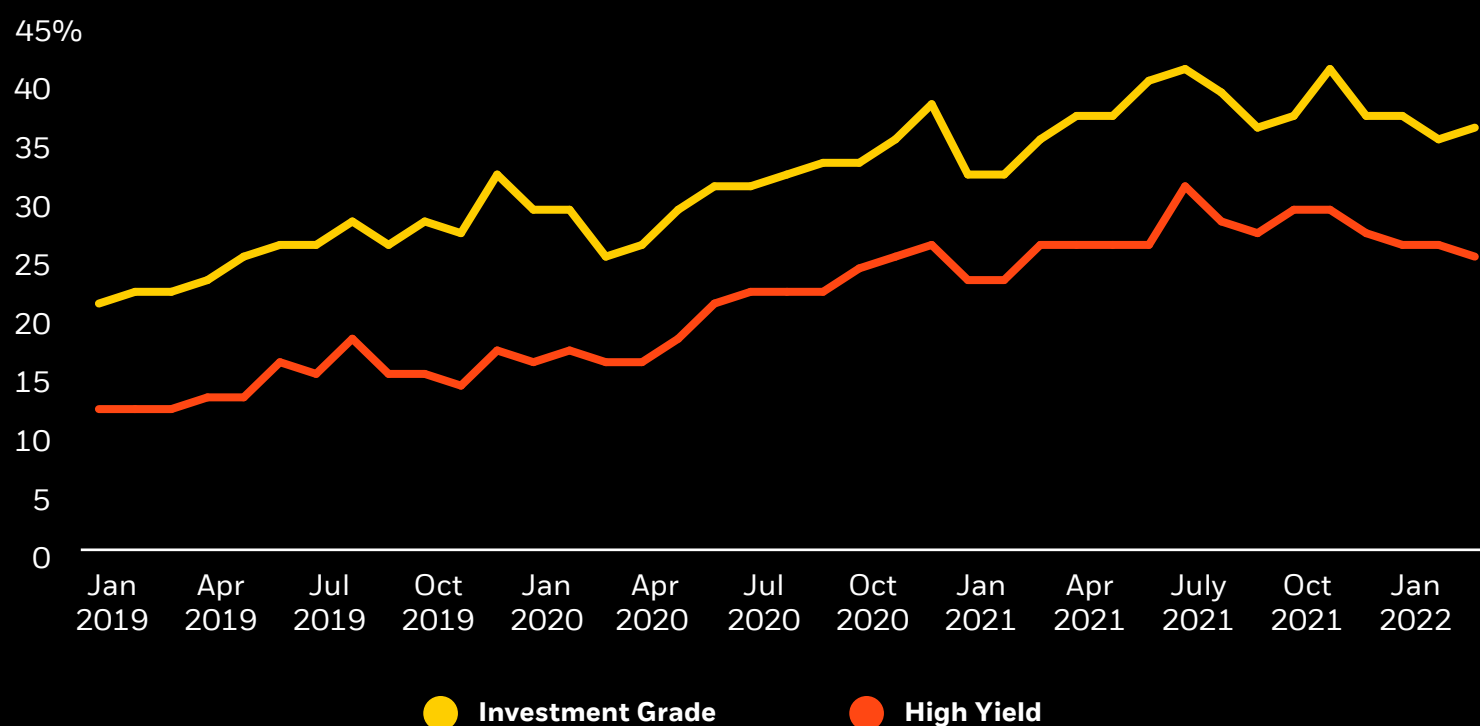
In part due to an uptick in bond ETF trading activity, electronic trading volumes in U.S. investment grade bonds at the end of March 2022 accounted for 36% of total traded volumes for those bonds, up from 21% in early 2019.²⁷

²⁵ BlackRock, “The Next Generation Bond Market,” July 2017.

²⁶ BlackRock, “The Modernization of the Bond Market,” October 2019.

²⁷ Coalition Greenwich (as of March 31, 2022).

Proportion of electronic trading in U.S. investment grade and high yield bonds



Source: Coalition Greenwich (as of March 31, 2022).



Spotlight on Europe: New windows for transparency

The European ETF ecosystem stands to benefit from further evolution of market structure with the availability of a consolidated tape that aggregates and disseminates ETF trade reporting to all venues and clients in close to real time.

