Milliman analysis: 2016 ends almost where it started at the end of 2015

The 2016 Milliman 100 PFI funded ratio is 81.0%

Forecast for end of year 2017 and 2018

Charles Clark, ASA, MAAA, EA
Zorast Wadia, FSA, MAAA, EA

Year in review

Interest rate declines characterized 2016. This is the sixth time since 2007 that there was an annual interest rate decline from the prior year. The Milliman 100 discount rate fell 17 basis points to 3.99% at the end of 2016 from 4.16% at the end of 2015. At the end of August, the discount rate reached 3.32%, the lowest in the 16 years of the Milliman 100 Pension Funding Index (PFI). Since that point and coincident with the conclusion of the U.S. presidential election, interest rates have steadily increased.

While asset returns from 2012 to 2014 were above expectations, assets underperformed expectations during 2015 and 2016. Though 2015 posted a dismal investment gain of 1.08%, 2016 ended with a modest gain of 6.17%. The 2016 gain still fell short of the annual asset return expectation of 7.2%. While the year-to-date return at the end of the third quarter of 2016 was 6.25% and it seemed that the investment performance was on course to meet or exceed expectations, the late year interest rate increases (based on Federal Reserve actions) hurt the fixed income holdings of a majority of plan sponsors and, thus, resulted in another year of underperformance. Those plans with higher equity allocation in 2016 had better returns than plans that had lower equity allocation.

The result was a funded status decline of $19 billion at the end of 2016 when compared to the end of 2015. The year-end 2016 funded ratio was 81.0%, down from 81.7% at the end of 2015. While plan assets were up $17 billion for the year, plan liabilities were up $36 billion on account of declining interest rates.

HIGHLIGHTS

	$ BILLION			
	MV	PBO	FUNDED STATUS	FUNDED PERCENTAGE
NOV 2016	1,382	1,721	(339)	80.3%
DEC 2016	1,392	1,718	(326)	81.0%
MONTHLY CHANGE	+11	(3)	+13	0.7%
YTD CHANGE	+17	+36	(19)	-0.7%

Note: Numbers may not add up precisely due to rounding

The projected asset and liability figures presented in this analysis will be adjusted as part of Milliman's annual Pension Funding Study. The study will also adjust for pension settlement and annuity purchase activities that occurred during 2016. De-risking transactions generally result in reductions in pension funded status because the assets paid to the participants or assumed by the insurance companies as part of the risk transfer are larger than the corresponding liabilities that are extinguished from the balance sheets. To offset this decrease effect, many companies engaging in de-risking transactions make additional cash contributions to their pension plans to improve the plan's funded status.

