Monthly pension update

AUGUST 2019

DID YOU KNOW?

August 2019 was the largest 1-month decrease in 10 year Treasury yields since August 2011.

FUNDED STATUS FAST FACTS

85.4% FUNDED STATUS **FELL 2.7%** THIS MONTH

-1.8% YTD FUNDED STATUS CHANGE

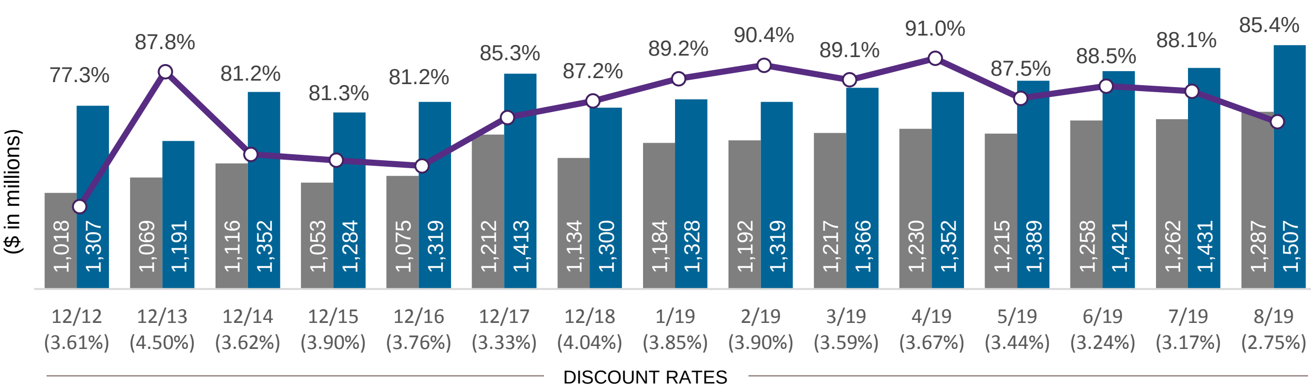
-130BPS DISCOUNT RATE YEAR TO DATE CHANGE

MONTHLY CONTRIBUTORS OF FUNDED STATUS CHANGE: **CREDIT SPREADS AND HEDGE PORTFOLIO**

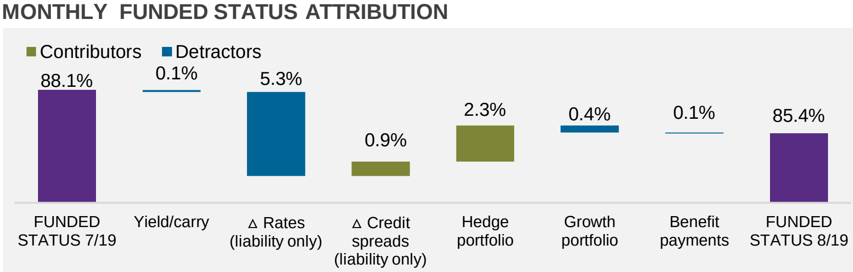
MONTHLY DETRACTORS OF FUNDED STATUS CHANGE: **INTEREST RATES AND GROWTH ASSETS**

HISTORICAL FUNDED STATUS

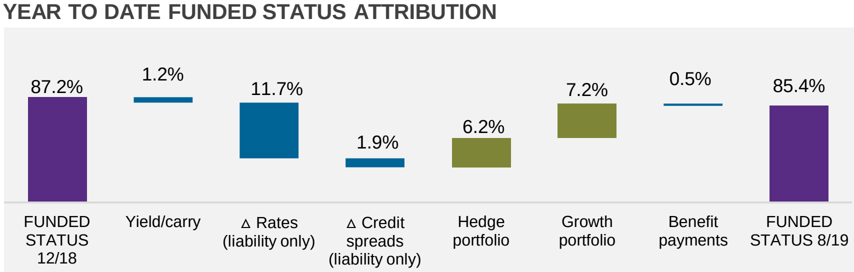
Performance of average defined benefit pension plan since 12/31/12



MONTHLY FUNDED STATUS ATTRIBUTION



YEAR TO DATE FUNDED STATUS ATTRIBUTION



Changes	Month	Year
Funded Status %	▼ (2.7%)	▼ (1.8%)
Discount Rate (bps)	▼ (42)	▼ (130)
Treasury Rates(bps)	▼ (53)	▼ (110)
Credit Spreads (bps)	▲ 11	▼ (20)
Liabilities (mm)	▼ $75.9	▼ $207.5
Assets (mm)	▲ $25.3	▲ $153.3
Funded Status (mm)	▼ ($50.6)	▼ ($54.2)

Note: Arrow indicates effect on funded status.

Source: J.P. Morgan, FTSE Pension Discount Curve, Bloomberg. As of August 31, 2019. For illustrative purposes only. Past performance is not indicative of future results.

