



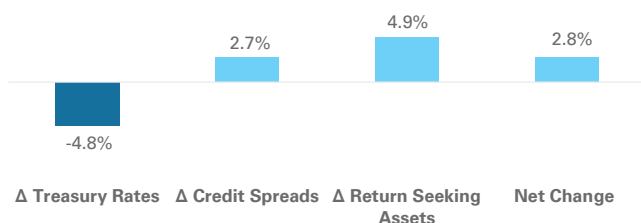
NEPC PENSION MONITOR

FIRST QUARTER 2023

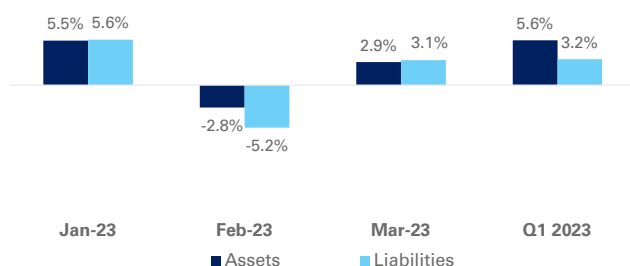
Returns from growth-oriented assets fueled increases in the funded status of most U.S. corporate pension plans in the first quarter of 2023. In this period, capital markets improved, offsetting potential declines in funded status resulting from modestly lower long-term interest rates. During the quarter, the Federal Reserve hiked rates by 50 basis points. Estimated plan liability discount rates, based on long-duration fixed-income yields, were lower in the first quarter and contributed to higher liabilities. Still, strong asset returns led to funded status gains for the three months ended March 31. The funded status of a total-return plan rose 2.8%, and the LDI-focused plan experienced a funded status increase of 3.7%.

HYPOTHETICAL OPEN/TOTAL-RETURN PLAN

Funded Status Attribution

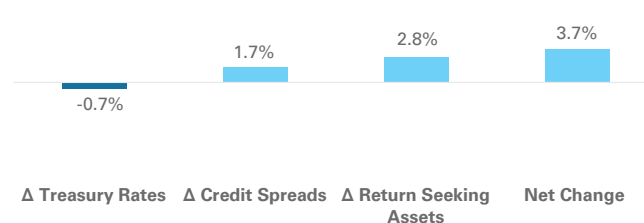


The funded status of the total-return plan rose 2.8% in the first quarter due to increases in the credit spread and equity returns, offset by a decrease in Treasury rates.

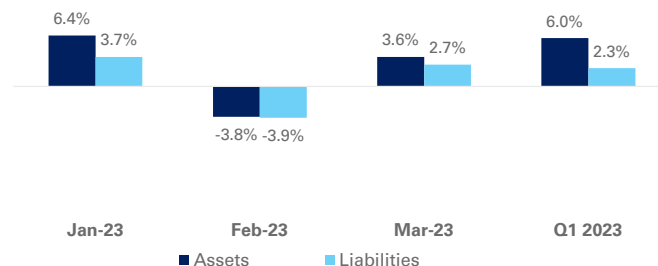


HYPOTHETICAL FROZEN/LDI-FOCUSED PLAN

Funded Status Attribution



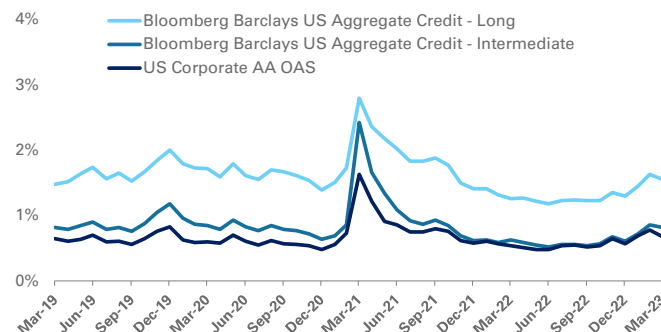
The funded status of the LDI-focused plan rose 3.7% as asset gains outpaced liabilities. The plan is 84% hedged as of March 31.



