

# Milliman analysis: Corporate pension funded status improved by \$26 billion in September, best improvement of 2017

Third quarter 2017 funded status improved by \$13 billion and is up \$7 billion for the year

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The funded status of the 100 largest corporate defined benefit pension plans improved by \$26 billion during September as measured by the Milliman 100 Pension Funding Index (PFI). The deficit fell to \$272 billion due to interest rate and market value gains experienced during September. As of September 30, the funded ratio increased to 84.3%, up from 83.0% at the end of August. This is the highest monthly improvement in dollars and funded ratio in 2017.

The market value of assets rose by \$6 billion as a result of September’s investment gain of 0.78%. The Milliman 100 PFI asset value increased to \$1.465 trillion at the end of September. Cumulative investment gains in 2017 are 8.34% year-to-date. By comparison, the 2017 Milliman Pension Funding Study reported that the monthly median expected investment return during 2016 was 0.57% (7.0% annualized).

The projected benefit obligation (PBO), or pension liabilities, decreased to \$1.737 trillion at the end of September from \$1.757 trillion at the end of August. The change resulted from an increase of nine basis points in the monthly discount rate to 3.69% for September from 3.60% for August. Discount rates had consistently dropped during the past five months before reversing in September and boosting funded status.

## HIGHLIGHTS

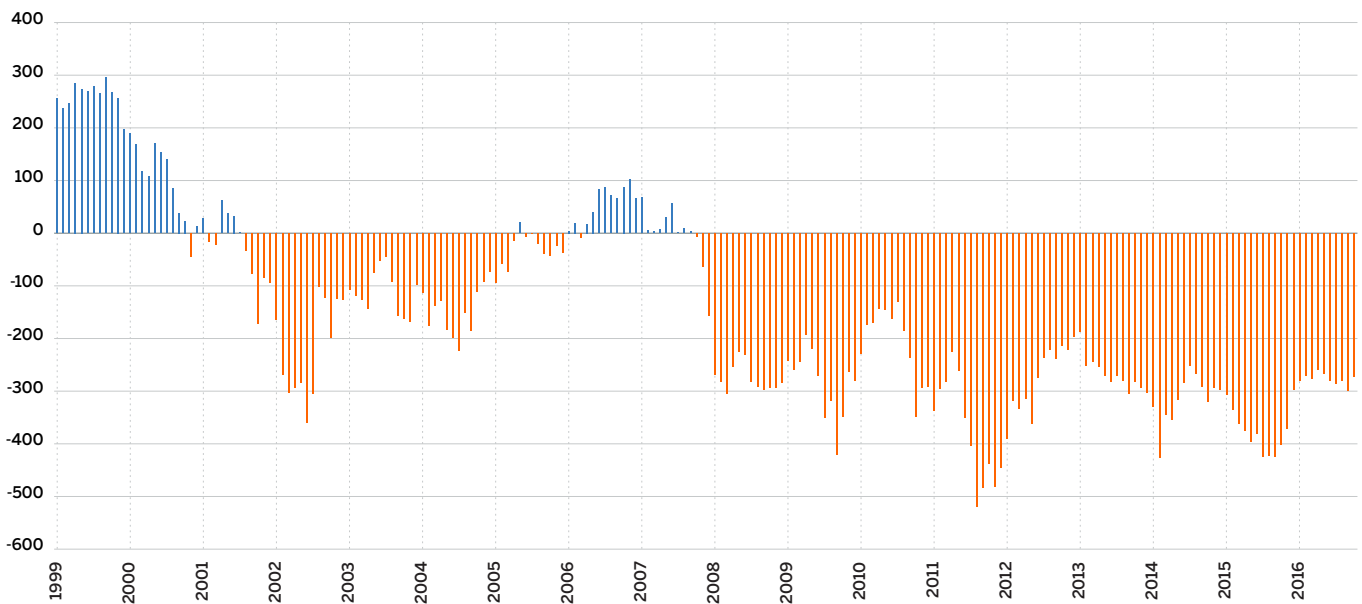
	\$ BILLION			
	MV	PBO	FUNDED STATUS	FUNDED PERCENTAGE
AUG 2017	1,459	1,757	(298)	83.0%
SEP 2017	1,465	1,737	(272)	84.3%
MONTHLY CHANGE	+6	(20)	+26	1.3%
YTD CHANGE	+68	+61	+7	1.0%