J.P.Morgan
Asset Management

MACROECONOMIC TRENDS IMPACTING PENSION PLANS

A breakdown of what you need to watch this month as you consider investment implications for your plan

GROWTH

Slower economic growth is no longer a forecast, it is a reality. Geopolitical uncertainty has continued to depress business confidence, leading to a pause in investment spending and a broad slowdown in manufacturing. Up until this point, however, healthy labor markets have provided support for consumer spending, allowing the expansion to bend, rather than break. That said, consumer confidence has shown signs of softening and hiring seems to be slowing - while we do not believe this will precipitate a recession in the near-term, it is a dynamic that bears watching. Absent any idiosyncratic shocks, our base case is for trend growth in the U.S. and below-trend growth in the rest of the world through the end of the year.

INFLATION

Global inflation remains relatively benign, and in most cases, below central bank targets. We have seen signs that inflation is beginning to firm in the U.S., but with wage growth still relatively contained and oil prices range bound, it does not appear that inflation is on the cusp of a significant acceleration. In Europe, inflation continues to hover around 1% despite a further decline in the unemployment rate, although slower European growth may be offsetting tighter labor markets. In EM, we are yet to see signs that inflation is picking up, which is likely a function of depressed manufacturing activity, muted commodity prices, and a dollar that lacks any sort of trend.

RATES

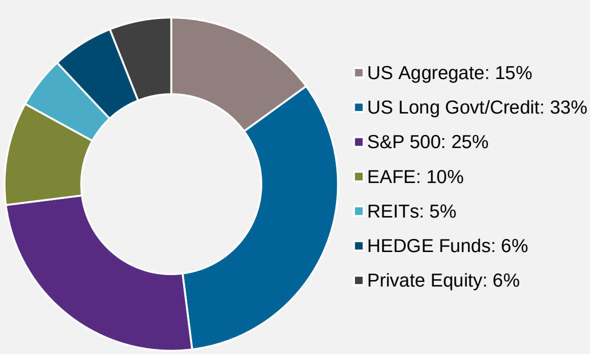
After cutting interest rates in July, the Federal Reserve looks set to cut rates by another 25bps when they convene in mid-September. The U.S. economy has remained resilient against a backdrop of slower global growth, but monetary policy outside of the U.S. is constrained and global financial conditions remain too tight. We expect that the European Central Bank will cut rates and restart quantitative easing later this year, and the Bank of Japan continues to state that it is ready, willing and able to ease further. However, the effectiveness of negative rates remains in question, suggesting that additional easing in these economies is akin to pushing on a string.

RETURNS

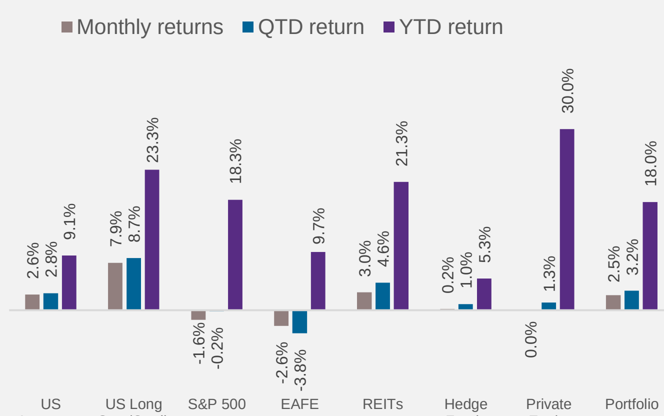
U.S. stock market valuations are in line with long-run averages, and earnings growth has moderated from the robust pace seen in 2017 and 2018. Furthermore, nearly half of 2Q19 S&P 500 earnings growth came from share repurchases, suggesting that earnings are skating on thin ice. This dynamic leaves the outlook for U.S. equity returns muted, and in the near-term, the international outlook is not much brighter. Although below-average valuations should support returns over time, there are structural issues facing many of these economies that will keep revenue growth in check. Stocks still look attractive relative to bonds, but with uncertainty continuing to rise, investors should maintain a balanced posture, and focus on income as a source of return across asset classes.

