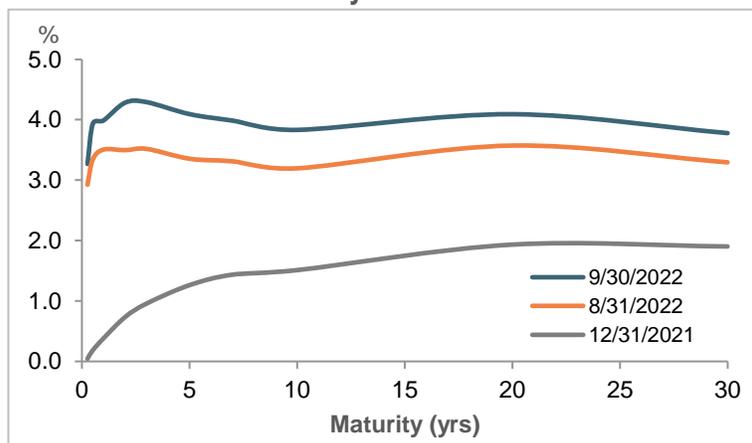


MARKET NEWS

- A broad risk-off sentiment swept global markets in September amid persistent inflationary pressures, tightening monetary policy, and concerns that global central banks' hawkish policies will lead to a recession
 - August CPI rose more than expected, increasing 8.3% year-over-year
- At its September meeting, the Federal Reserve (Fed) announced its third consecutive interest rate hike of 75bps, bringing the federal funds target range to 3 – 3.25%; the Fed's hawkish sentiment continued to intensify as Fed Chair Powell warned that the Fed will tolerate a recession, if necessary, to curb inflation
 - Treasury yields increased across the curve and the Treasury curve continued to invert; the spread between the 2- and 30-year Treasury rate closed the month inverted at -51bps after reaching its most inverted level this century on September 26th at -61bps
 - As a result of the Fed's aggressive pace of monetary tightening to combat inflation, several central banks, including the Bank of England, took measures to stabilize exchange rates against the strengthening US dollar
- Investment-grade supply was heavy in the beginning of the month until market volatility kept most borrowers on the sidelines; issuers priced only \$78 billion of a projected \$145 billion
 - Spreads widened 19bps month-over-month to 159bps, after reaching its widest level in over 2 years of 164bps on September 29th
- Following the slowest August since 2014, high yield supply continued to stall in September, marking the slowest September for new bond sales since 2011 with only \$9 billion priced given the rising cost of borrowing and risk-averse investors
 - The yield of the Bloomberg US High Yield Index increased 126bps to hover near a more than two-year high of 9.68% and spreads widened 68bps to 552bps as a result of a broad risk-off sentiment
- Agency mortgage-backed securities (MBS) continued to underperform Treasuries and other securitized sectors during the month amid weak technicals, rising mortgage rates, and falling home prices
- Municipal demand weakened in September as investors withdrew cash from muni funds for the eighth straight week; munis underperformed Treasuries with the 5-year muni/Treasury ratio increasing 8%, from 69% to 77%

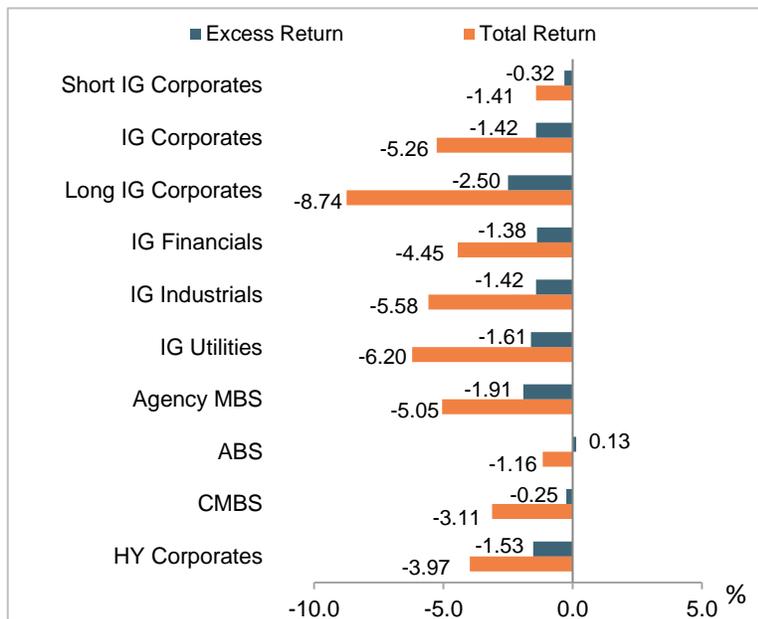
MARKET STATISTICS

Treasury Yield Curve



Maturity	2-year	5-year	10-year	20-year	30-year
9/30/2022	4.28	4.09	3.83	4.09	3.78
MTD Change	0.79	0.74	0.64	0.52	0.49

