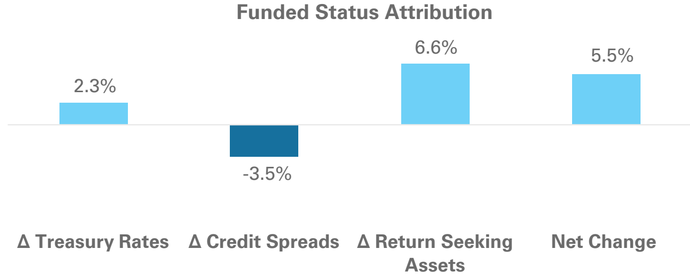
NEPC PENSION MONITOR

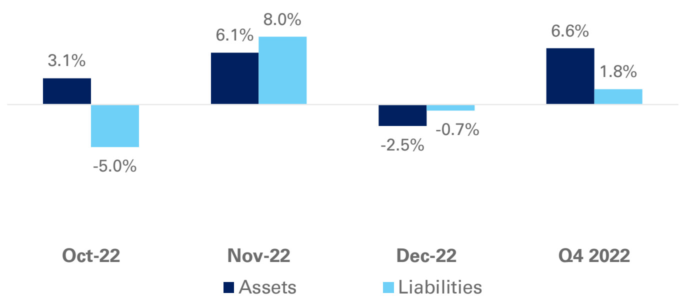
FOURTH QUARTER 2022

The funded status of most U.S. corporate pension plans increased in the fourth quarter, driven by gains from high-return assets. Capital markets in the fourth quarter improved and short-term interest rates increased by another 75 basis points. During the quarter, the Federal Reserve delivered rate hikes of 75 and 50 basis points. Estimated plan liabilities based on long-duration fixed-income yields were higher in the fourth quarter, but strong asset returns drove funded status gains for the three months ended December 31. The funded status of a total-return plan rose 5.5% with lower allocations to long-duration fixed income, and the LDI-focused plan saw its funded status go up 4%.

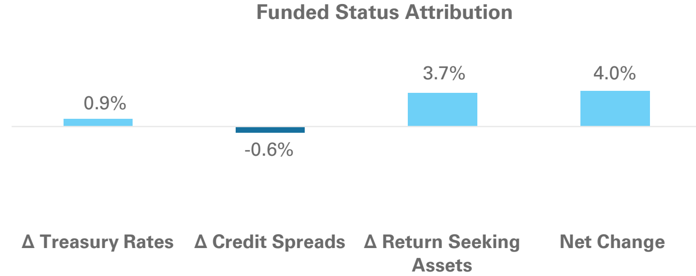
HYPOTHETICAL OPEN/TOTAL-RETURN PLAN



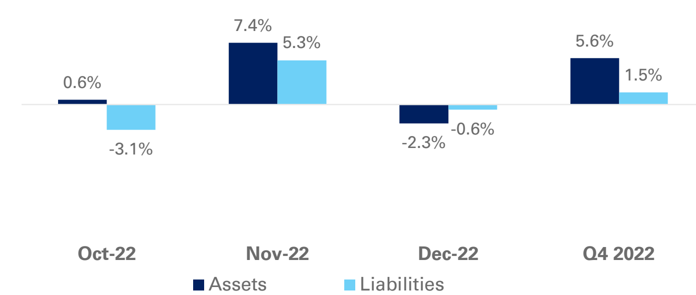
The funded status of the total-return plan increased 5.5% in the fourth quarter due to gains in equities and higher Treasury rates, offset by a drop in credit spreads.



HYPOTHETICAL FROZEN/LDI-FOCUSED PLAN

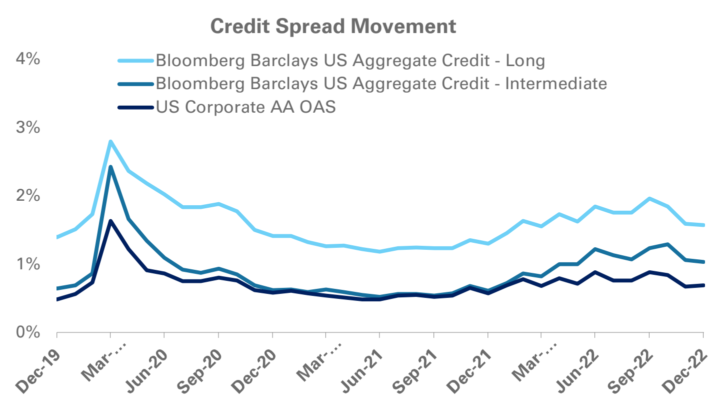


The funded status of the LDI-focused plan rose 4% as asset gains outpaced relatively flat liabilities. The plan is 81% hedged as of December 31.



