Bond Compass
Catching Yield Waves This Summer

Q3 2021

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billion in indexed fixed income assets

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- State Street Global Advisors' global scale enables our portfolio managers, traders and investment strategists to be sector specialists and based in their geographic markets
- Our dedicated capital markets teams provide 24-hour coverage across global markets, offering enhanced liquidity and cost-efficient** trading strategies

25

years of bond index investing experience

Proven Track Record

- 25 years of bond investing — our first fixed income fund launched in 1996
- More than 100 fixed income professionals dedicated to conducting research, managing risks and costs, and supporting our clients

100+

fixed income index strategies

Innovative Solutions for Bond Investors

- Comprehensive range of cost-effective ETFs
- Offering access to government and corporate bonds across the yield curve, using a consistent index methodology

* State Street Global Advisors, as of 30 June 2021.
** Frequent trading of ETFs could significantly increase commissions and other costs such that they may offset any savings from low fees or costs.

Contents

Investor Sentiment — Flows and Holdings

A snapshot of global fixed income flows, holdings and valuations, based on data provided by State Street Global Markets.*

* The fixed income flows and holdings indicators produced by State Street Global Markets, the investment, research and trading division of State Street Corporation, are based on aggregated and anonymised custody data provided to it by State Street, in its role as custodian. State Street Global Advisors does not have access to the underlying custody data used to produce the indicators.

Fixed Income Flows and Holdings

State Street Global Markets builds indicators of aggregated long-term investor behaviour in fixed income markets from a substantial subset of $10 trillion worth of fixed income assets under custody and administration at State Street.† This captures behavioural trends across tens of thousands of portfolios and is estimated to cover just over 10% of outstanding fixed income securities globally.

Analysis

The second quarter can best be described as a transitional period, as we finally got to some of the major inflection points in the reopening process. While global vaccinations were slow to start, the acceleration in administered shots in the US and UK provided optimism that herd immunity will be an obtainable goal. However, vaccine rollouts were uneven, with the eurozone and Canada quickly overcoming initial hurdles and developed Asia still lagging. Vaccine rollout in the emerging markets (EM) has proven to be an even slower process where inadequate vaccine access has increased the risk of resurgent COVID variants.

Despite these uneven reopenings, inflation readings have surged globally as reopening demand and supply chain disruptions have resulted in some of the biggest price gains seen in decades. While some of these gains can be attributed to the reversal of last year's collapsing prices, inflation still ran hotter than expected, as reopening categories were in high demand. Most central banks still expect these price surges to be transitory, although it will now likely take longer to see whether their forecasts prove correct. Nonetheless, rising prices have started the normalization discussion for many developed markets, while a few emerging economies have already raised rates to keep prices in check.

After a fairly volatile first quarter that saw yields rise globally, the rates market was mostly rangebound for much of the quarter before rallying to lower yields near quarter end. The prospect of earlier rate hikes in the emerging markets kept investor flows relatively weak in EM sovereigns compared to the developed markets. Stronger US Treasury buying emerged near the start of the quarter, particularly from foreign buyers when yields spiked to their YTD highs. More recently, cross-border demand for Treasuries has waned, although overall demand remains marginally positive. Since the market increasingly expects the Federal Reserve (Fed) to formally begin discussing the tapering process in Q3, market stability would require that investors look past shrinking Fed demand as we move into 2022.

Institutional investors continued to reach for yield in credit in Q2. Flows favored high yield, with investors looking past the prospects of policy normalization, higher inflation prints and near-record corporate issuance. More recently, flows have moderated to neutral in both the investment grade and high yield parts of the US credit markets, while euro credit demand remains strong.

The above estimates based on certain assumptions and analysis. There is no guarantee that the estimates will be achieved.
† State Street Form 10-K, as of 31 December 2020.

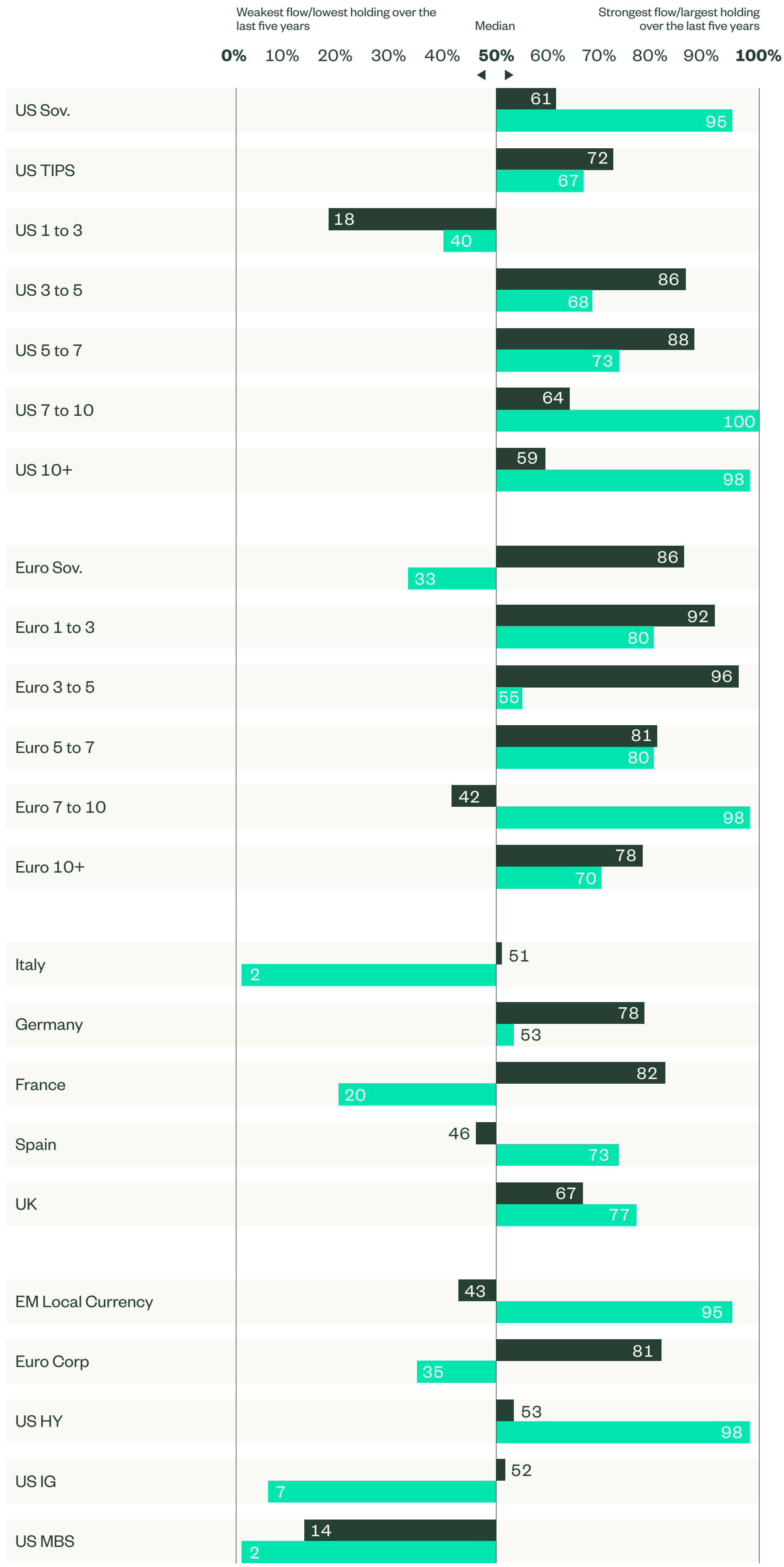
Q2 2021
Flows & Holdings

90-Day Flows

Holdings*

These metrics are generated from regression analysis based on aggregated and anonymous flow data in order to better capture investor preference and to ensure the safeguarding of client confidentiality. The figures are shown as percentiles, expressing the flows and holdings over the last quarter, relative to the last five years. The benefit of this approach is that it provides perspective on the size of flows and holdings compared to their historical trends, whereas a single, dollar figure provides less context.

