

# Milliman Analysis: Record-low interest rates drive another increase in the pension funding deficit

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Discount rates fell 12 basis points in July, but strong investment returns limited the funded status drop to \$5 billion. The funded status deficit for the Milliman 100 plans settled at \$453 billion after ballooning by \$146 billion so far in 2016.

The funded status of the 100 largest corporate defined benefit pension plans dropped by \$5 billion during July as measured by the Milliman 100 Pension Funding Index (PFI). The deficit rose to \$453 billion at the end of July, due to the dual effect of a decrease in the benchmark corporate bond interest rates used to value pension liabilities and robust investment returns. As of July 31, the funded ratio essentially remained flat at 75.7%, compared to 75.6% at the end of June.

The projected benefit obligation (PBO), or pension liabilities, increased to \$1.868 trillion at the end of July from \$1.839 trillion at the end of June. The change resulted from a decrease of 12 basis points in the monthly discount rate to 3.33% for July, from 3.45% for June. The discount rate at the end of July is the lowest it has been in the 16-year history of the Milliman 100 PFI. The

## HIGHLIGHTS

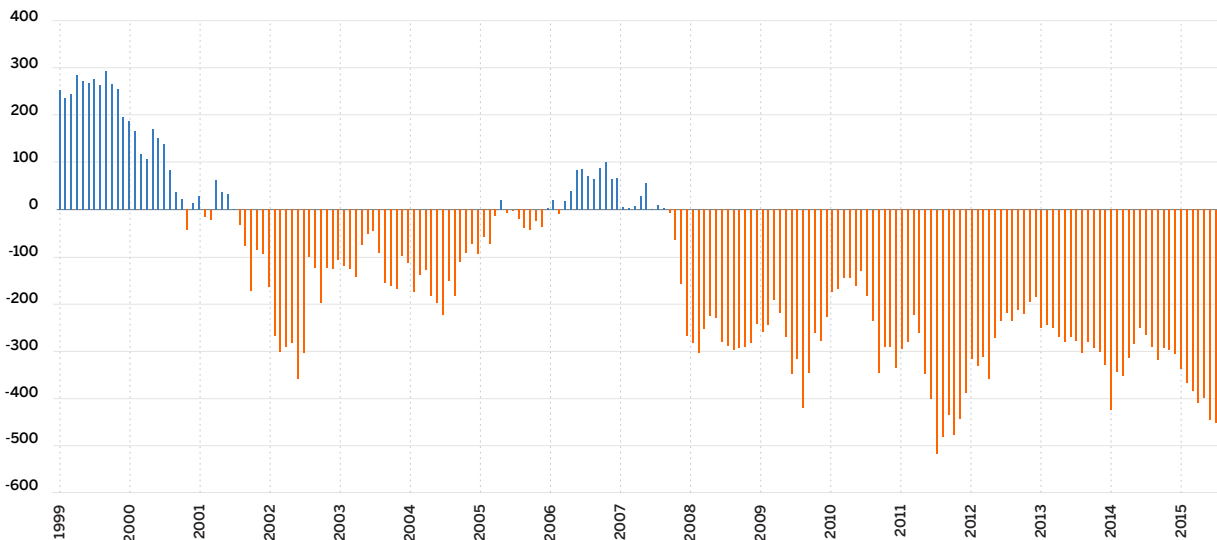
	\$ BILLION			
	MV	PBO	FUNDED STATUS	FUNDED PERCENTAGE
JUN 2016	1,392	1,839	(448)	75.6%
JUL 2016	1,415	1,868	(453)	75.7%
MONTHLY CHANGE	+23	+29	(5)	0.1%
YTD CHANGE	+40	+186	(146)	-6.0%