RATE MOVEMENT

Short-term interest rates moved higher for the three months ended December 31, largely due to the Fed hiking short-term interest rates 125 basis points during the quarter. Longer-term interest rates remained relatively flat. The 30-year Treasury yield increased 18 basis points during the quarter to 3.97%. Long-credit spreads narrowed 39 basis points. The combination of higher Treasury yields and narrowing credit spreads resulted in a decrease in discount rates, with the rate for the open total-return plan dropping 13 basis points to 5.27% and the discount rate for the frozen LDI-focused plan decreasing 16 basis points to 5.2% as of December 31.



RETIREE BUYOUT INDEX

The Buyout Index for Retirees is estimated to be approximately **104.4%** of PBO as of December 31, 2022

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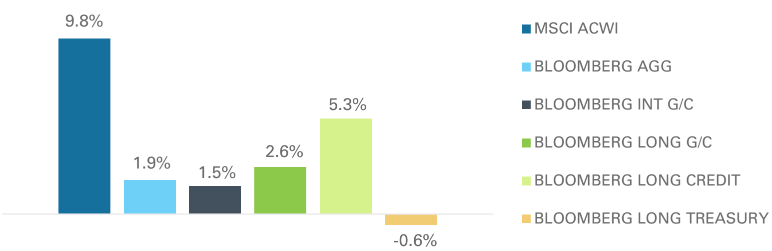
NEPC PENSION MONITOR

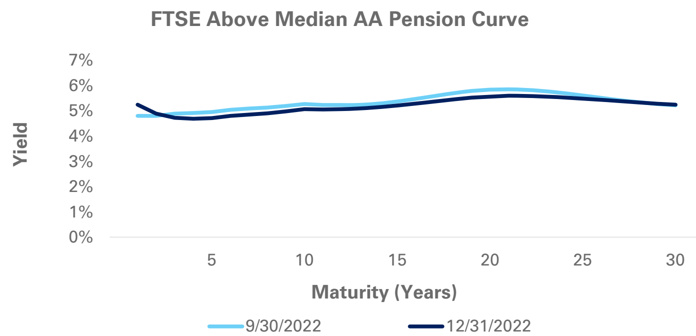
FOURTH QUARTER 2022

CONSIDERATIONS FOR PLAN SPONSORS

Equities were largely positive for the fourth quarter of 2022, while fixed-income markets experienced mixed results. Plan sponsors may find the current market environment difficult as asset levels were down significantly for 2022, but funded status levels may have improved due to the sharp rise in interest rates. These rates provide 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 required lower contributions and declining PBGC variable-rate premiums. NEPC consultants are available to discuss the benefits and cost of various pension finance and derisking strategies.

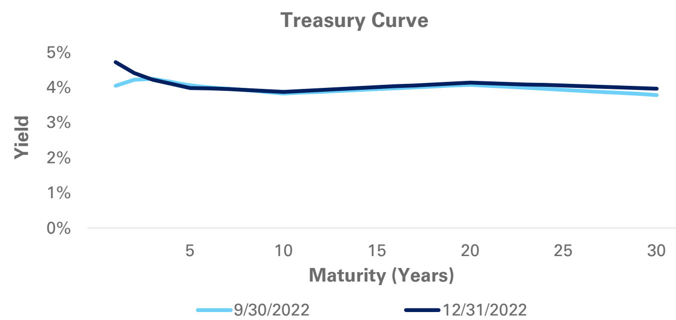
MARKET ENVIRONMENT AND YIELD CURVE MOVEMENT





U.S. equities gained 7.6% in the fourth quarter of 2022, reducing year-to-date losses to 18.1%. Non-U.S. stocks outperformed as the MSCI EAFE returned 17.3% during the quarter while the MSCI Emerging Market Index returned 9.7% in the same period. Despite strong returns in the fourth quarter, non-U.S. equity markets were down 16% for the 2022 calendar year, as represented by the ACWI ex-U.S. Index.

Treasury yields continued to march higher and the yield curve remained inverted. The 30-year Treasury yield was 18 basis points higher for the quarter, resulting in a loss of 0.6% for the Barclays Long Treasury Index. Corporate spreads contracted over the quarter, offsetting the rate increase and leading to a return of 5.3% in long credit, according to the Barclays Long Credit Index.



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 set at 90% funded as of December 31, 2018.

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 Govt/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 compare 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.