A Whole New World For Bond Investing:
Aligning Bond Indexes With an Evolving Market
The issuance of bonds traces its history to early human civilization, when payments were made in grain and terms were chiseled on tablets. As far back as the 12th century, European rulers began funding military adventures through debt instruments, giving rise to the sovereign credit market. Borrowing made possible through long-term obligations propelled the development of the West, supplying the capital not just for wars, but for global trade and foundational infrastructure such as canals and railroads. Generations of American investors have bought Treasury bills, notes, and bonds backed by the “full faith and credit” of the U.S. government.

To this day, the bond market stands as a pillar, not just of the global financial system, but of the real economy, and society more broadly. By setting the price of borrowing, it provides a feedback mechanism for policymakers, corporate executives, and a range of other debt issuers. The bond market’s ability to reward prudence and punish profligacy is seen by many as a force for law and order, property rights, and responsible stewardship of capital. Its wrath is feared in boardrooms and ministries the world over.

For investors, bonds retain a critical role in a diversified portfolio. Their regular income stream is prized by investors of all sizes, from retirees to asset owners looking to match future known liabilities. Bonds counterbalance the risk of equities and serve as portfolio ballast, especially useful during times of market stress. When fixed-income strategies lose money, their drawdowns tend to be far milder than those of stocks.

Bond indexes, for their part, define and structure the market. They delineate the opportunity set for investors, offer measuring sticks for active managers, and underpin passive investment vehicles. But the vastness and complexity of the market introduce myriad challenges to indexers. The sheer number of fixed-income securities is massive. Frequent rebalancing is required to keep up with new issuance and maturing bonds. Pricing and liquidity are real concerns, leading to frictions unknown to equity indexers. Then there’s the issue that weighting by size favors the most indebted issuers.

Indexes also provide a prism through which to view shifts in the landscape for fixed income — of which three stand out. First, massive stimulus in response to the global financial crisis and low interest rates have led to an increased supply of developed markets government debt and lower-quality corporate issuance in the market. Second, investor capital is increasingly flowing to passively managed fixed-income strategies, albeit to a lesser extent than on the equity side. This has only elevated the stature of the bond index. Third, the investment banks that ran the biggest bond trading desks while also maintaining bond indexes — a model riddled with potential conflicts — have seen their role diminished. Meanwhile, sections of the bond market have experienced declining trading volume and falling liquidity.
It is at this juncture that Morningstar is refreshing its bond index offering. Morningstar first launched a series of bond indexes in 2007 to augment investors’ fixed-income toolkit and aid the assembly of diversified portfolios. The benchmarks extend visibility into portfolio-level exposures on parameters such as sector allocation, credit quality, and interest-rate sensitivity. Adhering to those same principles, we are relaunching a more comprehensive suite of bond indexes providing in-depth asset class coverage. Regional families composed of non-overlapping building blocks offer a consistent set of lenses across global markets.

Morningstar’s bond indexes address the challenges inherent to fixed income by prioritizing investability. They contain a smaller number of bonds relative to comparable indexes, but emphasize the most liquid issues, all while reflecting the contours of the overall market. The goals are to ease tradability and replication. By exhibiting a wide array of security-level and portfolio-level datapoints, they offer transparency into critical portfolio-level attributes and risk exposures. The goal is to better align bond benchmarks with the investable universe for fixed income, thereby simplifying the processes of benchmarking and product creation, minimizing transaction costs, and improving transparency for fixed-income investors.

**Bond Indexing: A Complicated History**

Whereas data and publishing firms have long dominated the world of equity indexing, bond indexes were historically the province of investment banks. The banks’ near-monopoly on bond trading data gave them a handy tool with which to control bond indexes reliant on prices to function. The banks also enjoyed the benefits of relationships with investment-banking clients issuing securities who expected research coverage, not to mention inclusion in indexes used by the banks’ customers buying those instruments on the other side of the house.

Index construction under this paradigm was never really geared to serve end investors. Over the years, indexes became sprawling in nature, evolving into complex collections of eclectic sets of benchmarks. Many employed a tremendous level of fine slicing and duplication, as well as sector combinations meant to approximate strategies for very specific investment styles.