Note: Numbers may not add up precisely due to rounding

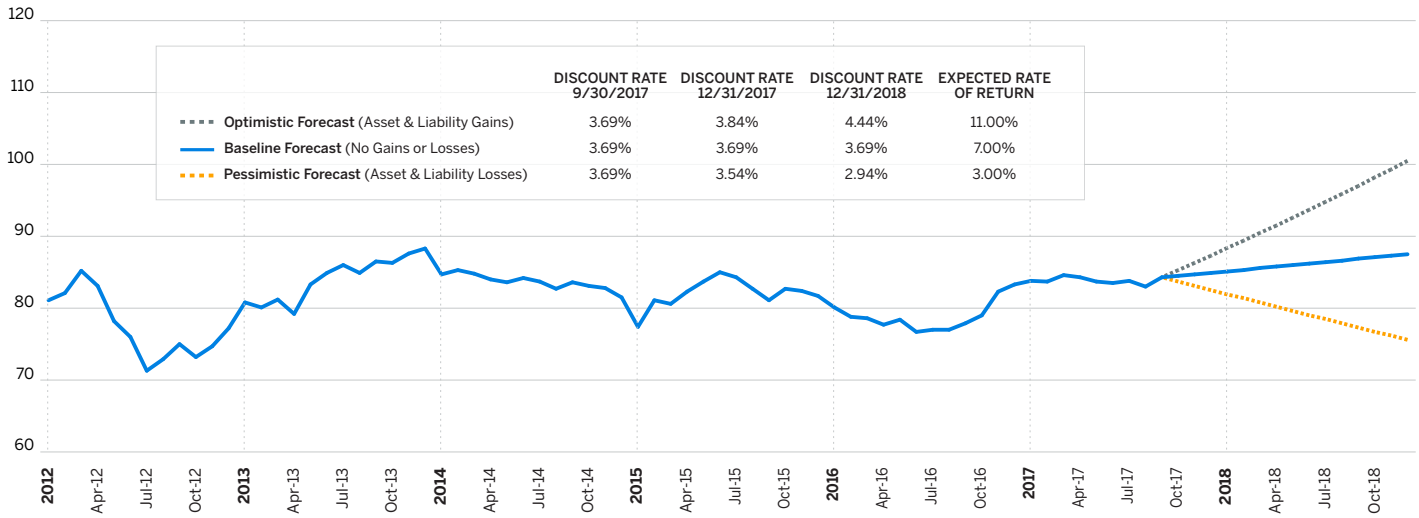
## Third Quarter 2017 Summary

During the quarter ended September 30, 2017, the funded status deficit improved by \$13 billion. This was primarily due to the funded status gain experienced in September. August posted a funded status drop mainly due to discount rate declines. July had discount rate declines which led to liability losses as well, but also had robust investment gains that helped to boost funded status overall. Asset gains in the third quarter were at 2.66% as strong performance for the quarter helped to offset liability losses due to discount rate declines. Overall, discount rates fell by five basis points for the Milliman 100 PFI during

FIGURE 1: MILLIMAN 100 PENSION FUNDING INDEX PENSION SURPLUS/DEFICIT



**FIGURE 2: MILLIMAN 100 PENSION FUNDING INDEX – PENSION FUNDED RATIO**



the third quarter of 2017. The funded ratio of the Milliman 100 companies rose to 84.3% at the end of September from 83.5% at the end of June.

Over the last 12 months (October 2016–September 2017), the cumulative asset return for these pensions has been 8.30% and the Milliman 100 PFI funded status deficit has improved by \$129 billion. Discount rates experienced an increase over the last 12 months moving from 3.42% as of September 30, 2016, to 3.69% a year later. The funded ratio of the Milliman 100 companies has increased over the past 12 months to 84.3% from 77.9%.

The funded ratio at the end of September is ahead of where it started the year, 84.3% versus 83.3%. This bit of positive news comes on the heels of the release of the new mortality tables regulation by the IRS. The new mortality tables will affect 2018 cash contribution funding, Pension Benefit Guaranty Corporation (PBGC) premiums, and pension risk transfers via lump-sum payments. U.S. GAAP accounting figures as reflected in the Milliman 100 PFI are already reflective of updated mortality tables. It is too early to speculate how the new tables regulation may affect lump-sum windows, other risk transfer activity, and plan sponsor contributions before the end of 2017 and cascading into 2018, and the effect on the Milliman 100 pension funding ratio.

We further note that September 30, 2017, is the end of the federal fiscal year 2017. Before the end of October, the IRS, the Social Security Administration, and other federal agencies will release the metrics and values applying to 2018 payroll taxes and qualified pension plan limits (e.g., compensation and benefit limits).

The PBGC will also determine the discount rate used to value the obligations of defined benefit plans for which they are the trustees after employers have declared bankruptcy. The PBGC deficit as of September 30, 2016, for single employer plans trusted by the PBGC was approximately \$21 billion with a corresponding funded status of 82.5%.

### 2017-2018 Projections

If the Milliman 100 PFI companies were to achieve the expected 7.0% median asset return (as per the 2017 pension funding study) and if the current discount rate of 3.69% were maintained during years 2017 and 2018, we forecast the funded status of the surveyed plans would increase. This would result in a projected pension deficit of \$262 billion (funded ratio of 84.9%) by the end of 2017 and a projected pension deficit of \$216 billion (funded ratio of 87.5%) by the end of 2018. For purposes of this forecast, we have assumed 2017 aggregate contributions of \$36 billion and 2018 aggregate contributions of \$39 billion.