Note: Numbers may not add up precisely due to rounding

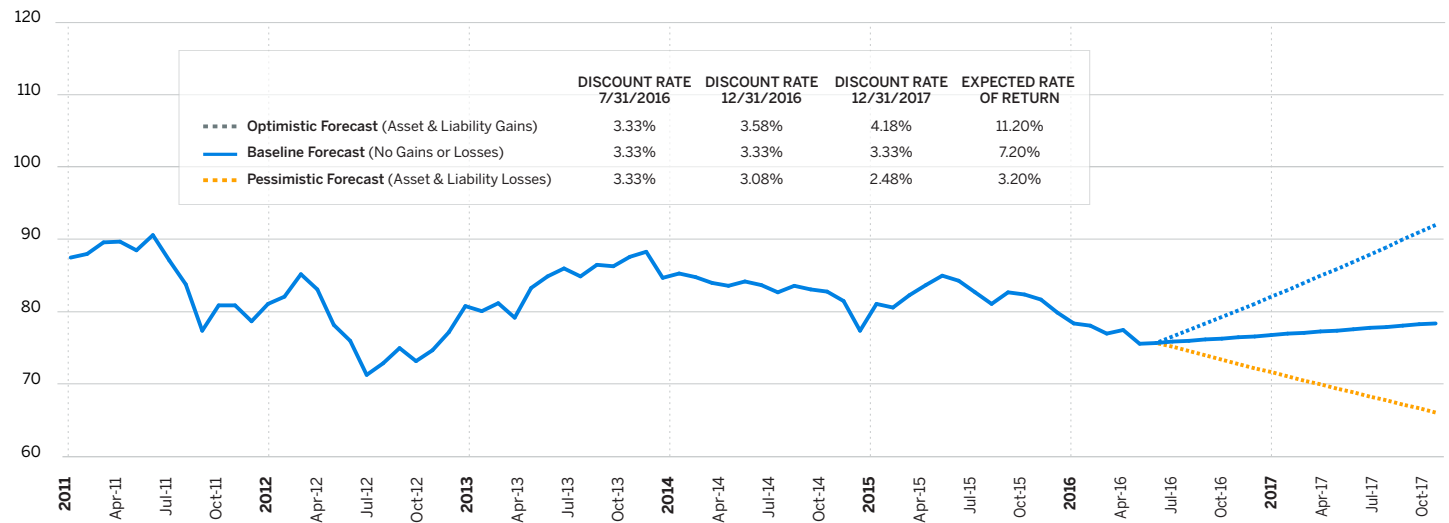
previous discount rate low of 3.41% was seen in January 2015 when the funded status deficit stood at \$427 billion. The highest funded status deficit in dollars was \$480 billion in October 2012.

July's discount rate decline was not all bad news for those plan sponsors with heavy allocations towards fixed income. The market value of assets of the Milliman 100 plans increased by \$23 billion as a result of July's investment gain of 2.08%. The Milliman 100 PFI asset value increased to \$1.415 trillion at the end of July. July's strong investment return was only second to March's 2.87% return during 2016. Assets for the Milliman 100 companies are up 5.81% year-to-date. By comparison, the 2016 Milliman Pension Funding Study reported that the monthly median expected investment return during 2015 was 0.58% (7.2% annualized).

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



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



Over the last 12 months (August 2015 – July 2016), the cumulative asset return for these pensions has been 4.10% and the Milliman 100 PFI funded status deficit has deteriorated by \$186 billion. The rise in the funded status deficit over the past 12 months is primarily due to decreases in discount rates. The funded ratio of the Milliman 100 companies has decreased over the past 12 months to 75.7% from 84.3%.

### 2016-2017 Projections

If the Milliman 100 PFI companies were to achieve the expected 7.2% median asset return (as per the 2016 pension funding study), and if the current discount rate of 3.33% were maintained during years 2016 and 2017, we forecast the funded status of the surveyed plans would increase. This would result in a projected pension deficit of \$440 billion (funded ratio of 76.5%) by the end of 2016 and a projected pension deficit of \$403 billion (funded ratio of 78.4%) by the end of 2017. For purposes of this forecast, we have assumed 2016 aggregate contributions of \$33 billion and 2017 aggregate contributions of \$36 billion.

