Monthly pension update

DECEMBER 2019

DID YOU KNOW?

Following a de-escalation in the US-China trade war and significant monetary policy easing, our **GFICC Investment Quarterly** has shifted to a modestly improved outlook for global growth.

FUNDED STATUS FAST FACTS

89.9%
FUNDED STATUS **ROSE 1.4%** THIS MONTH

+2.7% YTD
FUNDED STATUS INCREASE

-107BPS
DISCOUNT RATE YEAR TO DATE CHANGE

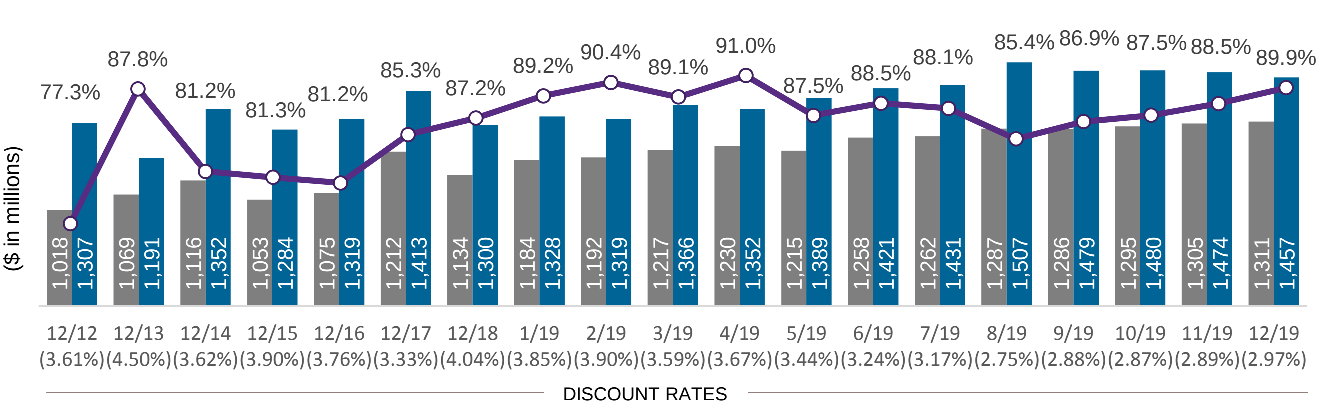
MONTHLY CONTRIBUTORS OF FUNDED STATUS CHANGE:
GROWTH ASSETS AND INTEREST RATES

MONTHLY DETRACTORS OF FUNDED STATUS CHANGE:
CREDIT SPREADS AND HEDGE PORTFOLIO

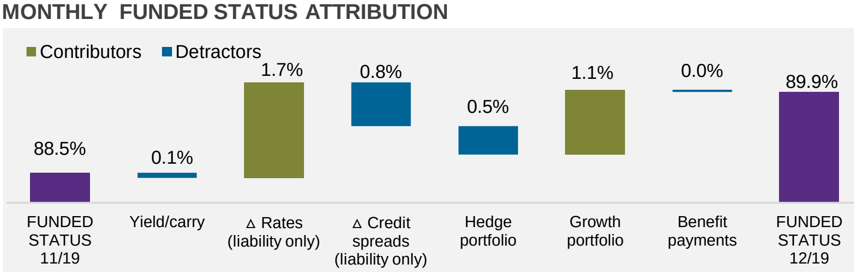
HISTORICAL FUNDED STATUS

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

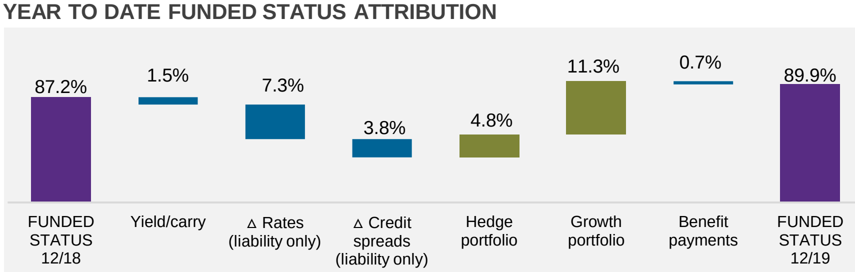
TOTAL ASSET VALUE ■ LIABILITY VALUE (CITIGROUP)
FUNDED STATUS



MONTHLY FUNDED STATUS ATTRIBUTION



YEAR TO DATE FUNDED STATUS ATTRIBUTION



Changes	Month	Year
Funded Status %	▲ 1.4%	▲ 2.7%
Discount Rate (bps)	▲ 8	▼ (107)
Treasury Rates(bps)	▲ 15	▼ (69)
Credit Spreads (bps)	▼ (7)	▼ (38)
Liabilities (mm)	▲ ($16.7)	▼ $157.6
Assets (mm)	▲ $5.7	▲ $176.9
Funded Status (mm)	▲ $22.4	▲ $19.3

Note: Arrow indicates effect on funded status.

