

Milliman analysis: 2019 ends with strong fourth quarter gains

Milliman 100 PFI funded ratio ends 2019 at 89.0% compared to 89.4% a year prior

PFI year-end discount rate settles at 3.20%, down 99 basis points, with double-digit investment gains of 15.66%

Forecast for end of year 2020 and 2021

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



Year in review

The year 2019 was characterized by strong investment returns alongside sharply decreasing discount rates that resulted in an overall \$30 billion drop in funded status. Discount rates have declined in seven of the last 10 years. The Milliman 100 discount rates fell 99 basis points to 3.20% at the end of 2019 from 4.19% at the end of 2018. The discount rate at year-end 2019 was the lowest year-end discount rate and the fifth lowest monthly discount overall that has been recorded in the 19-year history of the Milliman 100 Pension Funding Index (PFI).

Assets outperformed expectations during 2019, posting an annual return of 15.66% following the disappointing 2018 investment loss of 2.94%. By comparison, the 2019 Milliman Pension Funding Study reported that the monthly median expected investment return during 2018 was 0.53% (6.6% annualized). The year 2019 was favorable for both fixed income and equity investment classes. The PFI has observed investment returns above expectations in six of the last 10 years.

HIGHLIGHTS

	\$ BILLION			
	MV	PBO	FUNDED STATUS	FUNDED PERCENTAGE
NOVEMBER	1,604	1,847	(243)	86.9%
DECEMBER	1,618	1,819	(201)	89.0%
MONTHLY CHANGE	+14	(28)	+42	2.1%
YTD CHANGE	+174	+204	(30)	-0.4%

Note: Numbers may not add up precisely due to rounding

With the year-over-year \$30 billion funded status drop noted above, the year-end 2019 funded ratio declined to 89.0% from 89.4% at the end of 2018. While plan assets were up \$174 billion for the year, plan liabilities increased \$204 billion due to the aforementioned declining interest rates.

The projected asset and liability figures presented in this analysis will be adjusted as part of Milliman's annual 2020 Pension Funding Study, including summarizing and reporting the most recent plan sponsor SEC financial reports. The 2020

