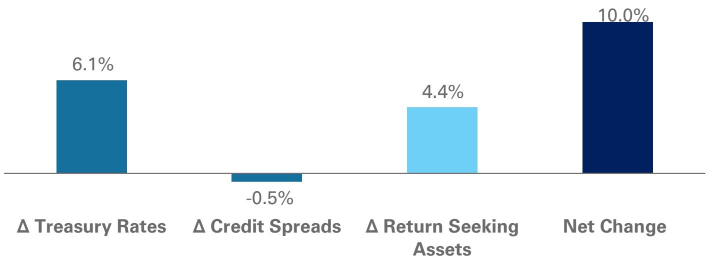
NEPC PENSION MONITOR

OCTOBER 2022

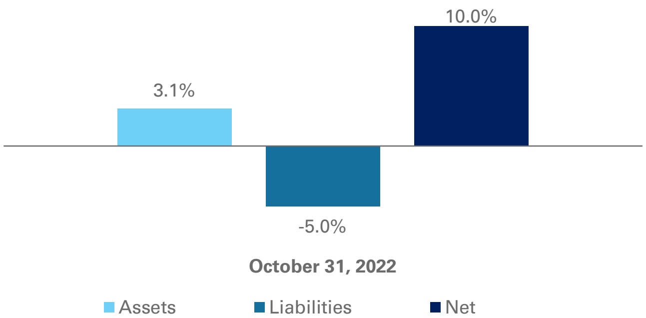
Corporate pension plans recorded significant gains in funded status in October amid rising discount rates and rallying equities. The Treasury yield curve rose and remained inverted between the one- and 10-year tenors as investors continued to grapple with the Federal Reserve's hawkish stance and its impact on economic conditions. Total-return plans outpaced LDI-oriented plans due to positive equity returns and a lower hedge to rising discount rates as Treasury rates ticked up. NEPC's hypothetical pension plans witnessed a funded status gain of 10% for the total-return plan compared to 3.6% for the LDI-focused plan.

HYPOTHETICAL OPEN/TOTAL-RETURN PLAN

Funded Status Attribution

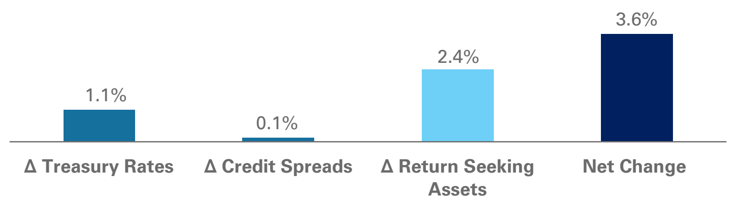


The funded status of the total-return plan increased by 10% due to higher yields, lower liabilities and positive equity market returns.

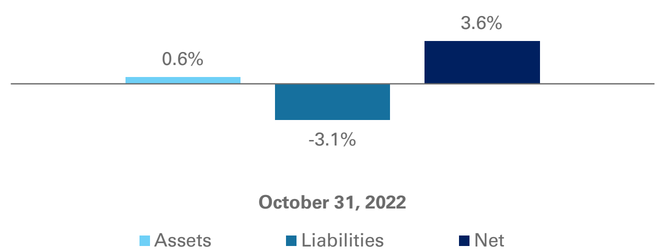


HYPOTHETICAL FROZEN/LDI-FOCUSED PLAN

Funded Status Attribution



The funded status of the LDI-focused plan increased by 3.6% due to higher yields, lower liabilities and positive equity market returns. The plan is 82% hedged as of October 31.

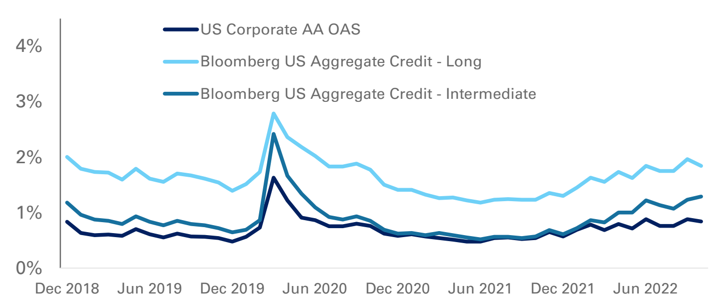


RATE MOVEMENT COMMENTARY

The Treasury curve continued to rise over the past month. The curve remains inverted from the one- to 10-year tenors. The 10-year yield rose by 27 basis points to 4.10%, and the 30-year yield rose by 43 basis points to 4.22%. Long credit spreads narrowed by 12 basis points and intermediate spreads widened by six basis points.

