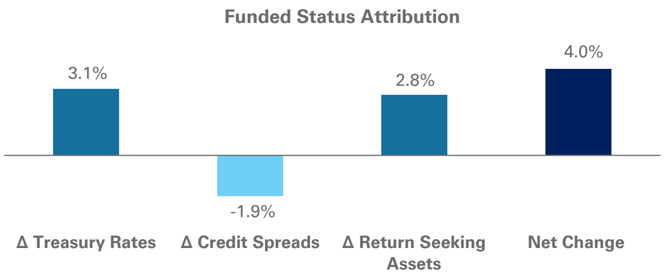
NEPC PENSION MONITOR

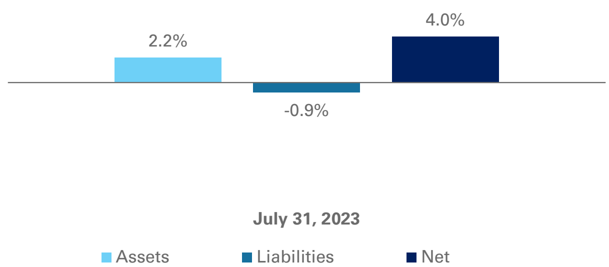
JULY 2023

In July, pension plan sponsors experienced rising liability discount rates, as Treasury rates moved to year-to-date highs. Continuing positive returns from global public equities also helped increase funded status for many corporate pension plans. Plans likely experienced gains in funded ratios due to lower liabilities from increasing liability discount rates and from higher risk asset returns. The Treasury yield curve experienced increases across most tenors last month with the largest increases occurring at longer maturities. Total-return-focused plans likely experienced gains in funded status due to lower liabilities combined with strong asset returns from global equity markets. NEPC's hypothetical total-return pension plan experienced a funded status increase of 4% compared to an improvement of 1.6% for our LDI-focused plan.

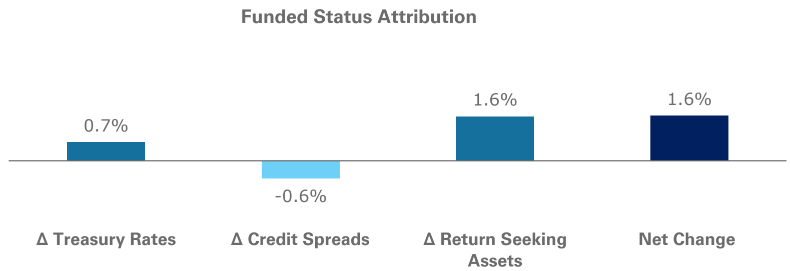
HYPOTHETICAL OPEN/TOTAL-RETURN PLAN



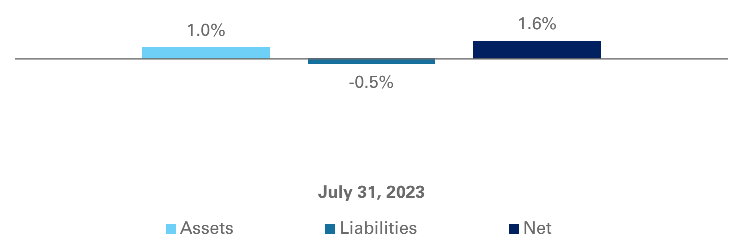
The funded status of the total-return plan increased due to higher Treasury rates and strong gains from return-seeking assets, which were offset by a decrease in credit spreads.



HYPOTHETICAL FROZEN/LDI-FOCUSED PLAN



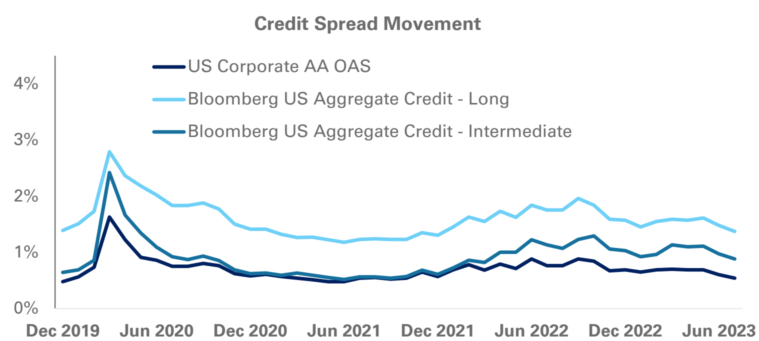
The funded status of the LDI focused plan rose due to higher Treasury rates and return-seeking assets. The plan is 87.5% hedged as of July 31.