European markets have never featured a consolidated view of pan-European trading, and investors often lack the transparency and full understanding of the depth of usage, liquidity, and price-discovery in European ETFs. However, this situation is likely to change.²⁸

In our view, regulatory initiatives and industry efforts toward market harmonization will likely enhance the visibility of European ETFs as liquid and low-cost financial instruments. As was the experience in the U.S., the availability of real-time affordable market data should increase market confidence in transparent investment vehicles such as ETFs. As a result, we expect the next phase of adoption for European ETFs to be led by European investors as well as international users of UCITS ETFs.²⁹

28 In November 2021, the European Commission proposed a new consolidated tape provider model in its review of the Markets in Financial Instruments Regulation (MiFIR).

29 Undertakings for Collective Investment in Transferable Securities (UCITS) ETFs, regulated by the European Union, offer a unique cross-border standard of disclosure and investor protection.

**Increasingly
precise sources of
potential returns**

Newer bond ETFs are slicing the fixed income marketplace into ever more granular exposures that can be blended into highly customizable portfolios. Many strategies featured in newer bond ETFs were previously available only to larger investors at high cost and great difficulty, if at all.

The first bond ETFs largely delivered broad, index-tracking exposure to entire markets or asset classes. Newer bond ETFs break down asset classes into more precise exposures across credit, sectors, durations, sustainability and other risk factors. This increasing granularity allows investors to redefine their desired market exposure. For example, the new bond ETF toolkit allows investors to pull apart a conventional broad-based market exposure such as the Bloomberg US Aggregate Bond Index and insert an inflation-protection component by replacing U.S. Treasury bond exposure with Treasury Inflation-Protected exposure (TIPS). There are now numerous ways to

define outcomes in, for example, investment grade strategies with ETFs that seek to hedge interest rates, inflation, or other risks.

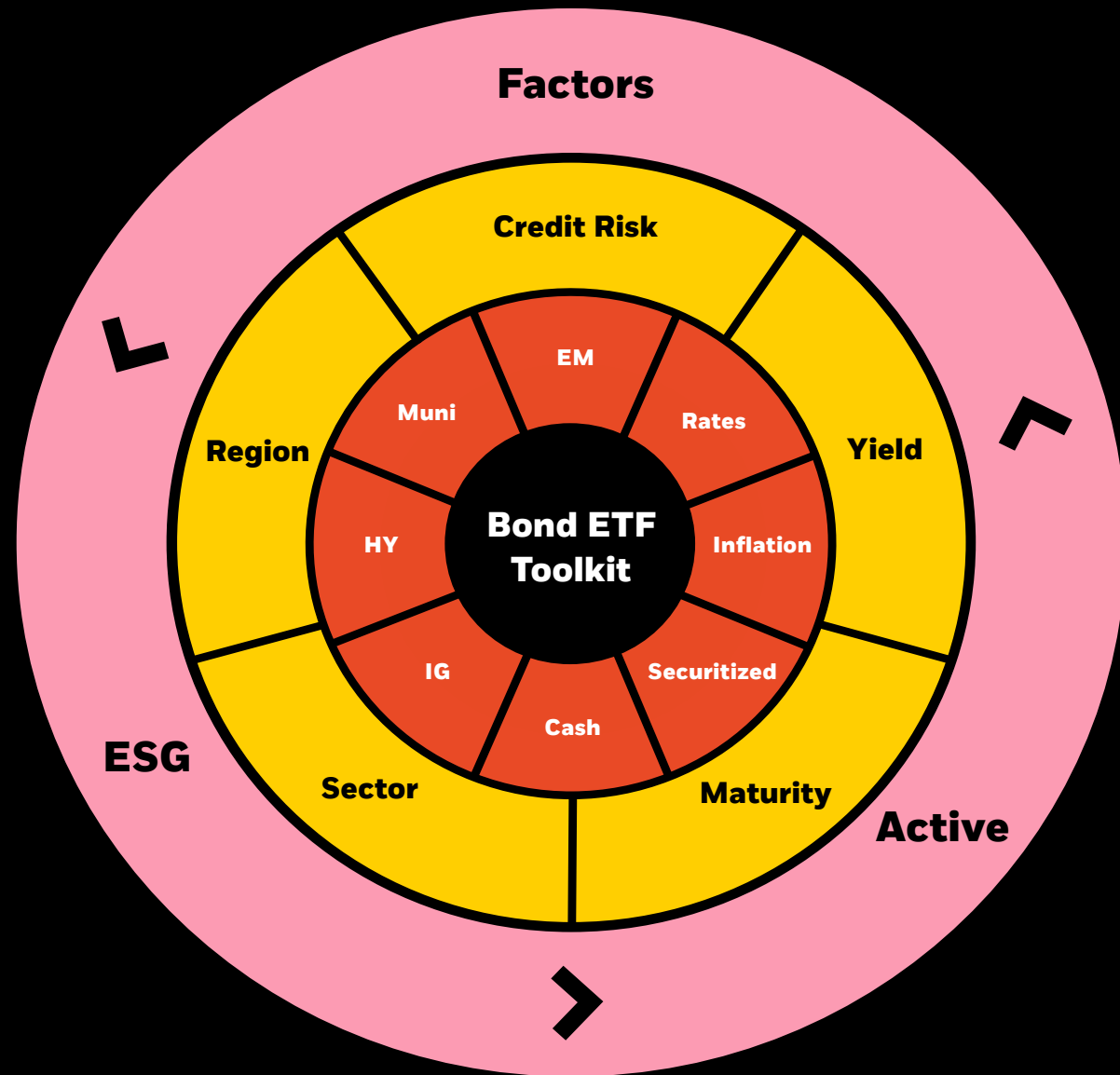
Many newer bond ETFs also enable novel access to diversified sources of yield. One example is bond ETFs that offer access to Asia high yield, a difficult-to-access asset class that has recently interested global investors. Similar exposures will continue to help diversify the sources of potential yield for global investors.