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

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MACROECONOMIC TRENDS IMPACTING PENSION PLANS

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

GROWTH

Global growth showed some signs of improvement into the end of 2019, with the global composite PMI rising to an 8-month high. Output growth was recorded in both services and manufacturing, although the pace of gains in manufacturing softened from the prior month on the back of lackluster European data. Consumption likely cooled into the end of last year, and unresolved trade tensions will continue to weigh on investment spending. While any further easing in tensions may provide a lift to manufacturing activity, this will likely be more of a normalization than a boom. As such, we expect global growth will remain subdued over the coming months, before gradually moving to around 3% in real terms by the middle of the year.

INFLATION

Global inflation remains subdued, but may begin to show some signs of life. The U.S. December employment report showed wages took a tumble into year-end, which is inconsistent with the broader trend in earnings seen over the past few months. Our base case is that wage growth should bounce back in January, and potentially accelerate over the course of this year as the labor market continues to tighten. Wages are rising globally, but the lack of pass-through to consumer prices remains a bit of a puzzle. That said, an improvement in global growth against a backdrop of supply-side constraints could push inflation higher than expected in 2020.

RATES

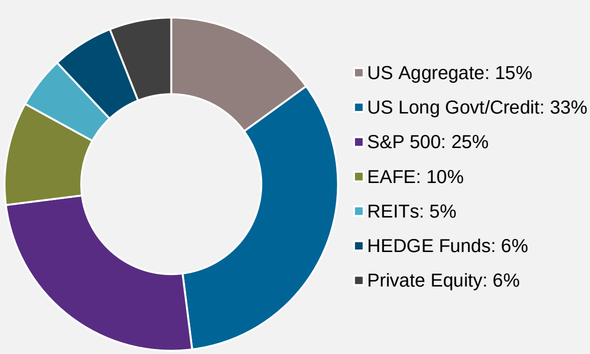
The Federal Reserve (Fed) held rates steady in December 2019, and continued to signal it they had concluded its mid-cycle adjustment. The forecasts released at the December meeting were fairly benign, and signaled the Fed's expectation for real growth of around 2% against a backdrop of gradually rising inflation and stable employment. Furthermore, repo markets made it through the end of the year without any significant hiccups, suggesting the more active role undertaken by the Fed has succeeded in preventing the pipes from getting clogged. Our base case remains one of no rate hikes in 2020, but as always, the Fed will remain data dependent.

RETURNS

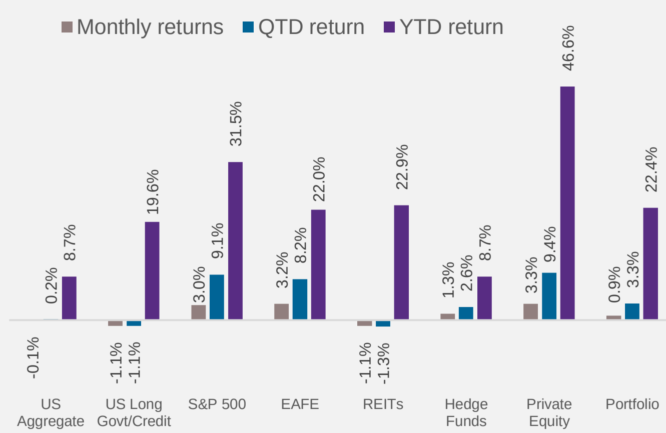
Both equity and bond markets generated healthy returns in 2019. On the equity side, multiple expansion accounted for the majority of these gains, while on the fixed income side, Fed easing helped anchor rates as geopolitical uncertainty subsided into year-end. Looking forward, however, gains will be more difficult to come by. Valuations across all asset classes look rich, and although there are pockets of opportunity, some assets remain cheap for a reason. As such, we continue to focus on earnings as a key driver of returns in equity markets, and believe that investors should focus on income as a way of insulating against what looks set to be a backdrop of elevated volatility.