While those tools were undeniably valuable to many of the institutions they were designed to serve, they didn’t always jibe with the way that individuals and advisors think about investing. Further, bond index families as a whole tend to be daunting for the average investor or financial advisor. Given their breadth and complexity, many lacked clear and self-evident family-level organization.

That was problematic, because bond benchmarks play a critical role in structuring, defining, and shining a light on the fixed-income market in ways that are simply less necessary for equities. Indexes also serve a democratizing function. In the words of Mahseredjian and Friebel: “Indexes make the bond market more efficient by eliminating the information advantage formerly held by a few.”

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The bond market needs structuring because it is far broader, more layered, and more fluid than the stock market. In addition to corporate issuance, it includes debt from governments, municipalities, and a vast range of securitizations with different rates, maturities, and cash-flow structures. Old bonds are always maturing, while new bonds are coming to market, often from the same issuers. Thus, bond indexes must rebalance more frequently than equity benchmarks in order to capture new issuance and bonds that are called or maturing.

The over-the-counter nature of bond trading also presents challenges. In the absence of a central exchange and with many bonds not trading regularly, liquidity is a perennial concern. Pricing data can be difficult to obtain. “Transparency” is a term rarely associated with the bond market—or for that matter, the bond index providers.

Indeed, the broad provision of information was never the goal of the traditional bond index providers. Underlying index composition and data were difficult to obtain or cost-prohibitive. Yield and basic return information were often the only data made available. While regulators often require funds to release their holdings at regular intervals, no such requirement exists for the indexes against which they’re benchmarked. An investor without access to underlying data for the index against which her portfolio is managed may therefore not know that her investment’s risk profile is different from that of the broader market on parameters such as sector allocation, credit quality, and interest-rate sensitivity. A fund can sport an exceptionally high yield or outperform because of a large bet on bonds with low credit quality or local-currency emerging-markets debt, but it’s important for investors to grasp the risk of those bets reversing course during different market conditions.

Banks Aren’t What They Used to Be

Changes in the banking world have been myriad and the stuff of headlines, ever since regulators stepped in to rescue the industry from complete collapse in 2008, and then later addressed scandals like the manipulation of the London Interbank Offered Rate in 2014. Policymakers in the U.S. and Europe have imposed a host of new regulations to prevent banks from bringing down the global economy in the future. Capital requirements have been raised, assets ring-fenced, and bail-in mechanisms created. Surviving investment banks converted to commercial banks. Others were sold in a hurry at distressed prices. The once-dominant Lehman Brothers filed for bankruptcy.

That altered the calculus of relationships, profit margins, and business strategies across swaths of the industry, putting large index arms of investment banks onto their back burners and eventually leading to spin-offs of those groups. Now more independent of banking and under pressure from investors more reliant on indexes than ever, providers have begun to refine index design and construction to align with best practices focused on end users.
Bond Indexes as Investment Strategies

Bond indexes have taken on added significance in recent years, as investor assets increasingly flow to passive fixed income strategies. Investing in bonds via index-trackers lags passive share on the equity side, but it has gained traction in recent years. The exchange-traded fund revolution has included fixed income, with bond ETFs surpassing the milestone of $1 trillion in assets under management in early 2019. Of course, some prominent fixed-income ETFs are active.

Exhibit 1: Growth in Index-Tracking Fixed Income Mutual Funds and ETFs Worldwide

When you add together index trackers in either ETF or traditional mutual fund form, assets come closer to $2 trillion. (See Exhibit 1.) From less than 10% market share in the fund and ETF space in 2008, passively managed strategies as a percentage of overall fixed-income fund assets approached 30% in the U.S., 20% in Europe, and 15% in Asia as of the end of 2018 (see Exhibit 2.) compared with passive share of roughly 45% of equity fund and ETF assets in the U.S. and 35% in Europe.

Exhibit 2: Passive Share Within Fixed Income Funds and ETFs

Despite their rising popularity, passive fixed-income strategies are far trickier to implement than equity index-trackers. In a research study on the performance of bond funds, Morningstar researchers Mara Dobrescu, Matias Möttölä, and James Li blame the complexity of bond benchmarks for the struggles of many managed fixed income strategies to outperform. They write, “In markets where transaction costs are particularly elevated, both active funds and ETFs have struggled to match the performance of the index.” The transaction costs they reference trace to illiquid and hard-to-trade securities, as well as frequent rebalancing.

