

Milliman Analysis: Public pension assets plummeted by 6.39% in Q418, the biggest drop in the history of the Milliman Public Pension Funding Index

Funded status decreases by \$306 billion in fourth quarter 2018

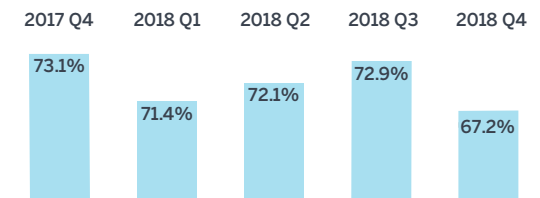


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The fourth quarter of 2018 closed out a disappointing year for public pension assets, as the estimated funded status of the 100 largest US public pension plans, as measured by the Milliman 100 Public Pension Funding Index (PPFI), dropped from 72.9% at the end of September 2018 to 67.2% at the end of December 2018.

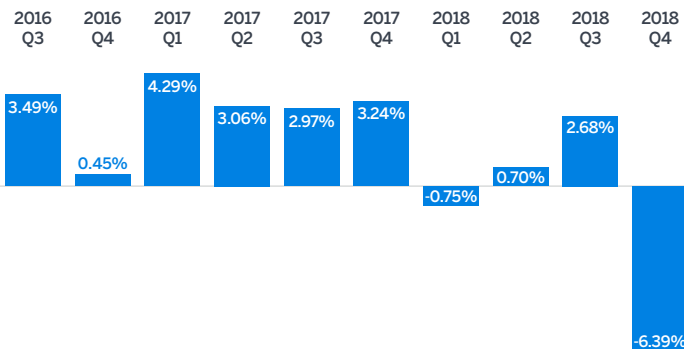
At the end of December 2018, the deficit stands at **\$1.693** trillion, compared to \$1.387 trillion at the end of September 2018. The \$306 billion decrease in the funded status for Q4 was the largest quarterly decrease since the PPFI began in September 2016, more than double the prior largest decrease (Q2 2017).

FUNDED RATIO



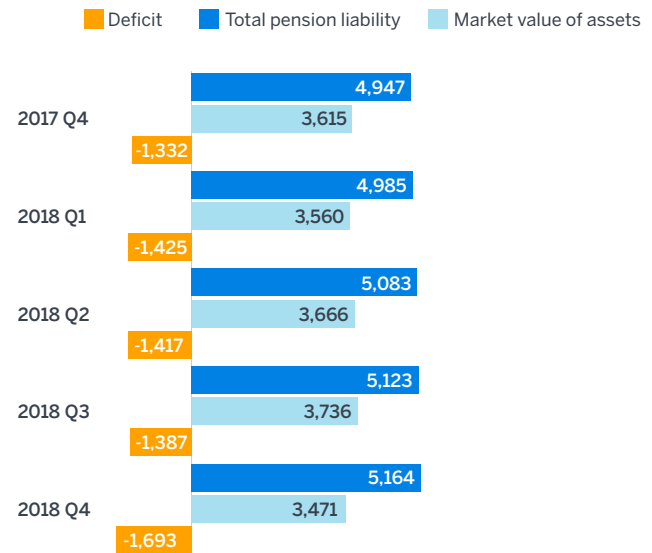
In aggregate, the PPFI plans experienced investment returns of **-6.39%** in the fourth quarter. Estimated returns for Q4 ranged from a low of -10.27% to a high of -2.18%. The Milliman 100 PPFI asset value decreased from \$3.736 trillion at the end of Q3 to **\$3.471** trillion at the end of Q4. The plans lost investment market value of approximately \$239 billion, on top of approximately \$26 billion flowing out, as benefits paid out exceeded contributions coming in from employers and plan members.

QUARTERLY INVESTMENT RETURNS



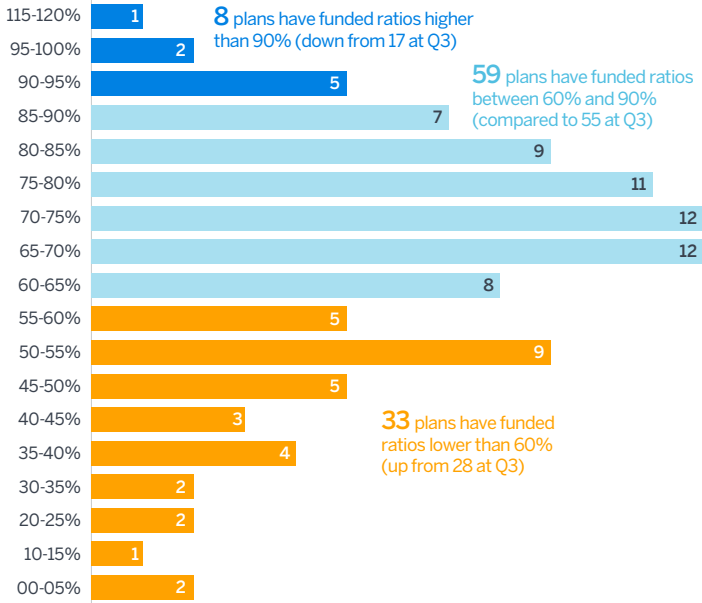
The total pension liability (TPL) continues to grow, and stood at an estimated **\$5.164** trillion at the end of Q4, up from \$5.123 trillion at the end of Q3. Just as pension assets grow over time with investment income and shrink over time as benefits are paid, so too does the TPL grow over time with interest and shrink as benefits are paid. The TPL also grows as active members accrue pension benefits.

QUARTERLY FUNDED STATUS



Funded ratios moved lower this quarter, with 9 plans dropping below the 90% funded mark; there are now just 8 plans above this mark, compared to 17 at the end of the Q3. At the lower end, the number of the more poorly funded pension plans also increased. There are now 33 plans whose funded ratios fall below 60%, and 11 plans remain below 40% funded.

FUNDED RATIOS AT DECEMBER 31, 2018



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, 2017. This information was summarized as part of the Milliman 2018 Public Pension Funding Study, which was published on January 15, 2019.

This quarterly update reflects adjustments made as of the end of June 2018 as part of Milliman's annual Public Pension Funding Study, just recently published, found here milliman.com/ppfs. The adjustments reflect updated publicly available asset and liability information gathered for the annual study.



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