For more information please visit globalmarkets.statestreet.com

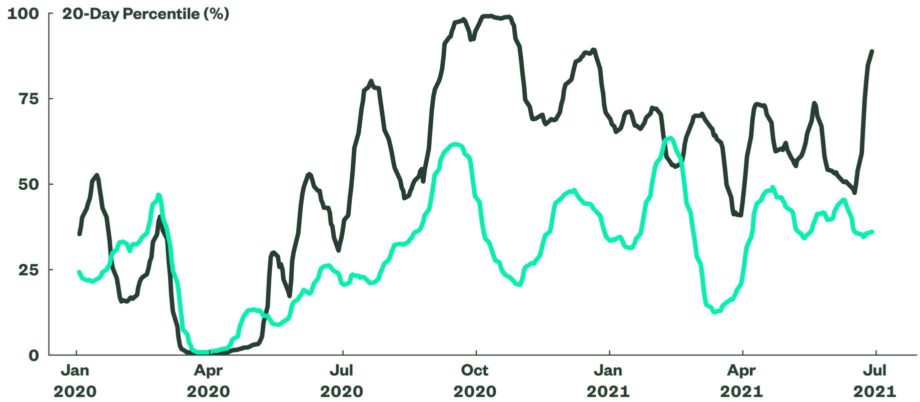


Source: State Street Global Markets, as of 30 June 2021. Flows and holdings are as of date indicated. They should not be relied thereafter. *As at quarter end.

Safety Over Yield

In many ways, low developed market yields, expectations for a weaker USD and broad reflationary support make it a perfect environment for emerging market debt (EMD). However, this has not enticed real money investors to increase their allocations to EMD this year. As the chart indicates, investors have generally chosen safety over yield, with net buying of developed market sovereign bonds at the expense of emerging market bonds. As our PriceStats® series shows, inflation in emerging markets has far outpaced price gains in advanced economies, forcing rate hikes in several developing countries. Uneven vaccination rates also create greater risk for emerging markets, which threatens positive growth expectations.

Developed and Emerging Market 20-Day Flows

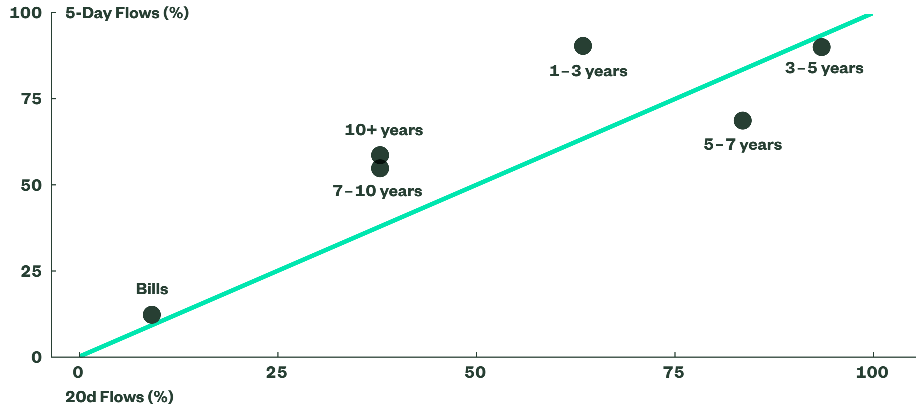


Source: State Street Global Markets, as of 30 June 2021.
Flows and holdings are as of the date indicated. They should not be relied on thereafter.

Treasuries Still Finding Broad Support

The Fed has signaled that it has started to think about the normalization process, with broad expectations that tapering of asset purchases will be announced before the end of the year. Interestingly, longer-dated Treasury yields have fallen steadily during the second quarter to levels last seen in February, while the curve has also flattened. And while expectations around the timing of the first rate hike have not changed, fewer subsequent rate hikes are now expected. Our investor flows data continue to show broad buying across most Treasury maturities, with shorter-term flows indicating accelerated buying from the intermediate into the longer end of the yield curve.

US Treasuries 5- and 20-Day Flows

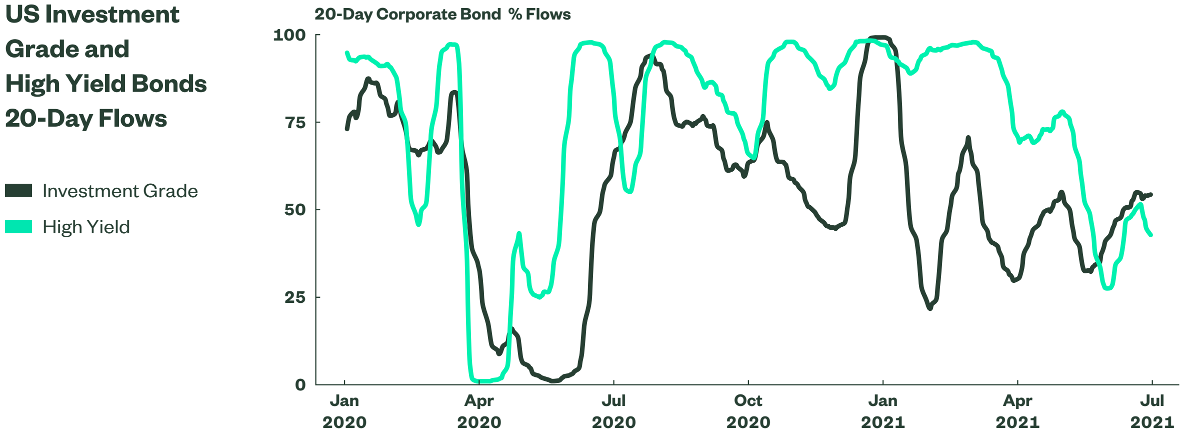


Source: State Street Global Markets, as of 30 June 2021.
Flows and holdings are as of the date indicated. They should not be relied on thereafter.

Turning Neutral on Credit

Both US investment- grade and high yield bonds have seen their spreads tighten this year as the overall cost of corporate borrowing fell to all-time low levels. This has prompted record issuance of high yield debt, while investment grade issuance has trailed last year's record volumes. So far this year, investors have favored high yield issuers, with the asset class being one of the few bond categories to post a positive return, with spread tightening and coupon payments resulting in low single-digit returns. Our investor behavior reflects this preference, with positive high yield flows for most of the year and generally neutral investment grade activity. More recently, both credit categories have gravitated toward neutral, with meaningful spread tightening unlikely from here given the overall low level of yields.

US Investment Grade and High Yield Bonds 20-Day Flows



Source: State Street Global Markets, as of 30 June 2021.
Flows and holdings are as of the date indicated. They should not be relied on thereafter.

PriceStats®

Quarterly measure of inflation based on prices from millions of items sold by online retailers, helping investors anticipate and evaluate the impact of inflation.

