



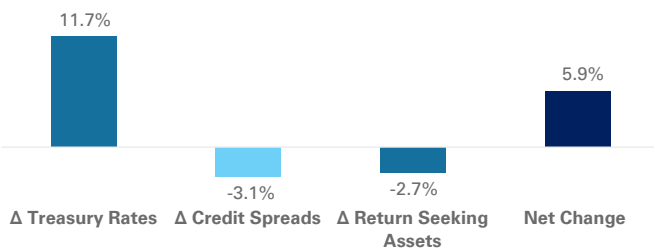
NEPC PENSION MONITOR

THIRD QUARTER 2023

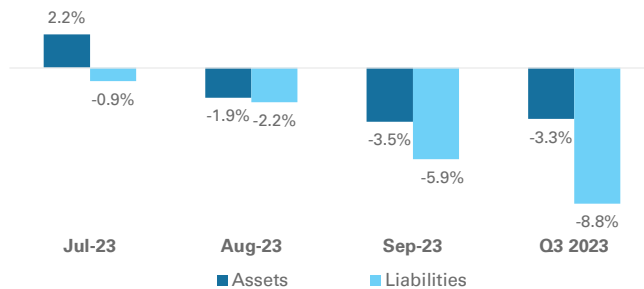
Increases in U.S. Treasury rates contributed to an uptick in liability discount rates and improved funded ratios for many U.S. corporate pension plans in the third quarter of 2023. However, for the second straight quarter, losses from return-seeking assets contributed to declines in funded ratios, offsetting gains from the decline in liabilities. During the quarter, global equity markets struggled as inflation remained elevated and the Federal Reserve continued to hike rates. During the three months ended September 30, the Fed increased the Fed Funds Rate by 25 basis points. Estimated discount rates for pension liabilities, based on long-duration fixed-income yields, also rose, reaching their highest levels in more than five years. We estimate that the funded status of a total-return plan increased 5.9%, and the LDI-focused plan experienced a funded status decrease of 0.3% in the third quarter.

HYPOTHETICAL OPEN/TOTAL-RETURN PLAN

Funded Status Attribution

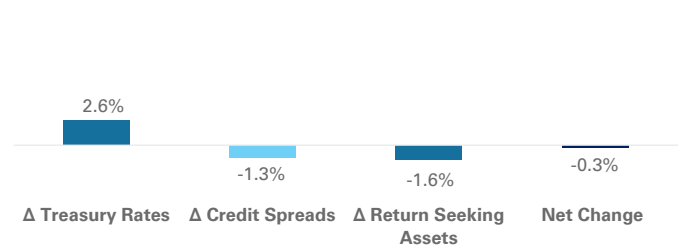


↑ The funded status of the total-return plan increased as Treasury yields rose, offset by the changes in return-seeking assets and credit spreads.

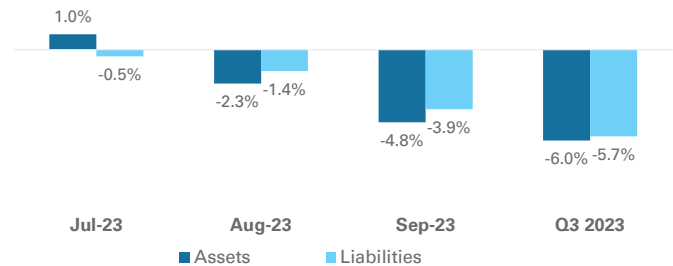


HYPOTHETICAL FROZEN/LDI-FOCUSED PLAN

Funded Status Attribution



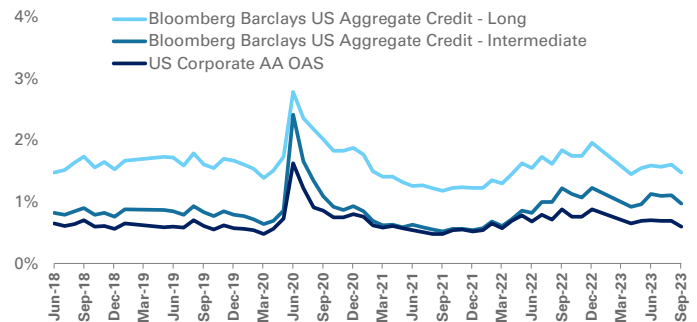
↓ The funded status of the LDI-focused plan increased as Treasury rates rose, offset by the changes in return-seeking assets and credit spreads. The plan is 87% hedged as of September 30.



RATE MOVEMENT

Short- and long-term interest rates moved higher for the three months ended September 30th. The 30-year Treasury yield increased 88 basis points during the quarter to 4.73%. Offsetting the rise in yields was a 15 basis point decline in long credit spreads. Taken together, higher Treasury yields in the third quarter resulted in an increase in pension discount rates, with the rate for the open total-return plan increasing 66 basis points to 5.89% and the discount rate for the frozen LDI-focused plan rising 64 basis points to 5.83% as of September 30.

