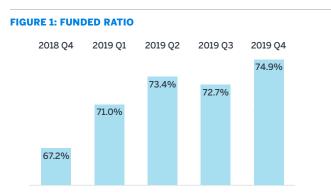
Public pension funded ratio climbs to 74.9% in Q4 2019, highest quarterly result in the history of the Milliman Public Pension Funding Index

Q4 investment performance of 4.47% outpaces pension liability growth

Rebecca A. Sielman, FSA

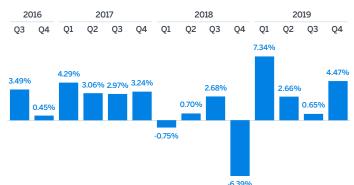
The fourth quarter of 2019 closed with high-water marks for both assets and liabilities for public pensions, with the estimated funded status of the 100 largest U.S. public pension plans as measured by the Milliman 100 Public Pension Funding Index (PPFI), growing from 72.7% at the end of September 2019 to 74.9% at the end of December 2019.

The deficit dropped to \$1.334 trillon at the end of December 2019, down from \$1.438 trillion at the end of September 2019. Plans are now at their highest funding levels since the PPFI began in September 2016, and have rebounded considerably from the PPFI low point of 67.2% one year ago.



In aggregate, the PPFI plans experienced an investment return of 4.47% in Q4 2019, with estimated returns ranging from 0.23% to **6.24%**. The overall annualized return for the 12 months ending December 31, 2019, was 15.9%, markedly exceeding the expected long-term earnings assumptions for the PPFI plans. The Milliman 100 PPFI asset value rose from \$3.833 trillion at the end of Q3 2019 to a PPFI high of \$3.979 trillion at the end of Q4 2019. The plans gained investment market value of approximately \$171 billion, which was offset by approximately \$24 billion flowing out, as benefits paid out exceeded contributions coming in from employers and plan members.

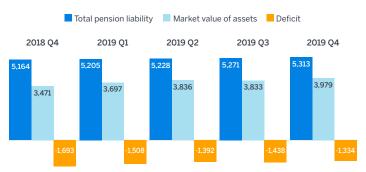
FIGURE 2: QUARTERLY INVESTMENT RETURNS



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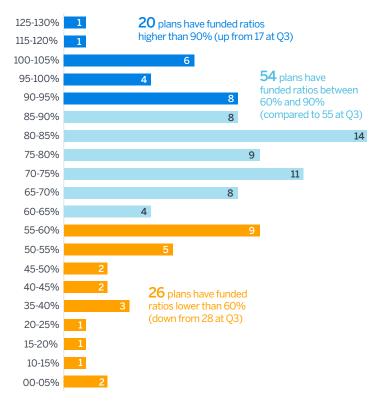
The total pension liability (TPL) continues to grow and stood at a PPFI estimated high of **\$5.313 trillion** at the end of Q4 2019, up from **\$5.271 trillion** at the end of Q3 2019. Just as pension assets grow over time with investment income and shrink over time as benefits are paid, so too does the TPL grow over time with interest and shrink as benefits are paid. The TPL also grows as active members accrue pension benefits.

FIGURE 3: QUARTERLY FUNDED STATUS



Funded ratios moved higher this quarter, with three plans moving back above the 90% funded mark; 20 plans currently stand above this benchmark, compared to 17 at the end of Q3 2019. At the lower end of the spectrum, the number of more poorly funded pension plans declined. There are 26 plans with funded ratios below 60%, and eight plans remain below 40% funded.

FIGURE 4: FUNDED RATIOS AT DECEMBER 31, 2019



About the Milliman 100 Public Pension Funding Index

Since 2012, Milliman has conducted an annual study of the 100 largest defined benefit plans sponsored by U.S. governments. The Milliman 100 Public Pension Funding Index projects the funded status for pension plans included in our study, reflecting the impact of actual market returns, utilizing the actual reported asset values, liabilities, and asset allocations of the pension plans.

The results of the Milliman 100 Public Pension Funding Index are based on the pension plan financial reporting information disclosed in the plan sponsors' Comprehensive Annual Financial Reports, which reflect measurement dates ranging from June 30, 2016 to December 31, 2018. This information was summarized as part of the Milliman 2019 Public Pension Funding Study, which was published on January 20, 2020.

This quarterly update reflects adjustments made as of the end of June 2019 as part of Milliman's annual Public Pension Funding Study, found at milliman.com/ppfs. The adjustments reflect updated publicly available asset and liability information gathered for the annual study.

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CONTACT

Becky Sielman becky.sielman@milliman.com