PriceStats®

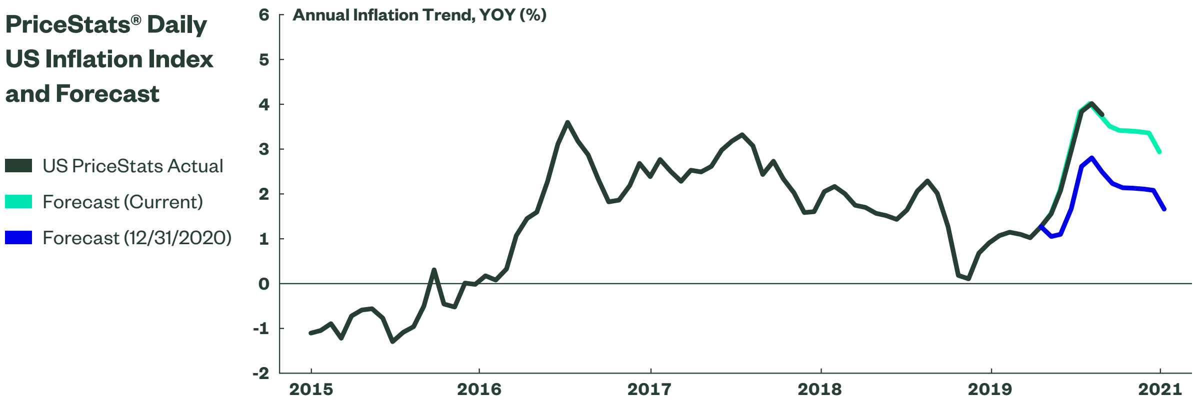
PriceStats® provides high-frequency measures of inflation and real exchange rates drawn from prices on millions of items sold by online retailers. This real-time pulse of global economic trends helps investors anticipate and evaluate the impact of inflation, including the impact on monetary policy and the degree of exchange rate misalignments.

This information is available on a daily basis from State Street Global Markets: globalmarkets.statestreet.com.

Transitory Inflation Buzz

Transitory inflation will likely go down as one of the most overused financial terms for 2021. We are now past the base effect peak for inflation and PriceStats® is confirming that year-over-year measures have started their transitional journey, with prices having peaked in May. However, the timing to normalisation is likely to take much longer than initially anticipated. As the chart shows, inflation in the US has run much hotter since the start of the year than anticipated, which will make the transitory process that much longer. In fact, if monthly price gains just match longer-term averages, the year-end 2021 inflation rate will still be higher than the peak expected at the start of the year. The Federal Reserve's recent upgrade to its personal consumption expenditures (PCE) forecast is an acknowledgement of the extended normalisation process that will push the structural-versus-transitory discussion into 2022.

PriceStats® Daily US Inflation Index and Forecast

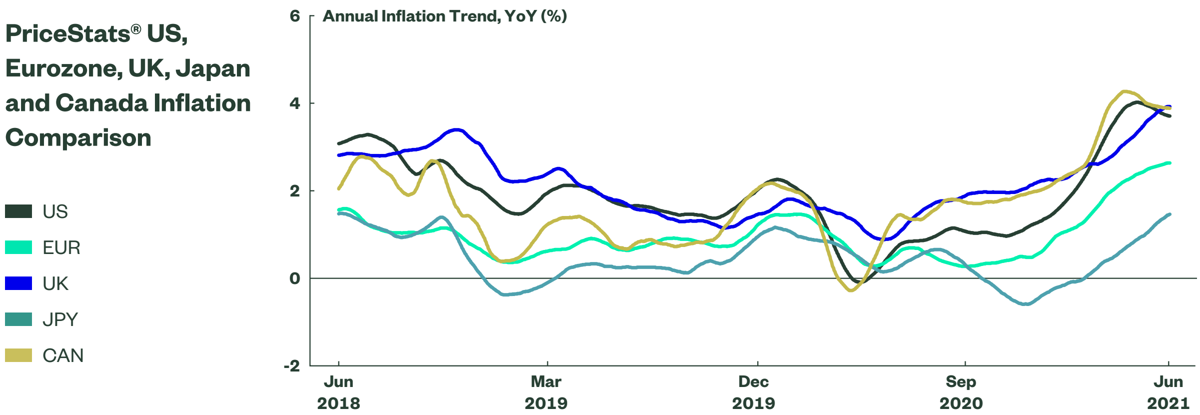


Source: State Street Global Markets, as of 30 June 2021.

Not All Price Surges are Created Equal

The headline-grabbing inflation prints out of the US are set to ease, with the bulk of the base effects now in the rearview mirror. This is already being reflected in our US PriceStats® data series, which peaked at the end of May and has compressed by 30bps over the past month. It is worth noting that the lockdown process has been unique at a national level, and therefore varying reopening timetables will impact inflation expectations. For instance, as the chart shows, it appears that US and Canadian prices are topping out, a consequence of a more aggressive lifting of restrictions. In contrast, Europe, only now reaching vaccination levels comparable to those in North America, continues to see rising inflation, with base effects in play until the fall. The comparatively slow vaccination rates in Japan should be viewed relative to their bottoming of prices at the end of last year. It will therefore take longer before we can ascertain whether prices are in fact transitory as practically every central banker espouses.

PriceStats® US, Eurozone, UK, Japan and Canada Inflation Comparison

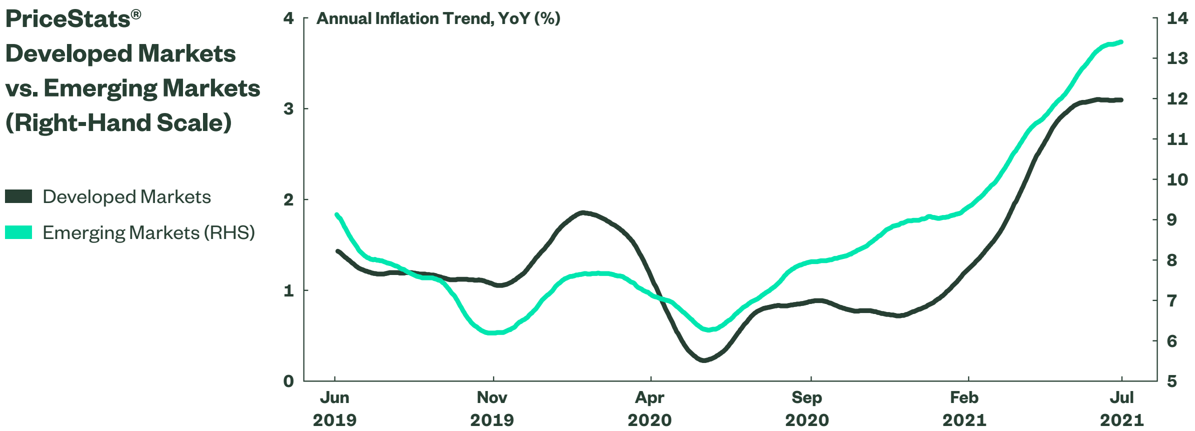


Source: State Street Global Markets, as of 30 June 2021.

Emerging Market Prices Still Rising

While there are signs that the transitory pricing message pushed by developed market central banks may in fact prove accurate, the same is not true within the emerging markets. As the chart shows, the PriceStats® EM aggregate series not only stands at the highest level in its history (back to 2010), it continues to push higher. While base effects are partially responsible, higher import costs, particularly commodity prices, currency depreciation and supply disruptions are also at play. Fortunately, most individual country readings remain within the range of central bank targets, although upward pressure will make it a question of how long policy can remain accommodative before normalisation begins. For some countries, that time is already here, with the central banks of Russia, Brazil and Mexico having recently raised rates in an attempt to contain prices.

PriceStats® Developed Markets vs. Emerging Markets (Right-Hand Scale)



Source: State Street Global Markets, as of 30 June 2021.

Fixed Income Outlook

State Street Global Advisors has identified the key considerations for investors in the coming quarter, and how markets can be navigated using SPDR ETFs.

Fixed Income Outlook: Catching Summer Yield Waves

Bond market volatility increased toward the end of the quarter but remains below the levels witnessed during the first quarter of 2021. The largest increase this quarter occurred following the surprise change in the Federal Reserve (Fed) dot plots, projections that now indicate the potential for two rate hikes in 2023 — up from one previously.