MTD Returns



As of: 9/30/22. Sources: Bloomberg

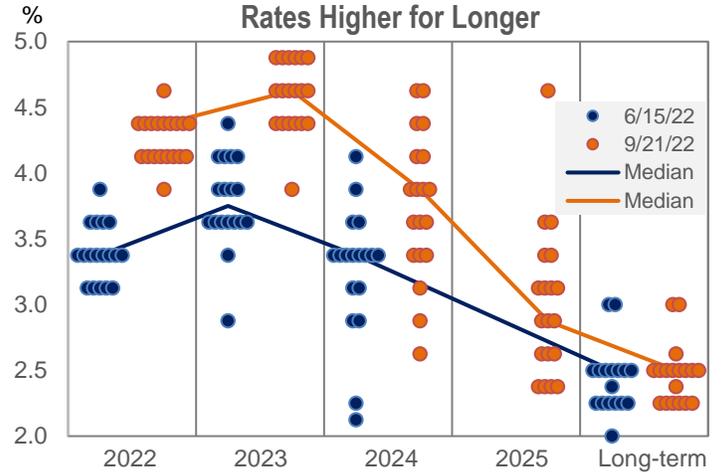
Excess returns are the curve-adjusted excess return of a given index relative to a term structure-matched position in Treasuries.

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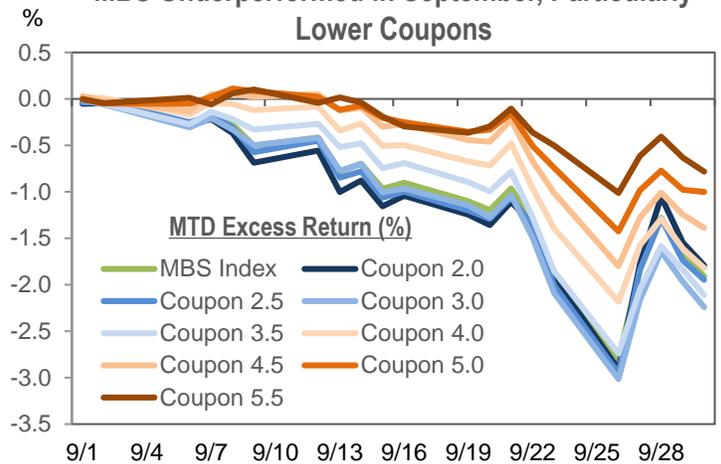
SEPTEMBER MARKET THEMES

- Treasury yields across the curve moved materially higher amid persistent inflation and the Fed's updated outlook for the path of interest rates.
 - August CPI beat expectations by 0.2% at 8.3% year-over-year
 - The dot plot showed most Fed officials anticipate the federal funds rate to not only be higher than where they predicted in June, but for longer as well.
- Front-end tenors vied for the highest point of the Treasury curve throughout the month depending on the latest data and perception of the Fed's terminal rate and timing
 - While the 12-month was the highest yielding point of the curve after the CPI release, the 3-year rate ended the month higher after the updated dot plot.
- Agency MBS broadly lagged with underperformance accelerating during the second half of the month and ending with the worst ever month of excess return at -191bps.
- Volatility stemmed from the uncertain impact of quantitative tightening and higher rates - the average 30-year mortgage rate increased from 6% to over 7% - reducing affordability.
 - This led to duration extensions and clouded future prepayment speeds for lower coupon mortgages.
- The Fed later announced it is holding off outright sales of its \$2.7 trillion of mortgage bonds which helped support the sector, at least temporarily.
- The underperformance was led by lower-coupon mortgages, pushing the Bloomberg MBS Index convexity into positive territory and to the highest level on record of 0.14.
- A new UK political regime announced plans to cut taxes materially while the Bank of England (BOE) is actively tightening monetary policy.
 - These actions typically result in higher rates and spurred a large selloff across the UK Gilt curve; 30-year yields rose from 3% to 5% in just over a month, then reversed course to end the month at 4%.
- UK pensions with LDI driven overlays (duration added via interest rate swaps) saw massive single day margin calls and emerged as forced sellers of debt.
- Selling pressures pushed US corporate bonds wider at the end of September, however, the BOE announced temporary purchases "at whatever scale is necessary" of long-dated UK government issues, which calmed markets.

Dot Plot Shows the Fed is Prepared To Keep Rates Higher for Longer



MBS Underperformed in September, Particularly Lower Coupons



The Yield Increased Almost 150bps in Less Than a Week Before Falling Back Below 4%



Sources: Bloomberg as of 9/30/22. Excess returns are the curve-adjusted excess return of a given index relative to a term structure-matched position in Treasuries. The views contained in this report are those of Income Research & Management ("IR+M") and are based on information obtained by IR+M from sources that are believed to be reliable but IR+M makes no guarantee as to the accuracy or completeness of the underlying third-party data used to form IR+M's views and opinions. This report is for informational purposes only and is not intended to provide specific advice, recommendations, or projected returns for any particular IR+M product. No part of this material may be reproduced in any form, or referred to in any other publication, without express written permission from Income Research + Management. "Bloomberg®" and Bloomberg Indices are service marks of Bloomberg Finance L.P. and its affiliates, including Bloomberg Index Services Limited ("BISL"), the administrator of the index (collectively, "Bloomberg") and have been licensed for use for certain purposes by IR+M. Bloomberg is not affiliated with IR+M, and Bloomberg does not approve, endorse, review, or recommend the products described herein. Bloomberg does not guarantee the timeliness, accuracy, or completeness of any data or information relating to any IR+M product.