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

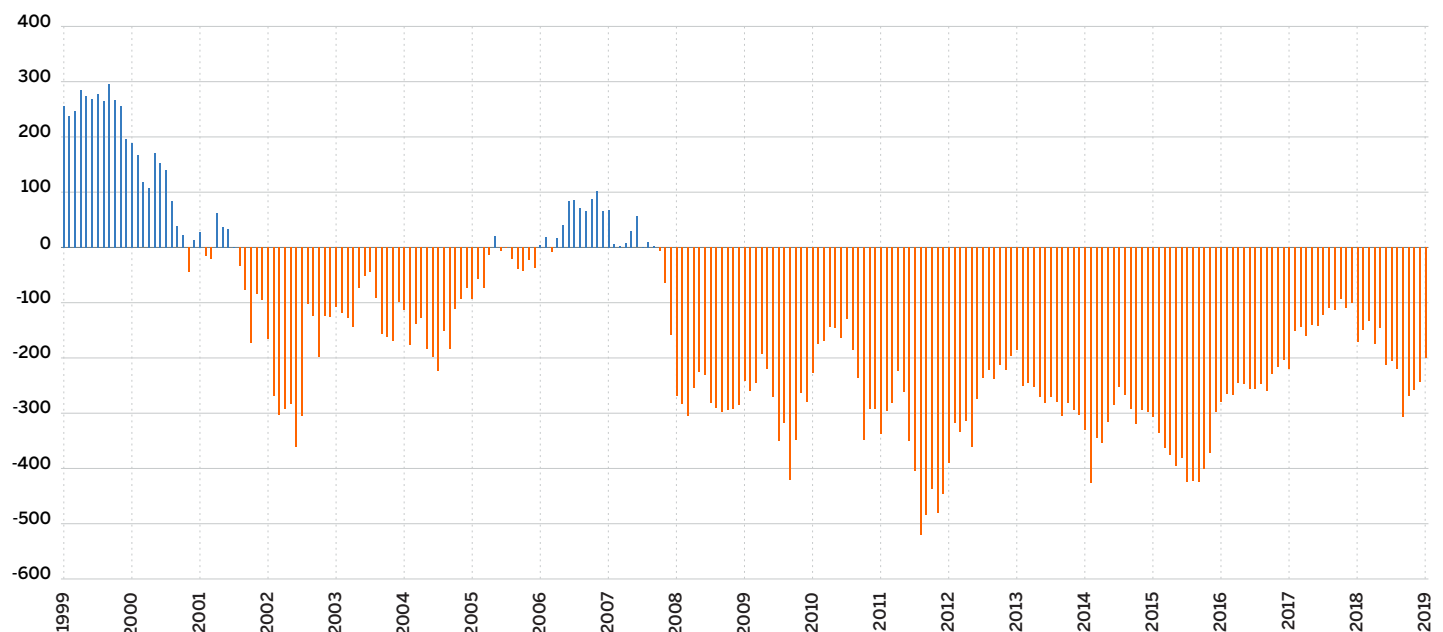
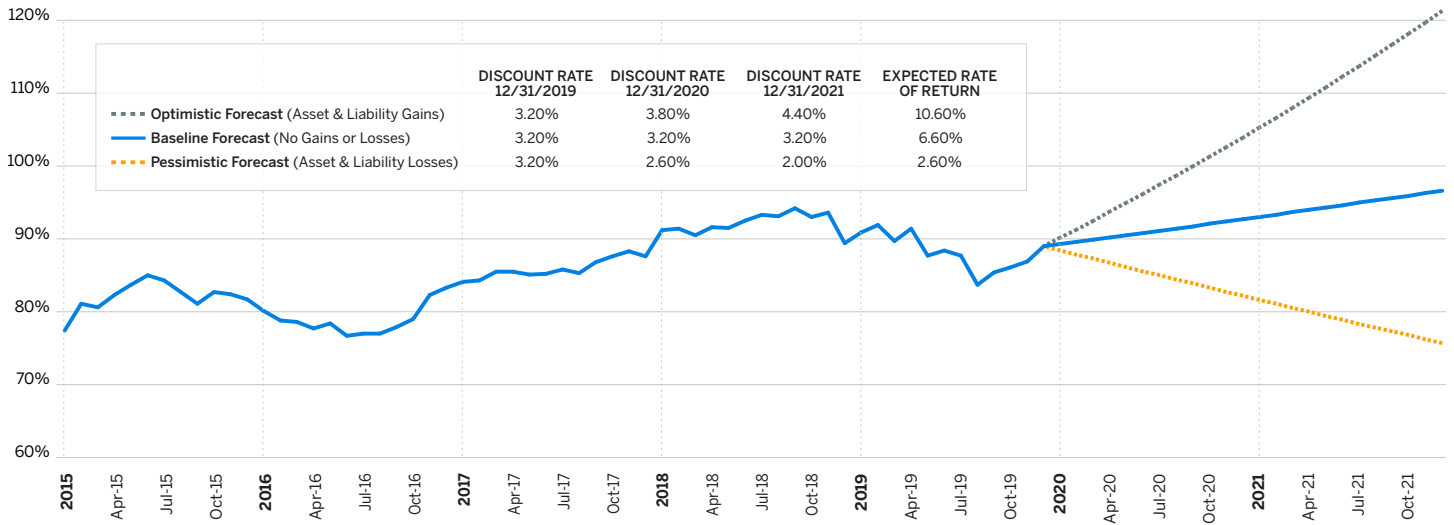


FIGURE 2: MILLIMAN 100 PENSION FUNDING INDEX — PENSION FUNDED RATIO



Pension Funding Study will also reflect reported pension settlement and annuity purchase activities that occurred during 2019. 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.

During 2019, the cumulative investment return was 15.66% while the cumulative liability return (e.g., the projected benefit obligation [PBO] increase) was 17.35%. The \$30 billion funded status increase during 2019 resulted in a year-end funded status deficit of \$201 billion.

Taking a closer look by quarter, 2019 was off to a promising start as the investment return for the Milliman 100 plans was 6.30% in the first quarter, but discount rates sharply fell in March, eroding the funded status gains from earlier in the quarter. The resulting funded ratio was 89.7% as of March 31, 2019. Positive investment experience continued during the second quarter of 2019, but funded status declined throughout as discount rates continued their descent. The funded ratio fell to 88.4% as of June 30 in spite of a stellar six-month return of nearly 10%. The third quarter was by far the worst quarter of the year as investment returns were flat while discount rates achieved new all-time lows. The lowest discount rate ever recorded in the 19-year history of the Milliman 100 PFI of 2.95% occurred at the end of August. Funded status declined by \$64 billion during the third quarter and the funded ratio was 85.4% as of September 30. Luckily, things turned around during the fourth quarter as pension assets posted above average returns and discount rates rallied in December. December’s \$14 billion increase in market value brings the Milliman 100 PFI asset value to \$1.618 trillion at year-end 2019.