This partial policy pivot flattened the yield curve by 23 basis points in June, the largest monthly flattening since 2015.[1] Yet the flattening slowed toward the end of the month following Fed Chair Jay Powell's declaration that the dot plots should be taken with a grain of salt[2] — and they should be. For example, projections published in 2015 and 2016 forecasted interest rates rising much faster than the Fed conducted their hikes. And even after the Fed raised rates in December 2015, the projections continued to miss the mark — forecasting four hikes in 2016 even though there would be only one that year. Put simply, the dot plot is a projection of where officials *feel* policy may be in the future, not where it *will* be. So the rise in short-term rates that contributed to the flattening in June was likely a knee-jerk response that should mean revert.

The first change of the crisis-related policy decisions is likely to be a tapering of bond purchases. San Francisco Fed President Mary Daly, a voting member in the Federal Open Market Committee, said conditions could be met later this year or early next.[3] And this aligns with the Fed's view on labor, with Chair Powell indicating unemployment should noticeably improve by the fall[4] — a forecast strengthened by the June payroll report that saw the pace of hiring accelerate by the most in 10 months.[5] Tapering, or at least foreshadowing of the timeline for tapering, will likely place upward pressure on longer-term rates and steepen the yield curve over the coming months.

Irrespective of whether the Fed acts, we are likely to see rates rise modestly throughout the summer as economic data improves amid the recovery. Currently, 11 out of the 16 economic data points we track have improved past their pre-pandemic levels.[6] One metric that is not above its pre-pandemic level, however, is consumer confidence. Yet the latest reading exceeded all forecasts and was propelled by Americans becoming more upbeat about the economy and the job market.[7]

This confidence should place more upward momentum on consumer spending, particularly within the services industries that are still not back to pre-pandemic levels. Given that consumption makes up roughly 70 percent of the economy, this should lead to continued upward-revised GDP figures and a potentially higher US 10-year yield — as it is a market proxy for forward-looking growth and inflation prospects.

Beyond rising rates, the recovery will also continue to create a supportive backdrop for credit (fewer defaults and more upgrades), even as yields and spreads are stretched within traditional fixed-rate segments — most notably high yield, where yields are now at a record low of 3.75 percent.[8]

The tight spreads and low yields create a weaker fundamental backstop if volatility does rise, however. And there is the potential for more bond market volatility, perhaps after the Federal Reserve Bank of Kansas City's Jackson Hole Economic Policy Symposium in late August, which historically has been used to communicate major policy changes.[9]

Even if rates do rise, the level of yields will still be low from a historical perspective. And investors will have to navigate a sea of rate options that have either elevated duration risks or tight valuations. As a result, over the next quarter, investors may want to focus on duration management (shorter-duration corporates and more balanced active core mandates), as well as target less-stretched credit exposures (senior loans) that offer a noticeable yield pickup over basic Treasuries and core Bloomberg Barclays U.S. Aggregate Bond Index (Agg) bonds.

Theme 1

Target Yield and Mitigate Rate Volatility With a Balanced Active Core

Given the outlook for potentially higher, but still historically low, rates and a possible increase in bond market volatility this summer from post-crisis policies likely kicked off at the Jackson Hole symposium, investors may want to reexamine their core allocations within bond portfolios. And with these market forces in play, active management may be more ideal than owning the broader Agg.

An active mandate has more flexibility and depth of options, two valuable traits in this market. An active strategy can alter the duration profile based on prevailing macro trends as well as target other bond sectors not included in the Agg, such as high yield bonds (3.74 percent), emerging-market bonds (3.8 percent), and bank loans (3.70 percent)[10] — three sectors which offer some of the highest yields in the fixed income universe today.

An active strategy that simply overweights credit and doesn't offer a balanced and risk-managed exposure may, however, be unable to provide the intended diversification that core bonds are meant to offer within the broader portfolio. The SPDR® DoubleLine® Total Return Tactical ETF (TOTL) seeks to generate high quality income by balancing both traditional and nontraditional fixed income asset classes.

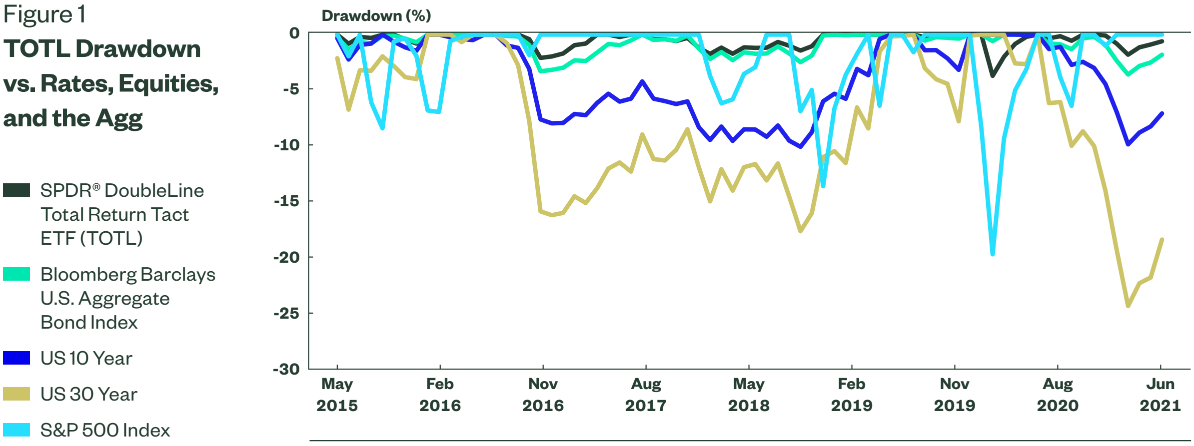
As of the end of Q2, approximately 30 percent of TOTL's portfolio was allocated to pure credit sectors, favoring securitized credit over corporate credit.[11] And within the 70 percent allocated to more rate-sensitive markets, roughly 32 percent[12] of it was to agency mortgage-backed securities — a core bond segment with an 83 basis point advantage over basic Treasuries.[13]

This ability to allocate differently across bond sectors has positively contributed to TOTL's 101 basis point outperformance in 2021.[14] Additionally, selection effects within those sectors have also been a positive contributor, combining with sector effects to make up just less than half of the outperformance from TOTL this year. The largest contributor, however, has been the duration management implemented by the portfolio management team — speaking to the multiple access points of flexibility an active mandate has at its disposal.

As a result of this flexibility, TOTL yields 100 basis points more than the Agg,[15] but remains underweight duration (4.32 years vs. 6.61 years).[16] And this focus on duration management could continue to be the key driver of performance in the core, as rates could remain choppy over the coming months due to uncertainty surrounding the global recovery, the transitory nature of inflation, and the pace and timing of central bank policy normalization.

Despite its exposure to nontraditional credit-sensitive sectors, TOTL can still potentially serve as a defensive core bond exposure. DoubleLine's focus on risk management has allowed TOTL to defend against both equity and interest-rate volatility, as evidenced by lower historical drawdowns, as shown in Figure 1.

Figure 1
TOTL Drawdown vs. Rates, Equities, and the Agg



Source: Morningstar, 1 May 2015–30 June 2021. US 30-Year represented by the Bloomberg Barclays U.S. Treasury Bellwethers (30Y) Index. US 10 Year represented by the Bloomberg Barclays U.S. Treasury Bellwethers (10Y) Index. Performance quoted represents past performance, which is no guarantee of future results. Investment return and principal value will fluctuate, so you may have a gain or loss when shares are sold. Current performance may be higher or lower than that quoted. Please visit ssga.com for most recent month-end performance. It is not possible to invest directly in an index.

TOTL also has a superior drawdown profile than its peers, as during the Fed rate hike in Q2 2015, TOTL saw a drawdown that was 126 basis points less than its median active peer.[17] Likewise, during the pandemic-induced volatility seen at the end of Q1 2020, TOTL saw a drawdown that was 335 basis points less than that of its peers. In fact, TOTL ranks in the 7th percentile relative to its peers based on max drawdown since its inception.[18] DoubleLine's focus on active risk management and balancing of credit- and interest-rate-sensitive sectors has led TOTL to have a standard deviation that is lower than 98 percent of its peers since its inception.[19]

To mitigate potential equity and rate volatility in the core while targeting a higher level of income, consider going active with the SPDR DoubleLine Total Return Tactical ETF (**TOTL**).