Bond Indexes Must Address Liquidity Considerations

Transaction costs are as much of an issue as ever, thanks to a confluence of factors that bond index providers must address. Global regulatory reform has affected broker/dealer balance sheets, leading to higher capital costs on trading desks and lower bond inventories. The result has been a significant erosion of market liquidity. While the amount of corporate bond issuance has exploded in recent years, trading volume has fallen.

Why? Companies have taken advantage of low interest rates to issue lots of debt, but with multiple bonds from the same issuer on the market, investors have preferred the latest issues. Turnover on bonds declines rapidly within months of issuance. The secondary market has dried up. This has led to rising transaction costs for trading in the cash market and protracted times for executing trades.

Therefore, in order to reflect the true opportunity set for investors, bond indexes need to be mindful of liquidity considerations and transaction costs while accurately mirroring the overall asset class on parameters such as interest-rate sensitivity, coupon, sector allocation, and credit quality. One way to address the challenges of changing market dynamics is to build indexes using the most recently issued “on the run” securities, which tend to be most actively traded and liquid. These bonds can then proxy a larger number of similar securities from the same issuer. The weightings for each issuer, based on market capitalization, can continue to reflect the full complement of securities outstanding. The resulting indexes should exhibit low tracking error relative to peers with a far larger number of securities and superior liquidity.

Morningstar’s Bond Index Evolution

Given the passage of time since Morningstar’s original bond index launch in 2007, and the changes taking place in fixed-income markets, it makes sense to refresh Morningstar’s index offerings, enhance their methodologies, and expand their coverage. Those changes include broadening the sectors and markets included in composite benchmarks and provided as sub-indexes.

Morningstar’s requirements help maintain a focus on bonds less likely to cause difficulty in tracking an index.

Unchanged, however, are the principles that have always guided the design of our indexes. That means following industry best practices of index construction and an organizational scheme designed with clarity, logic, and ease of use to bridge the gaps between individuals, advisors, and institutions.

Three Principles Underpin the Morningstar Approach to Bond Indexes:

**Enhanced Investability**
The indexes strike a balance between completeness and investability. They contain fewer constituents than peers and emphasize bonds readily available to investors while keeping overall exposures consistent with the contours of each market. Index inclusion rules focus on bond liquidity, which tends to be highly correlated with issue size. Many indexes require a minimum maturity of two years at issuance for initial inclusion and a minimum remaining term of one year to remain a constituent. Security features, such as scheduled calls, that are not central to a specific asset class are avoided. Morningstar’s requirements help maintain a focus on bonds less likely to cause difficulty in tracking an index.

**Transparency**
Morningstar makes index features accessible to users across the spectrum of institutions, advisors, and investors. More than 100 security-level and 50 portfolio-level datapoints are visible to index subscribers, including parameters such as sector allocation, credit quality, and interest-rate sensitivity. Information is made available across Morningstar outlets so that investors can better analyze and understand their portfolios, while the Morningstar Direct research platform can serve as a tool for users with the most comprehensive needs to find the most granular available data. The “democratization” of information makes it easier for investors to plan for and achieve their financial goals.

**Building Block Approach**
Morningstar’s bond index range provides in-depth asset class coverage while maintaining a family-level organizational structure. Regional families comprise a consistent set of non-overlapping building blocks. They offer a set of lenses that facilitate comparisons across geography and asset class, while also serving as tools for portfolio construction.
Morningstar’s Bond Index Family

Morningstar’s bond indexes represent all major global bond markets and asset classes, making them ideal for both product creation and benchmarking purposes.