Under an optimistic forecast with rising interest rates (reaching 3.84% by the end of 2017 and 4.44% by the end of 2018) and asset gains (11.0% annual returns), the funded ratio would climb to 87% by the end of 2017 and 101% by the end of 2018. Under a pessimistic forecast with similar interest rate and asset movements (3.54% discount rate at the end of 2017 and 2.94% by the end of 2018 and 3.0% annual returns), the funded ratio would decline to 83% by the end of 2017 and 76% by the end of 2018.

**MILLIMAN 100 PENSION FUNDING INDEX — SEPTEMBER 2017 (ALL DOLLAR AMOUNTS IN MILLIONS)**

END OF MONTH	YEAR	MARKET VALUE OF ASSETS	PROJECTED BENEFIT OBLIGATION (PBO)	FUNDED STATUS	CHANGE IN FUNDED STATUS	FUNDED RATIO
SEPTEMBER	2016	1,412,760	1,813,686	(400,926)	N/A	77.9%
OCTOBER	2016	1,394,862	1,765,970	(371,108)	29,818	79.0%
NOVEMBER	2016	1,384,985	1,682,326	(297,341)	73,767	82.3%
DECEMBER	2016	1,396,661	1,676,182	(279,521)	17,820	83.3%
JANUARY	2017	1,403,106	1,673,506	(270,400)	9,121	83.8%
FEBRUARY	2017	1,421,420	1,697,625	(276,205)	(5,805)	83.7%
MARCH	2017	1,422,044	1,680,752	(258,708)	17,497	84.6%
APRIL	2017	1,431,650	1,697,629	(265,979)	(7,271)	84.3%
MAY	2017	1,442,833	1,723,815	(280,982)	(15,003)	83.7%
JUNE	2017	1,442,170	1,727,929	(285,759)	(4,777)	83.5%
JULY	2017	1,451,652	1,732,259	(280,607)	5,152	83.8%
AUGUST	2017	1,458,655	1,756,836	(298,181)	(17,574)	83.0%
SEPTEMBER	2017	1,464,869	1,737,142	(272,273)	25,908	84.3%

**PENSION ASSET AND LIABILITY RETURNS**

END OF MONTH	YEAR	ASSET RETURNS			LIABILITY RETURNS	
		MONTHLY	YEAR-TO-DATE	DISCOUNT RATE	MONTHLY	YEAR-TO-DATE
SEPTEMBER	2016	0.06%	6.25%	3.42%	-0.99%	12.81%
OCTOBER	2016	-0.90%	5.29%	3.61%	-2.14%	10.39%
NOVEMBER	2016	-0.34%	4.93%	3.98%	-4.24%	5.71%
DECEMBER	2016	1.22%	6.21%	3.99%	0.16%	5.88%
JANUARY	2017	0.83%	0.83%	4.00%	0.19%	0.19%
FEBRUARY	2017	1.68%	2.52%	3.88%	1.79%	1.98%
MARCH	2017	0.41%	2.94%	3.96%	-0.65%	1.32%
APRIL	2017	1.04%	4.01%	3.88%	1.35%	2.68%
MAY	2017	1.14%	5.20%	3.76%	1.88%	4.61%
JUNE	2017	0.31%	5.53%	3.74%	0.57%	5.21%
JULY	2017	1.02%	6.60%	3.71%	0.58%	5.82%
AUGUST	2017	0.84%	7.50%	3.60%	1.74%	7.66%
SEPTEMBER	2017	0.78%	8.34%	3.69%	-0.80%	6.80%

## About the Milliman 100 Monthly Pension Funding Index

For the past 17 years, Milliman has conducted an annual study of the 100 largest defined benefit pension plans sponsored by U.S. public companies. The Milliman 100 Pension Funding Index projects the funded status for pension plans included in our study, reflecting the impact of market returns and interest rate changes on pension funded status, utilizing the actual reported asset values, liabilities, and asset allocations of the companies' pension plans.

The results of the Milliman 100 Pension Funding Index were based on the actual pension plan accounting information disclosed in the footnotes to the companies' annual reports for the 2016 fiscal year and for previous fiscal years. This pension plan accounting disclosure information was summarized as

part of the Milliman 2017 Pension Funding Study, which was published on April 6, 2017. In addition to providing the financial information on the funded status of U.S. qualified pension plans, the footnotes may also include figures for the companies' nonqualified and foreign plans, both of which are often unfunded or subject to different funding standards than those for U.S. qualified pension plans. They do not represent the funded status of the companies' U.S. qualified pension plans under ERISA.

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