Theme 2

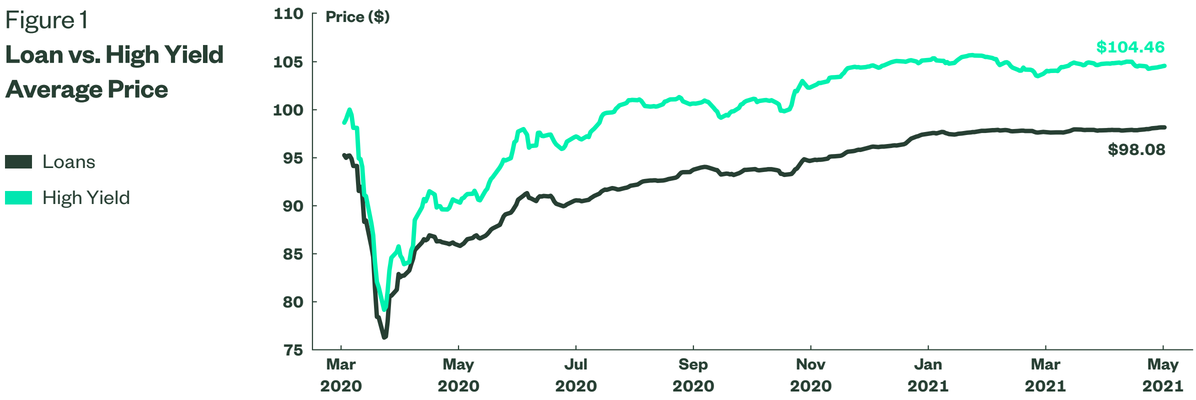
Focus on Loans for Potential Upside and Income

Looking outside the Agg for income generation naturally leads to below-investment-grade credit strategies like high yield. However, the credit markets are, to a degree, priced to perfection given record low yields and elevated valuations (tight spreads) — creating a noticeably asymmetrical return profile, a fact reinforced by its negative convexity.[20]

Yet, while tight, the environment remains constructive for credit considering the accommodative monetary policies in place, improving corporate profits, and rebounding economic data. There are also positive rating trends. Upgrades are outpacing downgrades by a 2:1 ratio, and the default environment is improving — with JP Morgan forecasting declining defaults in 2021 and 2022.[21]

Below-investment-grade senior loans may be able to provide high income without the stretched valuations found within the traditional fixed-rate high yield market. Senior loans currently yield the same as high yield (3.7 percent vs. 3.74 percent), but have more upside potential based on the current average price in the market.[22] Even with senior loans outperforming traditional high yield by 60 basis points this year, the average price has stayed below par ($98.08). Conversely, the average price of high yield bonds is over $104, as shown below. This dynamic for loans creates a similar high yielding exposure but with a less asymmetrical return profile than fixed-rate high yield.

Figure 1
Loan vs. High Yield Average Price



Source: S&P/LSTA Leveraged Loan Index, Bloomberg Barclays High Yield Index, as of 31 May 2021.

Beyond the improved valuations, senior loans also may offer a performance tailwind based on changes in interest rates. Fixed-rate credit, after all, is not immune to duration headwinds, as yield curve changes have subtracted 165 basis points from the overall 3.62 percent return in 2021 from high yield.[23] Senior loans, however, have been able to sidestep any duration-induced price declines, as a result of its floating rate structure, while still participating in the credit rally. Yield curve changes so far this year have been negligible for loans, a fact underscored by loans not only outperforming fixed-rate high yield this year (+60 basis points), but also the more duration-sensitive investment-grade market (+455 basis points).[24]

The base rate of the floating rate component is usually one- to three-month LIBOR. Therefore, the duration for senior loans is usually between 30 and 90 days. Thus, concerns about inflation and the potential for interest rates to rise further based on the Fed's latest projections may mean that the loan category — as a result of its lower duration — may hold its value more than other credit instruments. And if, as expected, the Fed raises rates to temper any inflationary headwinds — and short-term interest rates (LIBOR) increase — then the loan coupon also increases.

Should the credit rally come to a stall, however, loans are also more senior in their capital structure. Historically, they have witnessed lower relative levels of volatility than fixed-rate high yield (5.50 percent vs. 7.37 percent).[25] This, combined with their high income profile, more upside potential relative to high yield -based pricing levels, and stronger ability to mitigate any increase in rates due to their floating rate structure, makes loans an integral part of a diversified credit portfolio in this current environment.

For an actively managed senior loan exposure that may add more value over an indexed approach through credit selection, consider the SPDR® Blackstone Senior Loan ETF (**SRLN**).

Theme 3

Trim Rate Risk Within Corporates

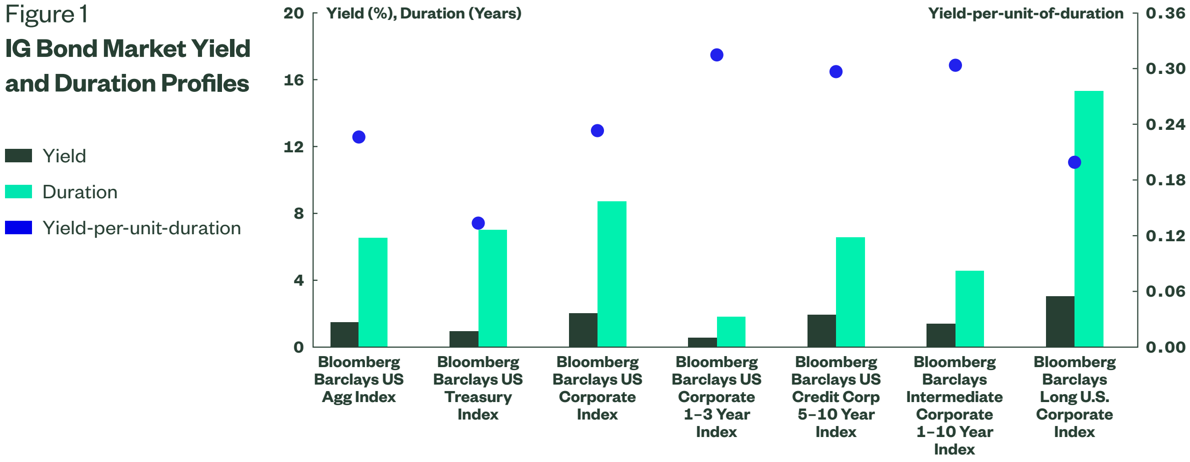
Within the investment-grade (IG) corporate bond market, rate movements have been the dominant driver of returns through the first six months of the year, subtracting 373 basis points of return.[26] This negative impact from yield curve changes more than offsets the positive 270 basis points of return from spread tightening amid the rally[27] — even as spreads fell to the anomalously low 1st percentile at 82 basis points.[28]

Credit spreads across the maturity spectrum are tight, with all tenors' spreads below the bottom 5th historical percentile.[29] While the recovery is still likely to be supportive to credit markets and further spread tightening, there is not much room left for spreads to tighten to a point where spread return contribution could overcome the impacts from likely higher interest rates. Particularly for broad-based corporate bonds that have an extended duration profile of over 8.5 years.[30]

Therefore, duration management within the core investment-grade corporate bond sector is important. The only drawback to trimming duration completely and focusing on shorter maturities would be sacrificing income. For example, the floating-rate investment-grade corporate note market (duration of 0.08 years) yields only 34 basis points,[31] while one- to three-year corporate bonds yield only a slightly higher 57 basis points.[32] Striking a balance between yield and duration, therefore, is crucial. Analyzing a maturity segment's yield per unit of duration alongside current yield levels can be helpful in navigating this challenge.