Exhibit 3: Morningstar Bond Index Family

- Global (OM) Core Families
- Emerging Market Family

<table>
<thead>
<tr>
<th>Global Core Family</th>
<th>US Core</th>
<th>Canada Core</th>
<th>UK Core</th>
<th>Eurozone Core</th>
<th>Sweden Core</th>
<th>Switzerland Core</th>
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<tbody>
<tr>
<td>High Yield</td>
<td></td>
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<tr>
<td>TIPS</td>
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*European countries include all countries that have bonds denominated in EUR. Separate indexes have been constructed for bonds denominated in CHF and SEK, respectively.
Conclusion

The global bond market is broad, diverse, and constantly in motion. Indexes have a critical role to play in defining the investable universe for fixed-income securities and serving as benchmarks for managed strategies. While the penetration of index-tracking fixed-income strategies lags its equity equivalent, it is fast gaining traction. Meanwhile, the bond market itself has changed, particularly since the financial crisis, influenced by factors as varied as banking regulation and the realignment of long-standing norms in the ownership and distribution of data.

Against that backdrop, making indexes investable, understandable, and accessible to users across the spectrum of institutions, advisors, and investors is key. Morningstar is refreshing its bond indexes in a number of ways, from adjusting methodologies to broadening the sectors and markets included in composite benchmarks and those provided as subindexes.

As always, Morningstar’s goal is to strike the right balance between completeness and investability and help shine a light on the market for investors.
Appendix

Indexes are useful analytical tools that illuminate market trends. The changing composition of the Morningstar U.S. Core Bond Index in the 10 years following the global financial crisis is a case in point. In the post-crisis years, massive stimulus caused developed markets government debt to proliferate. In the U.S., the Federal Reserve bought some Treasury issuance while sucking up government-agency-backed mortgage securities in the trillions through a quantitative easing program.

The European Central Bank also began its QE program in mid-2009, but with an aggressive decision to begin buying covered bonds rather than government debt, before expanding that mandate in later years to governments, agencies, and European institutions. The ECB announced it would stop adding to its bond holdings in December 2018—more than nine years after it began. Quantitative easing and anemic European inflation have translated into sovereign bond yields that have actually been negative, which is where German government debt still stood at the end of 2018.

Rock bottom interest rates have prompted a flood of corporate debt issuance, especially in the U.S. Companies across the economy have taken advantage of cheap borrowing to go to the bond market. Much of the issuance has been lower on the quality spectrum.

The Morningstar U.S. Core Bond Index illuminates the changing nature of the fixed-income landscape. (See Exhibit 4). Government bonds consumed 42% of the index’s weight as of the end of 2018, up from 31% one decade prior. Mortgage-backed securities, which played a central role in the U.S. housing market bubble that sparked the crisis, have declined by an even greater share. And the increase in corporate borrowing, especially lower on the quality spectrum, is responsible for lower index-level credit quality. Meanwhile, the index’s altered sector composition has resulted in an increase in its interest-rate sensitivity. The Morningstar U.S. Core Bond Index’s duration rose from less than four years in 2008 to near six years in 2018.

<table>
<thead>
<tr>
<th>Sector Composition (%)</th>
<th>2008 Year-End</th>
<th>2018 Year-End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>31.08%</td>
<td>42.10%</td>
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<tr>
<td>Agency</td>
<td>7.50%</td>
<td>1.30%</td>
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<tr>
<td>MBS</td>
<td>42.60%</td>
<td>28.80%</td>
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<tr>
<td>Corporate</td>
<td>19%</td>
<td>27.80%</td>
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<table>
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<tr>
<th>Market Value ($millions)</th>
<th>8,840.12</th>
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<tr>
<td>Effective Duration</td>
<td>4.14</td>
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<tr>
<td>Term to Maturity</td>
<td>5.30</td>
<td>7.60</td>
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<tr>
<td>Corporate Credit Quality</td>
<td>A</td>
<td>A-</td>
</tr>
<tr>
<td>BBB Credits as % Corporate Market Value</td>
<td>27.80</td>
<td>48.90</td>
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<tr>
<td>BBB Credits as % Total Market Value</td>
<td>9.20</td>
<td>19.10</td>
</tr>
</tbody>
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Exhibit 4: Sector Composition of the Morningstar U.S. Core Bond Index
About Morningstar Indexes

Morningstar combines the science and art of indexing to create a comprehensive offering of global equity, fixed-income, alternative, and multi-asset class indexes. We make these available to meet a range of needs, including benchmarking, performance measurement, asset allocation, product development, and more. Whether beta or strategic beta indexes are required, we deliver flexible solutions built on our ecosystem of high-quality data and proprietary research.

Contact Us Today

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