RATE MOVEMENT

Short-term interest rates moved higher for the three months ended March 31. Conversely, longer-term interest rates moved slightly lower as the 30-year Treasury yield decreased 30 basis points during the quarter to 3.67%. Long-credit spreads widened by two basis points. Lower Treasury yields in the first quarter resulted in a decrease in discount rates, with the rate for the open total-return plan dropping 22 basis points to 5.05% and the discount rate for the frozen LDI-focused plan decreasing 24 basis points to 4.96% as of March 31.

Credit Spread Movement



RETIREE BUYOUT INDEX

The Buyout Index for Retirees is estimated to be approximately **104.1%** of PBO as of March 31, 2023

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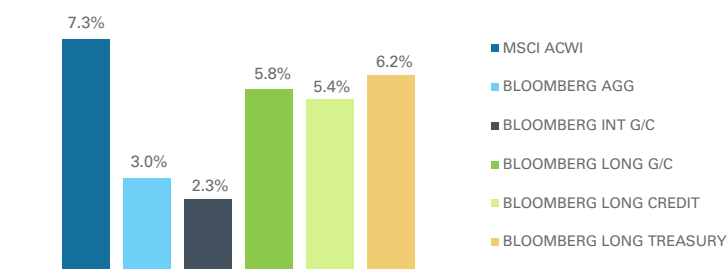
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FIRST QUARTER 2023

CONSIDERATIONS FOR PLAN SPONSORS

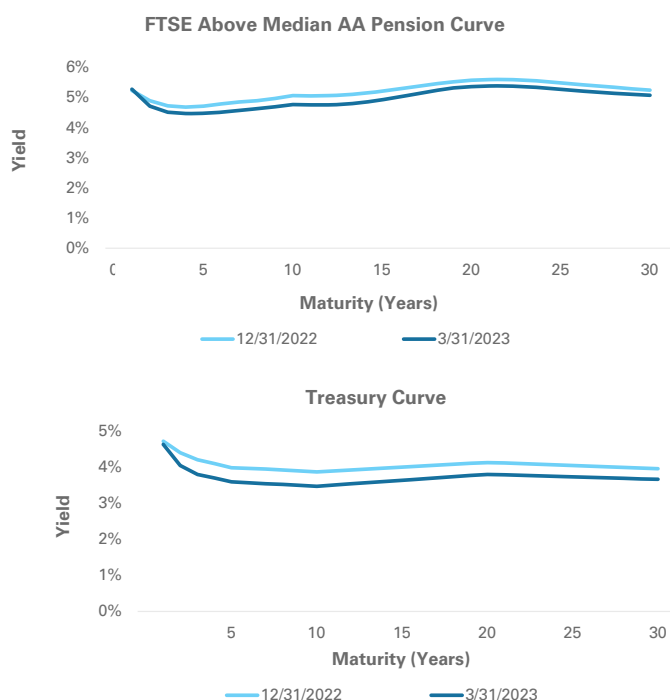
Equities were largely positive in the first quarter of 2023 and fixed-income markets experienced gains as a result of declines in interest rate. Plan sponsors may find the current market environment challenging as equity and fixed-income markets remain volatile. While long-term interest rates are lower year-to-date, the increase in rates in 2022 and strong equity market returns this year 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 7.5% in the first quarter of 2023. Non-U.S. developed market stocks outperformed the U.S. as the MSCI EAFE returned over 8% during the quarter; MSCI Emerging Market Index returned 4% in the same period.

Treasury yields decreased slightly and the yield curve remained inverted. The 30-year Treasury yield was 30 basis points lower for the quarter, resulting in a gain of 6.2% for the Barclays Long Treasury Index; in this period, the Barclays Long Credit Index posted returns of 5.4%.



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.