The next generation of ETF innovation is just beginning. It will focus on combining sophisticated strategies such as sustainability, factors, and an ever-growing number of defined outcomes. Such strategies will begin to blur the lines between what was generally considered index and active, since they will be steered both by rules-based methodologies and the discretion of individual managers. Given the simplicity and convenience that ETFs provide, we see growth in these new strategies alongside traditional bond ETFs, individual bonds, and derivative instruments.

Looking ahead, we believe this next generation of more active bond ETFs themselves can reach \$1 trillion in AUM by 2030, up from about \$200 billion in 2022.

Such growth is possible because the next-generation precision bond ETFs will finally allow investors think of portfolios not as lists of bonds, but as collections of risk that can be disaggregated and reassembled based on evolving market conditions, investment objectives, and risk preferences.

Increasing precision in bond ETF exposures



● Approach

● Exposure

● Asset class

Conclusion

The advent of bond ETFs is revolutionizing the way people invest in fixed income. Twenty years ago, it would have been difficult if not impossible to even imagine instantaneously buying or selling thousands of bonds in a single trade at a transparent price—exactly what bond ETFs have empowered investors to do. Bond ETFs have brought transparency, access, liquidity, and efficiency to millions of fixed income investors.

Like many technologies, the adoption of bond ETFs has been accelerated by the dynamics of the pandemic, which exposed longstanding inefficiencies in fixed income markets. Bond ETF growth persists even in the face of mounting inflation and rising rates as investors around the world look for better ways to access fixed income returns.

We believe that evolved portfolios will increasingly feature bond ETFs as essential elements for calibrating risks and opportunities while simultaneously increasing liquidity and lowering costs. What's more, we believe that institutional investors will continue to increase adoption of this powerful technology, and bond ETF innovation will bring to market more precise tools for portfolio construction and risk management. Finally, we believe that bond ETFs will continue to catalyze advances in fixed income market structure and will become further integrated into an increasingly modern, electronic fixed income marketplace.

For these reasons we are upgrading our projections for global bond ETF AUM, forecasting that the size of the industry will nearly triple and reach \$6 trillion (or 5% of the total bond market) by the end of this decade.

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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. International investing involves risks, including risks related to foreign currency, limited liquidity, less government regulation and the possibility of substantial volatility due to adverse political, economic or other developments. These risks often are heightened for investments in emerging/developing markets or in concentrations of single countries.

There can be no assurance that an active trading market for shares of an ETF will develop or be maintained. Transactions in shares of ETFs may result in brokerage commissions and will generate tax consequences. All regulated investment companies are obliged to distribute portfolio gains to shareholders. Diversification and asset allocation may not protect against market risk or loss of principal.

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