The Milliman 100 PFI liability value settled at \$1.819 trillion at the end of December 2019. The funded ratio climbed to 89.0% by the end of the year, just slightly behind where it started the year at 89.4%. While investment returns were superb, the low discount rate environment exerted itself and ended up having a more dominant effect on the funding ratio during 2019.

Pension plan accounting information disclosed in the footnotes of the Milliman 100 companies’ annual reports for the 2019 fiscal year is expected to be available during the first quarter of 2020 as part of the 2020 Milliman Pension Funding Study. We expect to publish our comprehensive recap in April 2020 as part of the 2020 Milliman Pension Funding Study.

2020-2021 Projections

If the Milliman 100 PFI companies were to achieve the expected 6.6% median asset return (as per the 2019 pension funding study), and if the current discount rate of 3.20% were maintained during years 2020 through 2021, we forecast that the funded status of the surveyed plans would increase. This would result in a projected pension deficit of \$132 billion (funded ratio of 92.7%) by the end of 2020 and a projected pension deficit of \$61 billion (funded ratio of 96.6%) by the end of 2021. For purposes of this forecast, we have assumed 2020 and 2021 aggregate annual contributions of \$50 billion.

Under an optimistic forecast with rising interest rates (reaching 3.80% by the end of 2020 and 4.40% by the end of 2021) and asset gains (10.6% annual returns), the funded ratio would climb to 104% by the end of 2020 and 121% by the end of 2021. Under a pessimistic forecast with similar interest rate and asset movements (2.60% discount rate at the end of 2020 and 2.00% by the end of 2021 and 2.6% annual returns), the funded ratio would decline to 82% by the end of 2020 and 76% by the end of 2021.

MILLIMAN 100 PENSION FUNDING INDEX — DECEMBER 2019 (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	2018	1,444,672	1,615,128	(170,456)	N/A	89.4%
JANUARY	2019	1,491,598	1,640,656	(149,058)	21,398	90.9%
FEBRUARY	2019	1,502,098	1,635,088	(132,990)	16,068	91.9%
MARCH	2019	1,523,066	1,697,476	(174,410)	(41,420)	89.7%
APRIL	2019	1,536,084	1,681,005	(144,921)	29,489	91.4%
MAY	2019	1,517,461	1,730,603	(213,142)	(68,221)	87.7%
JUNE	2019	1,562,001	1,767,860	(205,859)	7,283	88.4%
JULY	2019	1,564,400	1,783,382	(218,982)	(13,123)	87.7%
AUGUST	2019	1,579,960	1,886,605	(306,645)	(87,663)	83.7%
SEPTEMBER	2019	1,579,849	1,849,450	(269,601)	37,044	85.4%
OCTOBER	2019	1,593,097	1,850,540	(257,443)	12,158	86.1%
NOVEMBER	2019	1,604,159	1,846,884	(242,725)	14,718	86.9%
DECEMBER	2019	1,618,352	1,818,830	(200,478)	42,247	89.0%

PENSION ASSET AND LIABILITY RETURNS

END OF MONTH	YEAR	ASSET RETURNS			LIABILITY RETURNS	
		MONTHLY	YEAR-TO-DATE	DISCOUNT RATE	MONTHLY	YEAR-TO-DATE
DECEMBER	2018	-1.66%	-2.94%	4.19%	3.01%	-4.19%
JANUARY	2019	3.54%	3.54%	4.06%	1.97%	1.97%
FEBRUARY	2019	0.98%	4.56%	4.08%	0.05%	2.02%
MARCH	2019	1.67%	6.30%	3.78%	4.19%	6.30%
APRIL	2019	1.13%	7.50%	3.85%	-0.60%	5.66%
MAY	2019	-0.95%	6.49%	3.61%	3.31%	9.16%
JUNE	2019	3.21%	9.91%	3.45%	2.50%	11.89%
JULY	2019	0.42%	10.37%	3.37%	1.22%	13.26%
AUGUST	2019	1.26%	11.76%	2.95%	6.11%	20.18%
SEPTEMBER	2019	0.25%	12.04%	3.09%	-1.66%	18.19%
OCTOBER	2019	1.10%	13.27%	3.08%	0.38%	18.63%
NOVEMBER	2019	0.95%	14.36%	3.09%	0.12%	18.77%
DECEMBER	2019	1.14%	15.66%	3.20%	-1.20%	17.35%

About the Milliman 100 Monthly Pension Funding Index

For the past 19 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 2018 fiscal year and for previous fiscal years. This pension plan accounting disclosure information was summarized as

part of the Milliman 2019 Pension Funding Study, which was published on April 16, 2019. 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