Under an optimistic forecast with rising interest rates (reaching 3.58% by the end of 2016 and 4.18% by the end of 2017) and asset gains (11.2% annual returns), the funded ratio would climb to 80% by the end of 2016 and 92% by the end of 2017. Under a pessimistic forecast with similar interest rate and asset movements (3.08% discount rate at the end of 2016 and 2.48% by the end of 2017 and 3.2% annual returns), the funded ratio would decline to 73% by the end of 2016 and 66% by the end of 2017.

### About the Milliman 100 Monthly Pension Funding Index

For the past 16 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 2015 fiscal year and for previous fiscal years. This pension plan accounting disclosure information was summarized as part of the Milliman 2016 Pension Funding Study, which was published on April 6, 2016. 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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**MILLIMAN 100 PENSION FUNDING INDEX — JULY 2016 (ALL DOLLAR AMOUNTS IN MILLIONS)**

END OF MONTH	YEAR	MARKET VALUE OF ASSETS	PROJECTED BENEFIT OBLIGATION (PBO)	CHANGE IN FUNDED STATUS	FUNDED STATUS	FUNDED RATIO
JULY	2015	1,437,976	1,705,086	(267,110)	N/A	84.3%
AUGUST	2015	1,391,617	1,683,706	(292,089)	(24,979)	82.7%
SEPTEMBER	2015	1,370,308	1,690,590	(320,282)	(28,193)	81.1%
OCTOBER	2015	1,403,004	1,696,802	(293,798)	26,484	82.7%
NOVEMBER	2015	1,396,737	1,694,810	(298,073)	(4,275)	82.4%
DECEMBER	2015	1,374,997	1,681,985	(306,988)	(8,915)	81.7%
JANUARY	2016	1,347,911	1,687,261	(339,350)	(32,362)	79.9%
FEBRUARY	2016	1,343,755	1,713,513	(369,758)	(30,408)	78.4%
MARCH	2016	1,376,742	1,763,363	(386,621)	(16,863)	78.1%
APRIL	2016	1,380,534	1,792,268	(411,734)	(25,113)	77.0%
MAY	2016	1,384,221	1,785,396	(401,175)	10,559	77.5%
JUNE	2016	1,391,547	1,839,493	(447,946)	(46,771)	75.6%
JULY	2016	1,415,017	1,868,152	(453,135)	(5,189)	75.7%

**PENSION ASSET AND LIABILITY RETURNS**

END OF MONTH	YEAR	ASSET RETURNS			LIABILITY RETURNS	
		MONTHLY	YEAR-TO-DATE	DISCOUNT RATE	MONTHLY	YEAR-TO-DATE
JULY	2015	1.18%	2.74%	4.14%	1.85%	-1.73%
AUGUST	2015	-2.68%	-0.01%	4.23%	-0.83%	-2.54%
SEPTEMBER	2015	-0.97%	-0.97%	4.19%	0.84%	-1.73%
OCTOBER	2015	2.97%	1.97%	4.16%	0.79%	-0.95%
NOVEMBER	2015	0.12%	2.09%	4.16%	0.30%	-0.65%
DECEMBER	2015	-0.99%	1.08%	4.16%	-0.33%	-0.98%
JANUARY	2016	-1.58%	-1.58%	4.14%	0.65%	0.65%
FEBRUARY	2016	0.10%	-1.48%	4.01%	1.88%	2.54%
MARCH	2016	2.87%	1.34%	3.78%	3.22%	5.85%
APRIL	2016	0.67%	2.03%	3.65%	1.94%	7.90%
MAY	2016	0.66%	2.70%	3.68%	-0.08%	7.81%
JUNE	2016	0.93%	3.65%	3.45%	3.32%	11.39%
JULY	2016	2.08%	5.81%	3.33%	1.84%	13.43%