Credit Spread Movement



RETIREE BUYOUT INDEX

The Buyout Index for Retirees is estimated to be approximately **103.6%** of PBO as of September 30, 2023

RECENT INSIGHTS FROM NEPC

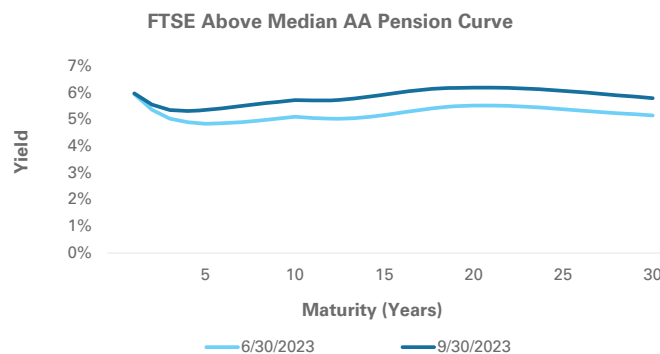
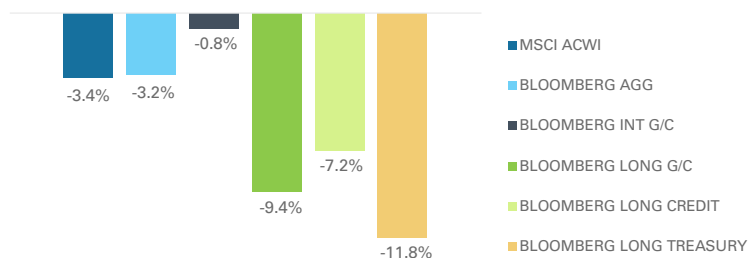
2023 Asset Allocation Roundtable
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CONSIDERATIONS FOR PLAN SPONSORS

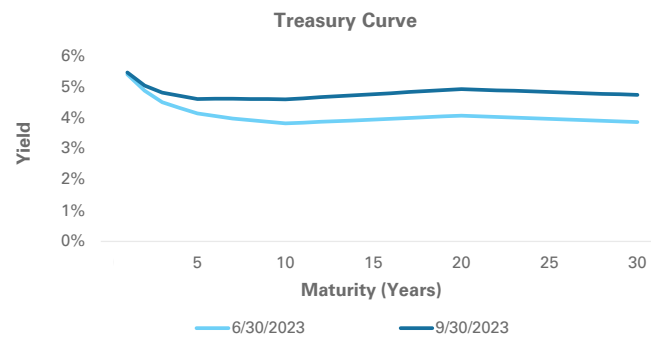
Equity and fixed-income markets experienced negative performance in the third quarter of 2023. Plan sponsors may find the current market environment difficult as stocks and bonds remain volatile though higher interest rates have generally been positive for plan funded status. Notably, long-term interest rates are materially higher year-to-date, while strong equity market returns earlier in the year provided an opportunity for total-return plans to (re)consider LDI to better meet objectives. For certain plan sponsors, higher-funded status levels are also providing a tailwind in the form of lower required contributions and declining PBGC variable-rate premiums. NEPC consultants are available to discuss the benefits and cost of various pension finance and derisking strategies.

MARKET ENVIRONMENT AND YIELD CURVE MOVEMENT



U.S. equities decreased 3.3% in the third quarter of 2023. Non-U.S. developed market stocks modestly underperformed the U.S. as the MSCI EAFE decreased 4.1% during the quarter; the MSCI Emerging Market Index decreased 2.9% during the same period.

Treasury yields increased and the yield curve remained inverted. The 30-year Treasury yield was 88 basis points higher for the quarter, resulting in a total return of -11.8% for the Barclays Long Treasury Index. During the same period, the Barclays Long Credit Index declined 7.2%.



DISCLOSURES

Liability returns are based on the FTSE Above Median Pension Discount Curve. Liabilities for the two hypothetical plans are based on sample benefit payments of two unique plans, set equal to stable duration targets as of December 31, 2018. The total-return plan reflects an open plan with a 15-year duration, while the LDI-focused plan represents a frozen plan with a 10-year duration. The benefit payments are not rolled forward each month to maintain the duration targets. No future benefit accruals or benefit payments are assumed in order to isolate the performance of plan's liabilities due to changes in interest rates. The funded status of each hypothetical plan was reset to 90% funded (Total-Return) and 100% funded (LDI focused) as of December 31, 2022.

The total-return plan assumes an allocation of 60% global equity, 40% core bonds. The LDI-focused plan assumes an asset allocation of 40% global equity and 30% long credit, 20% long Treasuries, 10% intermediate government/credit, with a greater emphasis on hedging liability duration. Monthly rebalancing is assumed. We do not assume any fees, expenses, benefit payments or contributions are made during the year in order to isolate the impact of market returns on the hypothetical allocations.

NEPC's Retiree Buyout Index is estimated using midpoint annuity purchase rates published by Brentwood Advisors, discounted against the cash flows of a sample retiree population, and compared with the same discounted cashflows using the FTSE Above Median Pension Discount Curve. Actual annuity pricing may vary substantially based on multiple factors.

Asset benchmarks used to measure asset returns are sourced from FactSet: MSCI ACWI Index, Barclays Aggregate Index, Barclays Intermediate Gov/Credit Index, Barclays Long Gov/Credit Index, Barclays Long Credit Index, Barclays Long Treasury Index, Barclays US Aggregate Intermediate Credit spread, Barclays US Aggregate Long Credit spread, and US Corporate AA Option-Adjusted Spread.

Past performance is no guarantee of future results.