The maturity segment, as shown below, with the highest yield per unit of duration ratios, and a yield over 1 percent, is the 1- to 10-year space. The overall profile is improved by simply "cutting off the tail" on the longer-duration bonds in the 10-year-plus maturity bucket. Compared to the broad market, the 1- to 10-year segment has 4.15 years less duration (48 percent lower), but a yield still north of 1.3 percent. While the latter is 32 percent less, it is not a one-for-one trade-off with duration which positively impacts the ratio. Similarly, by including the short end of the curve, the 1- to 10-year segment has a slightly stronger ratio than the 5- to 10-year space, given the latter's higher yield is offset by a longer duration (two more years) than the 1- to 10-year market.

Figure 1
IG Bond Market Yield and Duration Profiles



Source: Bloomberg Finance L.P. as of 6 July 2021. Past performance is not a guarantee of future results.

Beyond the potential benefits if rates do rise, the 1- to 10-year space may also be slightly less impacted by a rise in credit spreads off these low levels on a relative basis versus broad corporates. The option-adjusted spread duration (OASD), a metric that indicates the percent change in the price of a bond with respect to a 100 basis point change in spreads for 1- to 10-year corporates, is 4.5 versus 8.5 for broad corporates.[33]

Both levels are stretched versus history, but the broader market's OASD is at an all-time high (99th percentile) right now, whereas the 1- to 10-year space has a bit more room to go before hitting its own historical max (sits in the 94th percentile).[34] The duration times spread (DTS) for the 1- to 10-year corporate market is also less than the broader corporate bond segment,[35] further indicating less credit volatility and perhaps tempering some concerns, on a relative basis, of owning tightly valued broad corporates.

For a shorter-duration investment-grade exposure, consider the SPDR® Portfolio Intermediate Term Corporate Bond ETF (**SPIB**).

Endnotes

1 Per Bloomberg Finance L.P., as of June 30, 2021.

2 "Powell: Take Fed's Dot Plot 'With a Big Grain of Salt'", Bloomberg June 16, 2021.

3 "Fed's Daly says could get to taper threshold late this year", Bloomberg June 30, 2021.

4 "Powell says pickup in job gains likely this fall", the Hill June 22, 2021.

5 "U.S. Jobs Jump by Most in 10 Months as Economy Gains Steam", Bloomberg July 2, 2021.

6 Industrial Production, ISM Manufacturing, Durable Goods New Orders, ISM Services, Retail Sales, Consumer Confidence, PCE Total, PCE Services, PCE Goods, Personal Savings, Housing Prices, Existing Home Sales, New Home Sales, Unemployment, Continued Jobless Claims, and Job Openings (non-farm).

7 "U.S. Consumer Confidence Soars on Upbeat Views about Economy", Bloomberg June 29, 2021.

8 Bloomberg Finance L.P., as of June 30, 2021, based on the yield of the Bloomberg Barclays US Corporate High Yield Index.

9 Fed Chair Ben Bernanke signaled that a third round of QE was on the table in his 2012 speech at the symposium, while defending the Fed's controversial bond purchases. The Fed launched QE3 the next month.

10 S&P Dow Jones, Bloomberg Finance, L.P., Bloomberg Barclays High Yield Corporate Bond Index, Bloomberg Barclays EM USD Aggregate Bond Index, S&P/LSTA Leveraged Loan Index as of June 30, 2021. Based on yield-to-worst.

11 ssga.com as of July 1, 2021.

12 ssga.com as of July 1, 2021.

13 Bloomberg Finance L.P., as of June 30, 2021. Based on the yield of the Bloomberg Barclays US Treasury Index and the Bloomberg Barclays US MBS Index.

14 Bloomberg Finance, L.P. as of 06/30/2021.

15 ssga.com, Bloomberg Finance, L.P., as of July 1, 2021. Based on the 30-day SEC yield of TOTL and the yield-to-worst of the Agg.

16 ssga.com, as of July 1, 2021.

17 Morningstar 04/01/2015–06/30/2015. Peers consist of oldest share class of active ETFs and Mutual Funds in the Intermediate Core-Plus Bond Category.

18 Morningstar 02/24/2015–06/30/2021. Peers consist of oldest share class of active ETFs and Mutual Funds in the Intermediate Core-Plus Bond Category.

19 Morningstar 02/21/2020–06/30/2021. Peers consist of oldest share class of active ETFs and Mutual Funds in the Intermediate Core-Plus Bond Category.

20 Bloomberg Finance, L.P. 06/30/2006–06/31/2021. Based on monthly data. High Yield = Bloomberg Barclays US High Yield Corporate Bond. Spreads are 268 basis points, 2nd percentile and yields are at all-time lows at 3.53%. Convexity at -0.20 for the ICE BoFA US High Yield Bond Index.

21 Source: JPM, Blackstone Credit as of May 31, 2021.

22 S&P Dow Jones, Bloomberg Finance, L.P., Bloomberg Barclays High Yield Corporate Bond Index and S&P/LSTA Leveraged Loan Index as of 06/30/2021. Based on yield-to-worst.

23 Bloomberg Finance L.P., as of June 30, 2021.

24 Bloomberg Finance L.P., as of June 30, 2021. High Yield = Bloomberg Barclays US High Yield Corporate Bond. Loans = S&P/LSTA Leveraged Loan Index, investment-grade Corporates = Bloomberg Barclays US Corporate Index.

25 FactSet as of 06/30/2021. Based on the annualized standard deviation of the trailing 60-month period. Senior Loans = S&P/LSTA Leveraged Loan Index and High Yield = Bloomberg Barclays US Corporate High Yield Bond Index.

26 Bloomberg Finance L.P., as of July 6, 2021. Based on the return from the Bloomberg Barclays US Corporate Bond Index.

27 Bloomberg Finance L.P., as of July 6, 2021. Based on the return from the Bloomberg Barclays US Corporate Bond Index.

28 Bloomberg Finance L.P., as of July 6, 2021. Based on the profile of the Bloomberg Barclays US Corporate Bond Index and data from 01/01/2000 to 07/06/2021.

29 Bloomberg Finance L.P., as of July 6, 2021, based on the return from the Bloomberg Barclays US Corporate Bond Index and associated maturity bands.

30 Bloomberg Finance L.P., as of July 6, 2021. Based on the Bloomberg Barclays US Corporate Bond Index.

31 Bloomberg Finance L.P., as of July 6, 2021. Based on the Bloomberg Barclays Capital US FRN < 5 Years Index.

32 Bloomberg Finance L.P., as of July 6, 2021. Based on the Bloomberg Barclays US Corporate 1–3 Yr Index.

33 Bloomberg Finance L.P., as of July 6, 2021. Based on the profiles of the Bloomberg Barclays US Corporate Bond Index and Bloomberg Barclays US Intermediate Term Corporate Bond Index.

34 Bloomberg Finance L.P., as of July 6, 2021. Based on the profiles of the Bloomberg Barclays US Corporate Bond Index and Bloomberg Barclays US Intermediate Term Corporate Bond Index and data from 01/01/2000 to 07/06/2021.

35 Bloomberg Finance L.P., as of July 6, 2021. Based on the profiles of the Bloomberg Barclays US Corporate Bond Index and Bloomberg Barclays US Intermediate Term Corporate Bond Index. The DTS for 1- to 10-year corporates is 2.96 versus 9.79 for broad corporates.