The movement in Treasury rates and credit spreads resulted in an increase in pension discount rates used to discount pension liabilities. The discount rates for NEPC's hypothetical pension plans increased 34-to-37 basis points with the open total-return plan rate rising to 5.77%, while the discount rate for the frozen LDI-focused plan increased to 5.69%.

Credit Spread Movement



RETIREE BUYOUT INDEX

The Buyout Index for retirees is estimated to be approximately **104.8%** of PBO, as of October 31, 2022

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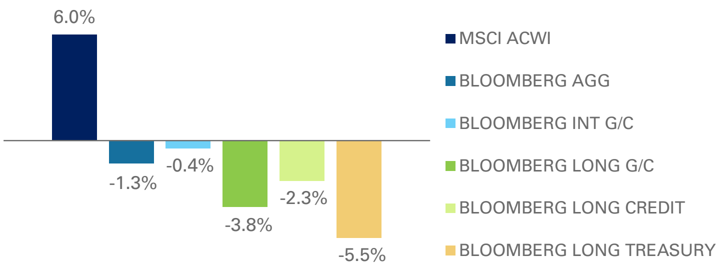
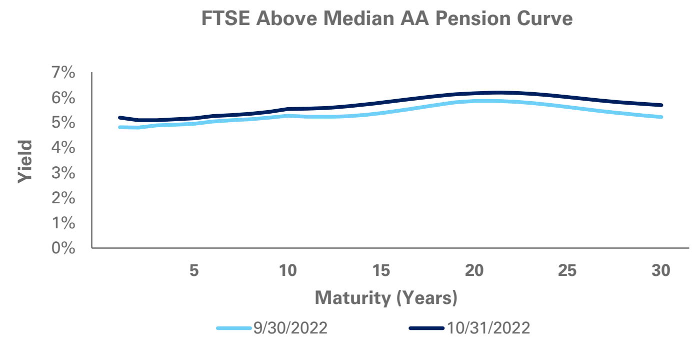
OCTOBER 2022

PLAN SPONSOR CONSIDERATIONS

Equity markets were largely positive for the month, offsetting losses from fixed-income markets. The Treasury yield curve rose, steepened modestly, and remained inverted between the one- and 10-year tenors. Treasury yields increased and inflated discount rates used for valuing pension liabilities. At NEPC, we anticipate market volatility and the potential for market disruption with the Fed continuing to increase short-term rates to battle inflation. 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 interest rates as yields rise.

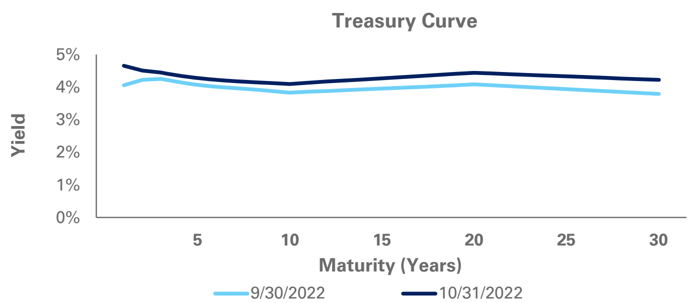
MARKET ENVIRONMENT AND YIELD CURVE MOVEMENT





Equities in developed markets increased for the month with U.S. equities returning 8.1%, according to the S&P 500 Index, and international developed markets returning 7.2%, according to the MSCI EAFE Index. However, emerging market equities were in the red with losses of 3.1%, according to the MSCI EM Index. On a global basis, the MSCI ACWI Index returned 6% in October.

The Treasury curve rose over the month. The curve remains inverted from the one- to 10-year tenors. This resulted in losses for fixed income, particularly for longer durations, as the Bloomberg Long Treasury Index declined 5.5% and the Bloomberg Long Credit Index lost 2.3%.



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.