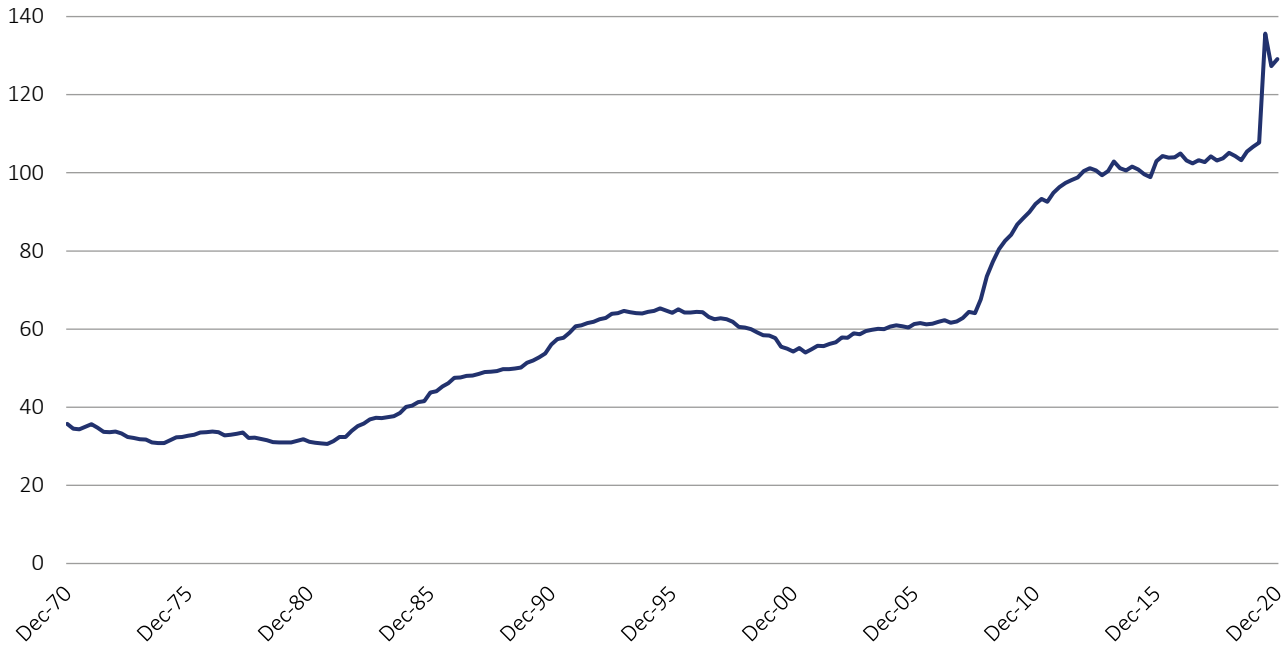
MARKET/ECONOMIC RESEARCH

Wilshire Research Note: Monitoring the Impact of Growing Government Debt on the Fixed Income Market

The United States has experienced two meaningful increases in government debt issuance in the past 15 years. As the Global Financial Crisis hit its pinnacle (maybe better described as a nadir) in late 2008, total federal debt increased by $2.1 trillion, or 22%, from June 2008 to June 2009. More recently, U.S. debt increased $4.4 trillion, or 19%, for the one-year ending March 2021 (totaling $28 trillion) in response to the economic damage caused by the Coronavirus epidemic. The combination of these two events more than doubled outstanding federal debt from 60% of the country's annual economic output to nearly 130%.

Total Public Debt / GDP (%)



Not surprisingly, the Treasury segment of the core fixed income market has grown substantially against this backdrop. First, it is worth noting that the total Treasury market value within fixed income benchmarks do not reflect the full $28 trillion referenced above. This results from benchmark construction methodology rules that often limit the amount and type of debt included – for example, short-term Treasury bills and non-tradable securities such as savings bonds are often excluded. The outstanding market value of the Treasury segment within the Bloomberg Barclays U.S. Aggregate Index is currently equal to only $9.5 trillion (i.e. just over one-third of U.S. debt outstanding). Despite that meaningful difference, the weight of Treasuries within the broad market index has grown since 2008.

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Treasury / Aggregate Index (%)

While elevated, today's levels of Treasury concentration within the bond market are below those seen in the 1980s when Treasuries represented nearly half of the fixed income market. However, the shrinking federal deficit of the 1990s, when the subsequent index concentration of Treasuries fell from nearly 50% to approximately 25%, forms a more recent experience for institutional investors. One consequence of this shift – for those who broadly invest in core bonds – is the ever-changing risk profile of the broad market as the relative contributions from its underlying and disparate sector components fluctuate with their shifting index weights. The risk and return profiles of these sectors are not the same, as each is influenced by a variety of unique risk exposures such as duration risk and credit risk. At similar maturity levels, Treasuries will typically deliver the lowest expected return, with the expected returns of other fixed income segments increasing through their varying exposure to spread product (i.e., credit risk). However, due to maturity differences and their corresponding interest rate sensitivity (i.e., duration), the Treasury sector does not exhibit the lowest risk as measured by volatility. Due to its combination of relatively low duration and spread risk, the market segment with the lowest standard deviation of return has, historically, been Securitized fixed income. To provide context on their potential impacts, the table below contains the expected return and risk (using Wilshire's March 2021 assumptions) based on the market weights that existed in December 2007 and December 2020 and compares these expectations to hypothetical market structures where 1) the Treasury segment grows by another 5%-points and 2) where Treasuries reach a 50% market weight (while in both cases assuming that the other relative weights remain constant).

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Market Segment	DEC-07	DEC-20	TRS + 5%	TRS = 50%
Treasury	22.4%	37.0%	42.0%	50.0%
Government-Related	13.0%	6.3%	5.8%	5.0%
Corporate	19.6%	27.4%	25.2%	21.7%
Securitized	45.1%	29.4%	27.0%	23.3%
Expected Return	2.25%	2.05%	2.00%	1.90%
Expected Risk	3.95%	4.30%	4.30%	4.30%
Sharpe Ratio	0.26	0.19	0.18	0.15

In moving from 2007's market structure to the current construct, the expected return on U.S. core bonds has declined (by 20 basis points) while expected risk has increased (by 35 basis points). As a reminder, since we are using a static set of capital market assumptions across these dates (i.e., Wilshire's March 2021 assumptions), these changes are focused on highlighting only the impact from fluctuations in the underlying market structure to capture their subsequent impact on lowering the expected risk-adjusted return (i.e., Sharpe Ratio) from 0.26 to 0.19. As can be seen in the columns that imagine a growing relative Treasury market weight, the Sharpe ratio continues to degrade largely due to a declining expected return. During this time of historically low rates, any decrease in return to a core portfolio allocation further pressures investors to consider increasing their overall risk profile in pursuit of targeted levels of return.

One potential response to these structural conditions is to unpackage core bond allocations and separately manage targeted exposures to the four underlying market segments. Such an approach would add to the complexity of portfolio implementation, as it would necessitate retaining separate investment mandates for each portfolio component. While some institutions might benefit from such an approach, Wilshire views broadly diversified core bond allocations to be suitable for most investors. More broadly, as the primary risk dampener of many investment portfolios, it is important for investors to monitor the impact of market structure on the expected return, risk and diversification properties of core bonds. In managing around these changes and their likely ramifications on overall portfolio risk, investors should consider making other portfolio adjustments to keep overall portfolio risk characteristics in line with long-term objectives.

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