ASSET ALLOCATION & MARKET SNAPSHOT (As of 8/31/19)

PLAN ASSET ALLOCATION

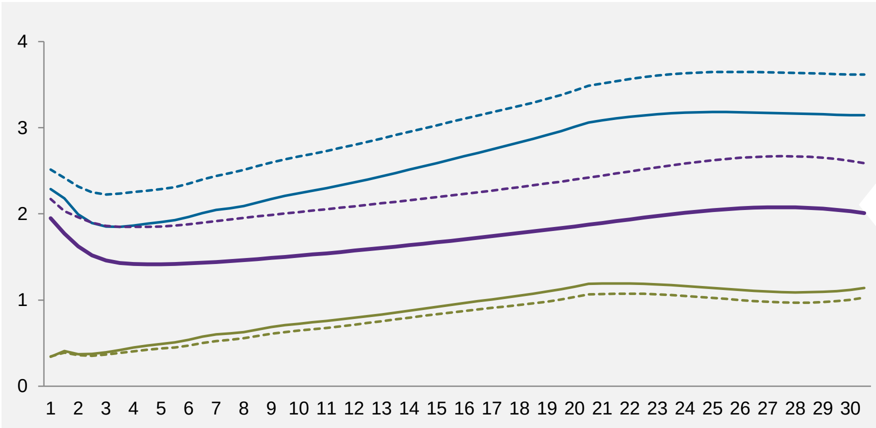


ASSET AND PORTFOLIO RETURNS



Source: J.P. Morgan, FTSE Pension Discount Curve, Bloomberg. As of August 31, 2019. For illustrative purposes only.
Past performance is not indicative of future results. For more information on our fixed income outlook, please visit our blog: http://blog.jpmorganinstitutional.com

YIELD CURVE CHANGES

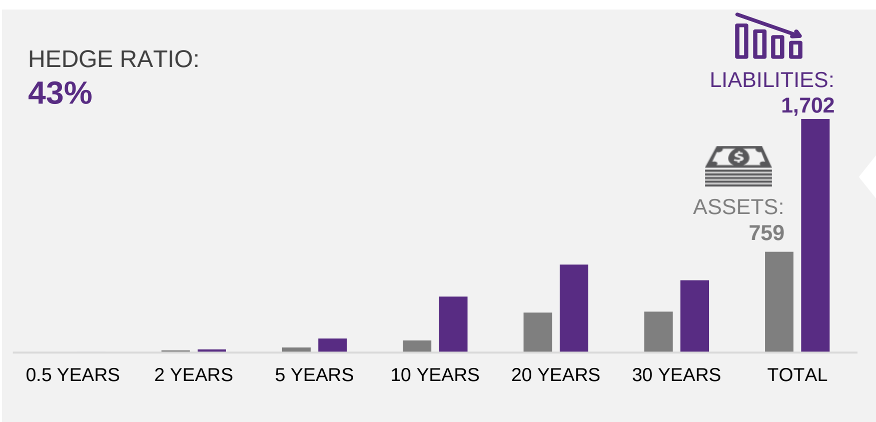


Over the month fallings rates, slightly offset by widening credit spreads drove discount rates down 42bps.

INTERESTED IN A DEEPER DIVE ON FIXED INCOME?

Click here for all the charts you need to understand what is happening in the fixed income markets.

PLAN RISK ANALYTICS



DURATION SENSITIVITY

The overall hedge ratio is defined as the ratio of asset dollar duration to liability dollar duration.

We estimate that this is approximately 43%.

We note that a higher hedge ratio, constructed with better key rate duration (KRD) matching along the curve would reduce funded status volatility. Matching the dollar duration of assets and liabilities across the curve structure would better insulate the plan against non-parallel yield curve movements.

Change in Interest Rates / *Change in Growth Portfolio*

	-20%	-15%	-10%	-5%	-	+5%	+10%	+15%	+20%
+100bps	81.3%	83.8%	86.3%	88.8%	91.3%	93.8%	96.3%	98.8%	101.3%
+75bps	80.0%	82.4%	84.8%	87.2%	89.7%	92.1%	94.5%	96.9%	99.4%
+50bps	78.8%	81.1%	83.5%	85.8%	88.1%	90.5%	92.8%	95.2%	97.5%
+25bps	77.6%	79.9%	82.2%	84.5%	86.7%	89.0%	91.3%	93.5%	95.8%
-	76.6%	78.8%	81.0%	83.2%	85.4%	87.6%	89.8%	92.0%	94.2%
-25bps	75.6%	77.7%	79.9%	82.0%	84.1%	86.3%	88.4%	90.5%	92.7%
-50bps	74.7%	76.7%	78.8%	80.9%	82.9%	85.0%	87.1%	89.2%	91.2%
-75bps	73.8%	75.8%	77.8%	79.8%	81.8%	83.8%	85.8%	87.9%	89.9%
-100bps	72.9%	74.9%	76.8%	78.8%	80.8%	82.7%	84.7%	86.6%	88.6%

SCENARIO ANALYSIS

The heat map shows the change in funded status under different instantaneous interest rate and growth portfolio movements.

We note that reducing the allocation to equities and increasing the hedge ratio will likely narrow the change of possible outcomes and help limit downside funded status scenarios.

Source: J.P. Morgan, FTSE Pension Discount Curve, Bloomberg. As of August 31, 2019. For illustrative purposes only.
Past performance is not indicative of future results.

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