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

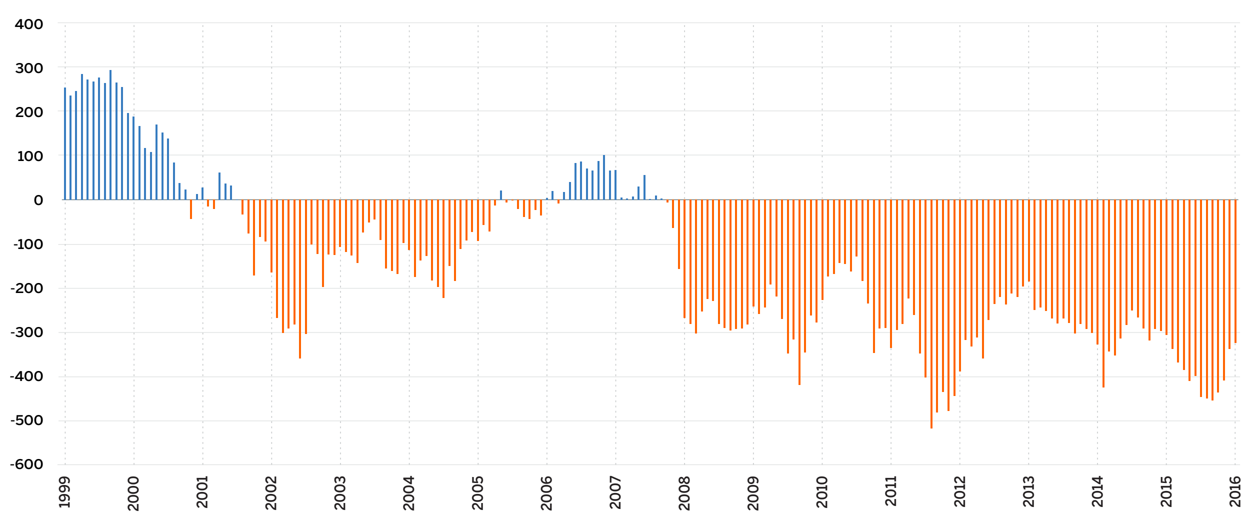
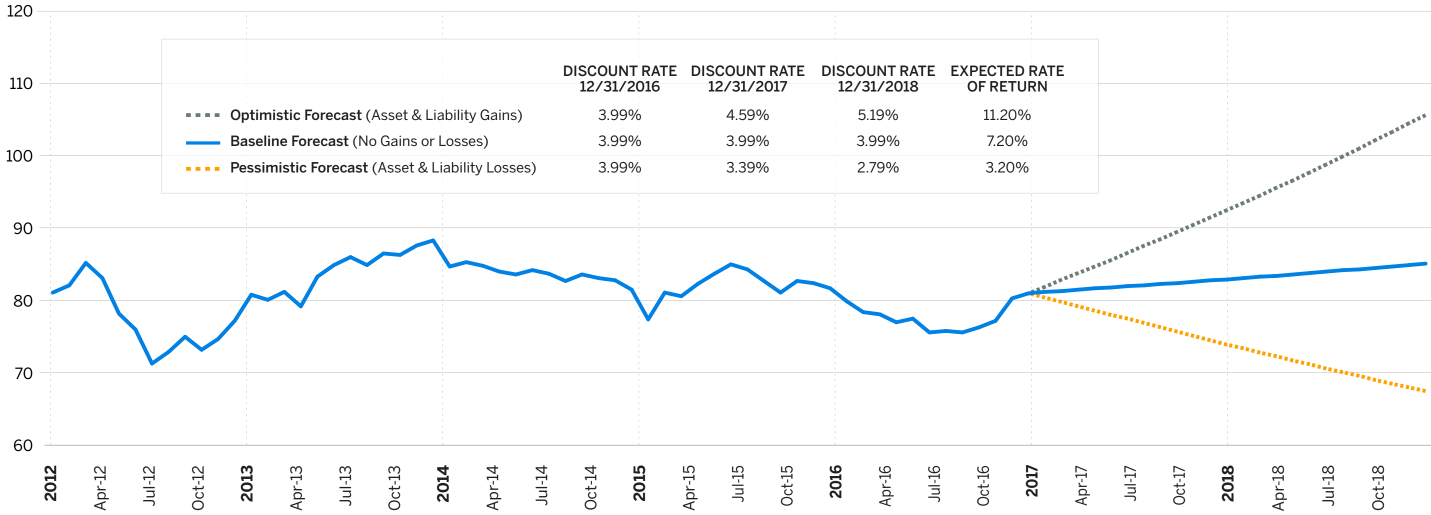


FIGURE 2: MILLIMAN 100 PENSION FUNDING INDEX — PENSION FUNDED RATIO



During 2016, the cumulative investment gain was 6.17% while the cumulative liability loss (i.e., the projected benefit obligation (PBO) increase) was 5.88%. The $19 billion funded status improvement during 2016 resulted in a year-end funded status deficit of $326 billion. Pension expense for 2017 for all Milliman 100 companies is estimated to increase by a modest $0.6 billion.

The year 2016 got off to a poor start as the investment loss for the Milliman 100 plans was (1.58)% in January 2016, resulting in a funded ratio of 79.9%. The activity during the remainder of the first quarter of 2016 was characterized by strong asset performance coupled with rising pension liabilities due to interest rate declines. The resulting funded ratio was 78.1% as of March 31, 2016. The second quarter of 2016 brought on further funded status declines as interest rates continued to fall. The funded ratio reached its nadir—75.6%—for the year at the end of June 2016. From there, the funded ratio oscillated about this value for the next three months, eventually breaking through to 76.3% at the end of September. This improvement was the result of an interest rate gain in September. The interest rate increases continued for the rest of the fourth quarter, and the funded ratio ended the year at 81.0%. While the first half of the year saw declines, the second half of 2016 was characterized by gains almost bringing the funded ratio full circle to the beginning of the year.