The Index Turning Point

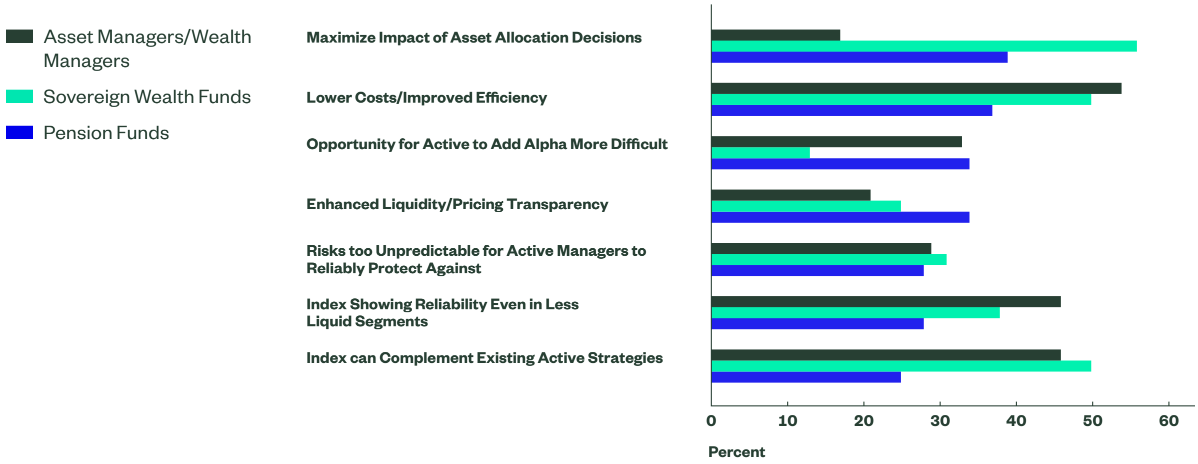
Institutional investors appear to be at a turning point with the construction of fixed income portfolios.

The Index Turning Point

Institutional investors appear to be at a turning point with the construction of fixed income portfolios. According to recent institutional investor research conducted by State Street Global Advisors of more than 350 global respondents,[1] 66 percent said increased use of indexing is a high priority for liquid, core fixed income exposures. Further, 63 percent gave high priority to indexing for less liquid, non-core fixed income exposures over the next three years and 68 percent indicated that exchange traded funds (ETFs) will play a bigger role in their fixed income portfolios.[2]

Indexing appeals to fixed income investors for many of the same reasons it appeals to equity investors — indexing delivers cost-effective, diversified, and liquid exposures. And today's ultra-low rate and spread environment, where fees have a larger impact on yields and returns, makes indexing's cost-effectiveness more attractive than ever.

And with investors relying on indexed fixed income to achieve a broad range of goals, from maximizing the impact of asset allocation decisions to complementing active strategies and accessing less liquid segments of the fixed income market, use will continue to accelerate.



Source: Longitude Study, State Street Global Advisors, as of 30 June 2021.

How Does Fixed Income Indexing Work?

Index tracking can be done through a full replication methodology that holds all of the underlying securities in the index in the respective weights or by employing a sampling strategy. Sampling can be the most efficient technique for constructing portfolios as many broad fixed income indices include a large number of securities, but not all of those securities can be purchased. Couple this with potentially high transaction costs to access illiquid bonds and full replication isn't always possible or practical.

Asset managers such as State Street Global Advisors use a sampling approach when indexing fixed income and managing ETFs. Rather than owning every security in an index, the goal is to build portfolios with the same characteristics as the index.

For example, State Street Global Advisors takes both a top-down and bottom-up approach to limit exposure differences while maximizing the benefits of sampling to ensure that the index's performance and characteristics are replicated.

A top-down approach seeks to align the key risk dimensions of the fixed income strategy to the index, including:

- Duration: Matching on key rate duration exposures across the curve
- Sector exposures: Aligning sector and industry compositions to manage macro impacts
- Quality: Selecting to ensure good alignment along the credit rating dimension
- Credit spread: Examining differences between option-adjusted spread as well as other metrics such as option-adjusted spread duration at the issue and issuer level.

These factors are typically the key variables that drive market beta.

A bottom-up security selection approach is often used in markets such as high yield, emerging markets or convertible bonds that typically can have high idiosyncratic or security specific risk, coupled with higher price volatility. In a bottom-up approach, State Street Global Advisors seeks to identify large or outsize idiosyncratic risks and ideally neutralize or certainly mitigate them. For example, we might decide to purchase one bond versus another from a company based on its position in the credit curve. Cost per exposure (similar to a bid-ask spread or transaction cost) is another key input when evaluating sampling and prioritizing various betas.

Indexing in Less-transparent Markets

Through market structure changes and new portfolio management techniques, an experienced index manager can continue to push the boundaries of what is possible in indexing. Everything from emerging market debt (EMD) and high yield (HY) to convertibles is an exposure that can now be delivered reliably and efficiently via index strategies.

In the past, the high cost of replication, market volatility and inefficiency were the main obstacles to the use of index strategies in these less transparent fixed income markets. Although these concerns were once valid, improvements in price discovery and trading and indexing techniques mean that implementation has moved a long way from index replication. Today, experienced investment managers can minimize and offset these negative effects.

In fact, the cost of indexing in these less transparent markets is no longer prohibitively expensive. The trading cost for EMD hard currency bonds is now comparable to investment-grade corporate bonds, and the cost for local currency-denominated securities is a fraction of that.[3]

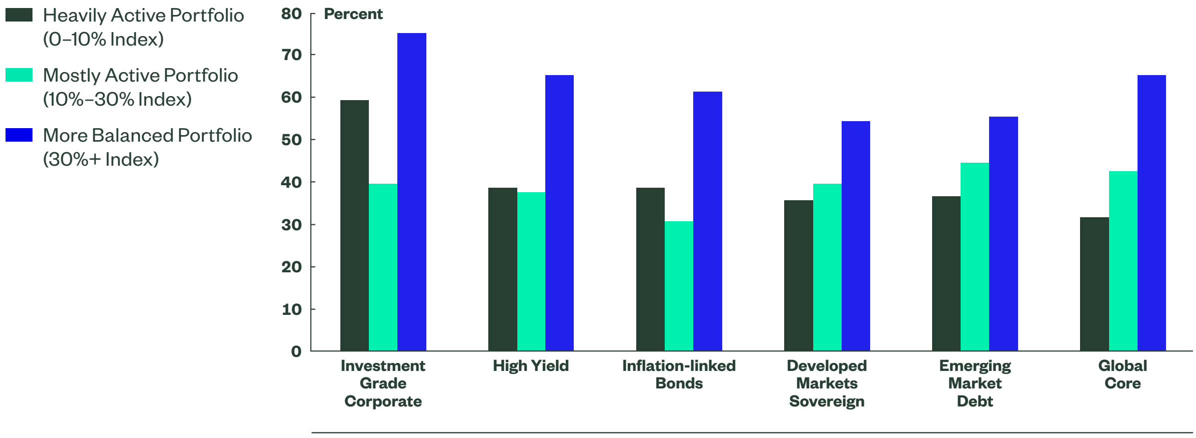
For both HY and EMD, indexers can keep costs low by employing portfolio management techniques such as minimizing turnover — and value can also be added by exploiting market inefficiencies, gaining exposure through the primary markets while also proactively anticipating index changes. Specific to emerging markets, indexers can also control all FX trades (even in controlled currencies) and manage exposure effectively through the forward or nondeliverable forward markets to ultimately deliver benchmark returns through a thoughtful but tightly risk-controlled investment process. This reliable and efficient delivery of EMD returns contrasts with the variability and higher costs associated with active managers in EMD.

Indexing Alongside Active Management

As the sources of alpha have become increasingly better understood, investors are questioning whether they should be paying active fees for what may simply be asset allocation decisions, such as structural overweighting of credit to outperform their benchmarks. Moreover, the bond market dislocation in March 2020 may have prompted some investors to question the wisdom of relying solely on an active manager.

The findings from State Street Global Advisor's research on institutional investors' preferences and intentions show that investors whose fixed income portfolios are predominantly allocated to active strategies were less satisfied with performance across various fixed income sectors over the last three years than those that had a higher share of indexing.