RATE MOVEMENT COMMENTARY

The Treasury yield curve increased by approximately 15 basis points in July, and remained inverted from the one- to 10-year tenors. The 10-year yield increased 16 basis points to 3.97%, while the 30-year yield increased 17 basis points to 4.02%. Rates across the yield curve have now increased on a year-to-date basis. Long- and intermediate-credit spreads decreased during the month of July.

The movement in Treasury rates and credit spreads resulted in higher pension discount rates used to discount pension liabilities. The discount rates for NEPC's hypothetical pension plans rose approximately six basis points for the open total-return plan rate at 5.29%, while the discount rate for the frozen LDI-focused plan was up approximately four basis points to 5.23%.



RETIREE BUYOUT INDEX

The Buyout Index for retirees is estimated to be approximately **103.4%** of PBO, as of July 31, 2023

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Street Smarts: How Does the U.S. Debt Downgrade Affect Your Portfolio?
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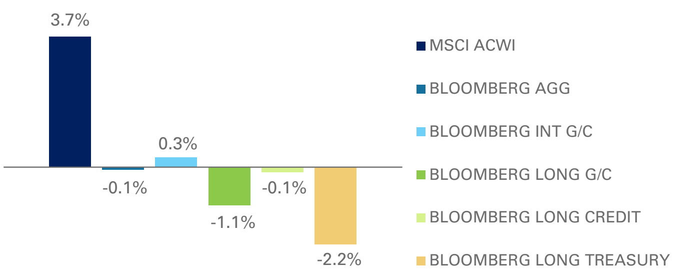
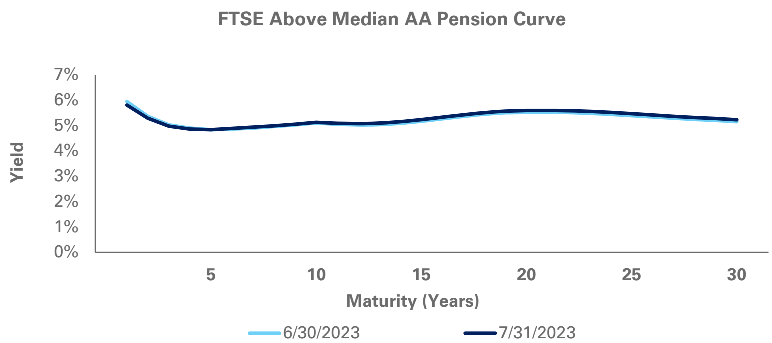
JULY 2023

PLAN SPONSOR CONSIDERATIONS

Equities were in the black in July, while long-dated fixed-income markets experienced losses due to higher Treasury rates. Treasury yields picked up in July with the yield curve shifting higher and hitting year-to-date highs. Modest decreases in credit spreads offset some of the rate increases, resulting in slightly higher discount rates used for valuing pension liabilities. At NEPC, we anticipate continued market volatility and the potential for market disruption. Plan sponsors should remain diligent about monitoring sources of change in funded status versus expectations as equities and interest rates are likely to remain volatile. This includes closely monitoring hedge ratio ranges to avoid becoming overhedged to longer maturity rates with a flatter yield curve.

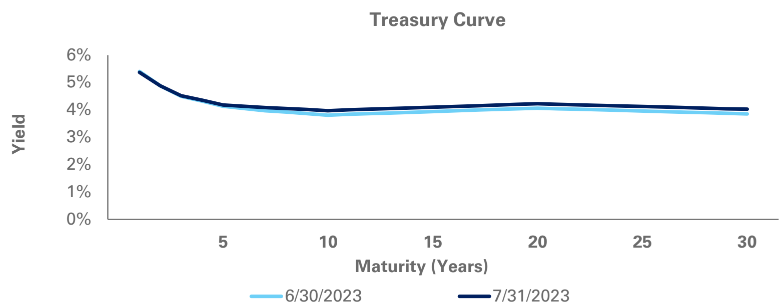
MARKET ENVIRONMENT AND YIELD CURVE MOVEMENT





In July, U.S. equities gained 3.2%, according to the S&P 500 Index. Non-U.S. equity markets performed similarly to U.S. stocks with international developed markets also gaining 3.2% in July, according to the MSCI EAFE Index. Emerging market equities were up 6.2% last month, according to the MSCI EM Index. Broadly, global equities gained 3.7% during the same period, according to the MSCI ACWI Index.

The Treasury curve increased by approximately 16-to-17 basis points from June to July at all tenors 10 and greater and remained inverted from the one- to 10-year tenors. This resulted in losses for fixed-income markets, with long-credit fixed income experiencing only modest losses due to contracted credit spreads. During the month, the Bloomberg Long Treasury Index declined 2.2% and the Bloomberg Long Credit Index lost 0.1%.



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 at 100% funded as of December 31, 2021.

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.