The present interest rate momentum could continue into 2017. Rumors of potential multiple rate hikes by the Federal Reserve in 2017 have plan sponsors and pension practitioners closely watching market activity. If interest rates continue their upward trajectory during 2017, the funded ratio could make some major gains. More information on this is provided in the 2017-2018 projections discussion below.

Pension plan accounting information disclosed in the footnotes of the Milliman 100 companies' annual reports for the 2016 fiscal year is expected to be available during the first quarter of 2017 as part of the 2017 Milliman Pension Funding Study.

December review

The funded status improved by $13 billion during December. The deficit fell to $326 billion from a deficit of $339 billion at the end of November. The funded status improvement for the month of December was due to robust investment returns of 1.17%. Corporate bond interest rates that are the benchmarks used to value pension liabilities were flat during December. As of December 31, the funded ratio improved to 81.0% from 80.3% at the end of November.

December's $11 billion increase in market value brings the Milliman 100 PFI asset value to $1.392 trillion at year-end 2016. The Milliman 100 PFI liability value decreased to $1.718 trillion at the end of December. The liability change resulted from a one basis point increase in the monthly discount rate to 3.99% for December from 3.98% for November.

2017-2018 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 3.99% 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 $294 billion (funded ratio of 82.9%) by the end of 2017 and a projected pension deficit of $258 billion (funded ratio of 85.1%) by the end of 2018. For purposes of this forecast, we have assumed 2017 aggregate contributions of $33 billion and 2018 aggregate contributions of $36 billion.

Under an optimistic forecast with rising interest rates (reaching 4.59% by the end of 2017 and 5.19% by the end of 2018) and asset gains (11.2% annual returns), the funded ratio would climb to 93% by the end of 2017 and 106% by the end of 2018. Under a pessimistic forecast with similar interest rate and asset movements (3.39% discount rate at the end of 2017 and 2.79% by the end of 2018 and 3.2% annual returns), the funded ratio would decline to 74% by the end of 2017 and 68% by the end of 2018.

MILLIMAN 100 PENSION FUNDING INDEX — DECEMBER 2016 (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
DECEMBER	2015	1,374,997	1,681,985	(306,988)	N/A	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	1,376,714	1,763,363	(386,649)	(16,891)	78.1%
APRIL	2016	1,380,561	1,792,268	(411,707)	(25,058)	77.0%
MAY	2016	1,384,166	1,785,396	(401,230)	10,477	77.5%
JUNE	2016	1,391,437	1,839,493	(448,056)	(46,826)	75.6%
JULY	2016	1,416,211	1,868,152	(451,941)	(3,885)	75.8%
AUGUST	2016	1,414,554	1,871,278	(456,724)	(4,783)	75.6%
SEPTEMBER	2016	1,409,988	1,847,619	(437,631)	19,093	76.3%
OCTOBER	2016	1,391,867	1,802,720	(410,853)	26,778	77.2%
NOVEMBER	2016	1,381,728	1,720,876	(339,148)	71,705	80.3%
DECEMBER	2016	1,392,340	1,718,126	(325,786)	13,362	81.0%

PENSION ASSET AND LIABILITY RETURNS

		ASSET RETURNS			LIABILITY RETURNS	
END OF MONTH	YEAR	MONTHLY	YEAR-TO-DATE	DISCOUNT RATE	MONTHLY	YEAR-TO-DATE
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	2.86%	1.34%	3.78%	3.22%	5.85%
APRIL	2016	0.68%	2.03%	3.65%	1.94%	7.90%
MAY	2016	0.66%	2.70%	3.68%	-0.08%	7.81%
JUNE	2016	0.92%	3.65%	3.45%	3.32%	11.39%
JULY	2016	2.18%	5.90%	3.33%	1.84%	13.43%
AUGUST	2016	0.27%	6.19%	3.32%	0.44%	13.93%
SEPTEMBER	2016	0.06%	6.25%	3.42%	-0.99%	12.81%
OCTOBER	2016	-0.90%	5.30%	3.61%	-2.14%	10.39%
NOVEMBER	2016	-0.34%	4.94%	3.98%	-4.24%	5.71%
DECEMBER	2016	1.17%	6.17%	3.99%	0.16%	5.88%

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.

CONTACT

Zorast Wadia
zorast.wadia@milliman.com