Conversely, investors that complement their alpha-seeking active managers with indexing strategies may be achieving better outcomes in the form of lower costs and, importantly, the ability to maximize the impact of their asset allocation decisions. For institutional investors with more balanced indexed/active fixed income portfolios, the percentage of those that were somewhat satisfied/extremely satisfied with active managers' performance was materially higher than those with heavily active and mostly active portfolios.[4]



Source: Longitude Study, State Street Global Advisors, as of 30 June 2021.

Because index strategies can complement active strategies and provide investors with greater flexibility to tactically allocate and fine-tune exposures to target allocations, more investors now employ both active and index approaches to their overall fixed income program.

State Street Global Advisors Fixed Income Indexing Capabilities

With indexing set to play a bigger role in fixed income allocations, these four steps can help you analyze your current fixed income approach and determine whether it can be improved:

1. **Evaluate** What are the costs and complexities of your current approach?

2. **Determine** Are your objectives being met consistently and efficiently?

3. **Analyze** If employing multiple managers, are there offsets to their styles? Does that impact the overall outcome?

4. **Act** Should you replace the weaker manager(s) with an index strategy to reduce costs, improve performance reliability or facilitate tactical allocations?

In many instances, a switch to indexing can bring greater cost-effectiveness and performance transparency as well as diversification and liquidity benefits.

Choosing an experienced index manager is also key. Founded in the late 1990s, State Street Global Advisor's Global Fixed Income Beta Solutions team has accumulated significant knowledge and insight through multiple market cycles, crises and conditions. The strength of our indexing process and risk management has been tested during bouts of volatility, not only during calm markets. And today our mission remains to deliver reliable, transparent and risk-controlled exposure to our clients' benchmarks as precisely and cost-effectively as possible.

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Endnotes

1 In partnership with Longitude Research, a Financial Times company. The research also included in-depth telephone interviews with two institutional portfolio managers (one in North America and one in Europe).

2 Fixed Income: Preparing for the Big Shift, State Street Global Advisors, June 2021.

3 The Move to Indexing, State Street Global Advisors, May 2021.

4 Fixed Income: Preparing for the Big Shift, State Street Global Advisors, June 2021.

Glossary

Bloomberg Barclays U.S. Aggregate Bond Index A benchmark that provides a measure of the performance of the US dollar-denominated investment-grade bond market. The “Agg” includes investment-grade government bonds, investment-grade corporate bonds, mortgage pass-through securities, commercial mortgage-backed securities, and asset-backed securities that are publicly for sale in the US.

Emerging Markets Developing countries where the characteristics of mature economies — such as political stability, market liquidity, and accounting transparency — are beginning to manifest. Emerging market investments are generally expected to achieve higher returns than those of developed markets but are also accompanied by greater risk, decreasing their correlation to investments in developed markets.

Fixed Income A type of investing, usually involving bills, notes, or bonds, for which real return rates or periodic income is received at regular intervals and at reasonably predictable levels. Fixed income can also refer to a budgeting style that is based on fixed pension payments.

High Yield A company or bond that is rated “BB” or lower is known as junk grade or high yield, in which case the probability that the company will repay its issued debt is deemed to be speculative.

Inflation An overall increase in the prices of an economy’s goods and services during a given period, translating to a loss in purchasing power per unit of currency. Inflation generally occurs when growth of the money supply outpaces growth of the economy. Central banks attempt to limit inflation, and avoid deflation, in order to keep the economy running smoothly.

Investment-Grade Credit A fixed-income security, such as a corporate or municipal bond, that has a relatively low risk of default. Bond-rating firms, such as Standard & Poor’s, use different lettered descriptions to identify a bond’s credit quality. In S&P’s system, investment-grade credits include those with “AAA” or “AA” ratings (high credit quality), as well as “A” and “BBB” (medium credit quality). Anything below this “BBB” rating is considered non-investment grade.

J.P. Morgan EMBI Global Diversified A benchmark of US dollar-denominated government bonds issued by emerging market countries. The benchmark limits the weights of countries with bigger debt by excluding some of these countries’ debt outstanding.

J.P. Morgan GBI-EM Global Diversified Index An investable fixed-income benchmark of local-currency emerging market bonds that includes only countries directly accessible by most of the international investor base.

Senior Loans Floating-rate debt issued by corporations and backed by collateral, such as real estate or other assets.

Treasuries The debt obligations of a national government. Also known as “government securities,” Treasuries are backed by the credit and taxing power of a country, and are thus regarded as having relatively little or no risk of default.

Volatility The tendency of a market index or security to jump around in price. Volatility is typically expressed as the annualized standard deviation of returns. In modern portfolio theory, securities with higher volatility are generally seen as riskier due to higher potential losses.

Yield The income produced by an investment, typically calculated as the interest received annually divided by the price of the investment. Yield comes from interest-bearing securities, such as bonds and dividend-paying stocks.

Important Information

Important Risk Discussion

Investing involves risk including the risk of loss of principal.

The views expressed in this material are the views of Matthew Bartolini, Emily Theurer, Marvin Loh, Lyubka Dushanova and David Furey through the period ended June 30, 2021 and are subject to change based on market and other conditions. This document contains certain statements that may be deemed forward-looking statements. Please note that any such statements are not guarantees of any future performance and actual results or developments may differ materially from those projected.

Diversification does not ensure a profit or guarantee against loss.

Prior to 02/26/2021, the SPDR Blackstone Senior Loan ETF was known as the SPDR Blackstone / GSO Senior Loan ETF.

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The value of the debt securities may increase or decrease as a result of the following: market fluctuations, increases in interest rates, inability of issuers to repay principal and interest or illiquidity in the debt securities markets; the risk of low rates of return due to reinvestment of securities during periods of falling interest rates or repayment by issuers with higher coupon or interest rates; and/or the risk of low income due to falling interest rates. To the extent that interest rates rise, certain underlying obligations may be paid off substantially slower than originally anticipated and the value of those securities may fall sharply. This may result in a reduction in income from debt securities income.

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

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

Actively managed funds do not seek to replicate the performance of a specified index. An actively managed fund may underperform its benchmarks. An investment in the fund is not appropriate for all investors and is not intended to be a complete investment program. Investing in the fund involves risks, including the risk that investors may receive little or no return on the investment or that investors may lose part or even all of the investment.

Investments in Senior Loans are subject to credit risk and general investment risk. Credit risk refers to the possibility that the borrower of a Senior Loan will be unable and/or unwilling to make timely interest payments and/or repay the principal on its obligation.

Senior Loan will result in a reduction in the value of the Senior Loan and consequently a reduction in the value of the Portfolio's investments and a potential decrease in the net asset value (NAV) of the Portfolio. Securities with floating or variable interest rates may decline in value if their coupon rates do not keep pace with comparable market interest rates. Narrowly focused investments typically exhibit higher volatility and are subject to greater geographic or asset class risk. The fund is subject to credit risk, which refers to the possibility that the debt issuers will not be able to make principal.

Because of their narrow focus, financial sector funds tend to be more volatile. Preferred Securities are subordinated to bonds and other debt instruments, and will be subject to greater credit risk. The municipal market can be affected by adverse tax, legislative or political changes and the financial condition of the issuers of municipal securities. The fund may contain interest rate risk (as interest rates rise bond prices usually fall); the risk of issuer default; inflation risk; and issuer call risk. The Fund may invest in US dollar-denominated securities of foreign issuers traded in the United States.

Investments in emerging or developing markets may be more volatile and less liquid than investments in developed markets and may involve exposure to economic structures that are generally less diverse and mature and to political systems which have less stability than those of more developed countries.

Foreign investments involve greater risks than US investments, including political and economic risks and the risk of currency fluctuations, all of which may be magnified in emerging markets.

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

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

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