ASSET ALLOCATION & MARKET SNAPSHOT (As of 12/31/19)

PLAN ASSET ALLOCATION

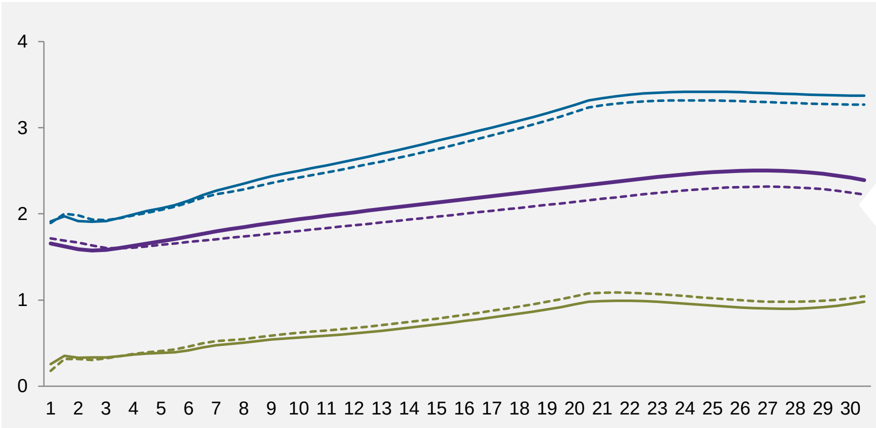


ASSET AND PORTFOLIO RETURNS



Source: J.P. Morgan, FTSE Pension Discount Curve, Bloomberg. As of December 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

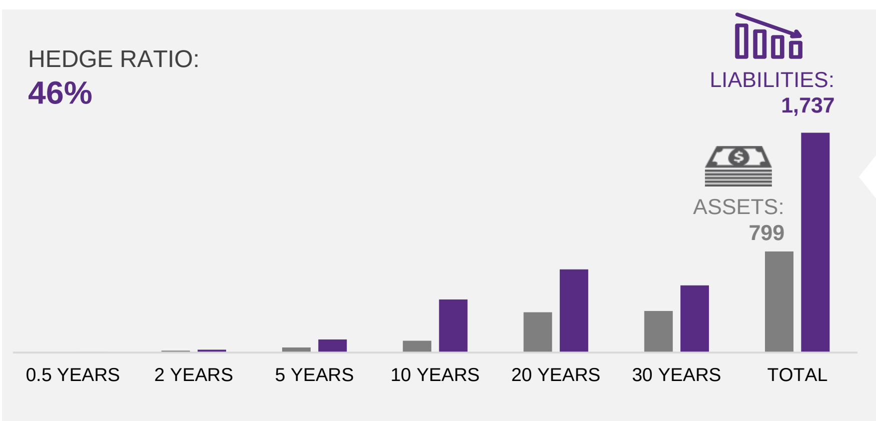


Over the month rates rose spreads tightened, leaving discount rates up 8bps

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 46%.

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	84.8%	87.5%	90.3%	93.1%	95.9%	98.6%	101.4%	104.2%	107.0%
+75bps	83.5%	86.2%	88.9%	91.6%	94.2%	96.9%	99.6%	102.3%	105.0%
+50bps	82.3%	84.9%	87.5%	90.1%	92.7%	95.3%	97.9%	100.5%	103.1%
+25bps	81.2%	83.7%	86.2%	88.8%	91.3%	93.8%	96.3%	98.8%	101.4%
-	80.2%	82.6%	85.0%	87.5%	89.9%	92.4%	94.8%	97.3%	99.7%
-25bps	79.2%	81.5%	83.9%	86.3%	88.7%	91.0%	93.4%	95.8%	98.2%
-50bps	78.2%	80.5%	82.9%	85.2%	87.5%	89.8%	92.1%	94.4%	96.7%
-75bps	77.4%	79.6%	81.8%	84.1%	86.3%	88.6%	90.8%	93.1%	95.3%
-100bps	76.5%	78.7%	80.9%	83.1%	85.3%	87.4%	89.6%	91.8%	94.0%

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 December 31, 2019. For illustrative purposes only.
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Interest Rate Risk: Bonds and other debt securities will increase or decrease in value based on changes in interest rates. If rates increase, the investment generally declines. On the other hand, if rates fall, the value of the investments generally increases. Your investment will decline in value if the value of the investment decreases. Securities with greater interest rate sensitivity and longer maturities tend to produce higher yields, but also are subject to greater fluctuations in value. Usually, the changes in the value of fixed income securities will not affect cash income generated, but may affect the value of your investment.
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