Milliman analysis: Corporate pensions experience great start to 2019 as January's robust investment gains boost funded ratio to 91.0%

Milliman 100 investment gain of 3.35% hits twelve-month high

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The funded status of the 100 largest corporate defined benefit pension plans improved by \$19 billion during January as measured by the Milliman 100 Pension Funding Index (PFI). The funded status deficit narrowed to \$148 billion from \$167 billion at the end of December 2018, the result of investment gains earned in January. Liability increases due to a decrease in the benchmark corporate bond interest rates used to value pension liabilities partially offset the improved funded status. As of January 31, the funded ratio rose to 91.0%, up from 89.7% at the end of December. January's asset return of 3.35% was greater than any prior monthly asset return in 2018. This much welcomed improvement comes on the heels of a dismal fourth quarter, where the cumulative return was -4.34%.

The market value of assets grew by \$46 billion as a result of January's robust investment gain. The Milliman 100 PFI asset value increased to \$1.505 trillion from \$1.459 trillion at the end of December 2018. By comparison, the 2018 Milliman Pension Funding Study reported that the monthly median expected investment return during 2017 was 0.55% (6.8% annualized). The expected rate of return for 2018 will be published in the 2019 Milliman Pension Funding Study in April.

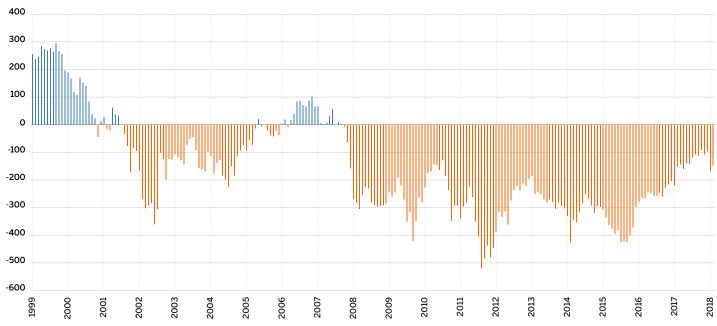
HIGHLIGHTS					
		\$ BILLIC	N		
	MV	РВО	FUNDED STATUS	FUNDED PERCENTAGE	
DECEMBER	1,459	1,626	(167)	89.7%	
JANUARY	1,505	1,653	(148)	91.0%	
MONTHLY CHANGE	+46	+27	+19	1.3%	
YTD CHANGE	+46	+27	+19	1.3%	

Note: Numbers may not add up precisely due to rounding

The projected benefit obligation (PBO), or pension liabilities, increased to \$1.653 trillion at the end of January. The change resulted from a decrease of 13 basis points in the monthly discount rate to 4.06% for January from 4.19% for December 2018.

Over the last 12 months (Feb. 2018–Jan. 2019), the cumulative asset return for these pensions has been -1.3% and the Milliman 100 PFI funded status deficit only improved by \$2.7 billion. The funded status gain is the result of the general upward trend in





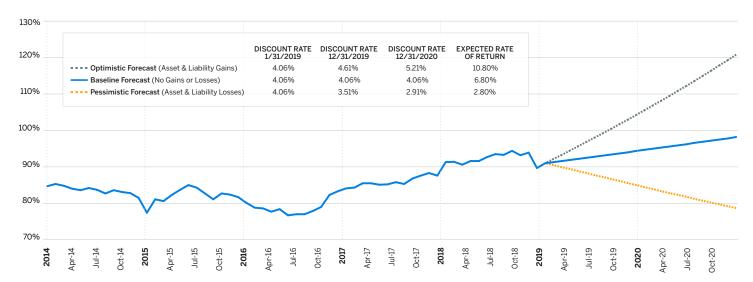


FIGURE 2: MILLIMAN 100 PENSION FUNDING INDEX — PENSION FUNDED RATIO

discount rates during 2018. The funded ratio of the Milliman 100 companies has returned full circle over the past 12 months settling at 91.0% as of the end of January.

The projected asset and liability figures presented in this analysis will be adjusted as part of our annual 2019 Pension Funding Study, where pension settlement and annuity purchase activities that occurred during 2018 will be reflected. De-risking transactions generally result in reductions in pension funded status since 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.

Pension plan accounting information disclosed in the footnotes of the Milliman 100 companies' annual SEC reports for the 2018 fiscal year is expected to be available during the first quarter of 2019, and will also be covered in the 2019 Milliman Pension Funding Study.

2019-2020 Projections

If the Milliman 100 PFI companies were to achieve the expected 6.8% median asset return (as per the 2018 pension funding study), and if the current discount rate of 4.06% was maintained during years 2019 through 2020, we forecast the funded status of the surveyed plans would increase. This would result in a projected pension deficit of \$93 billion (funded ratio of 94.4%) by the end of 2019 and a projected pension deficit of \$30 billion (funded ratio of 98.2%) by the end of 2020. For purposes of this forecast, we have assumed 2019 and 2020 aggregate annual contributions of \$52 billion.

Under an optimistic forecast with rising interest rates (reaching 4.61% by the end of 2019 and 5.21% by the end of 2020) and asset gains (10.8% annual returns), the funded ratio would

climb to 104% by the end of 2019 and 121% by the end of 2020. Under a pessimistic forecast with similar interest rate and asset movements (3.51% discount rate at the end of 2019 and 2.91% by the end of 2020 and 2.8% annual returns), the funded ratio would decline to 85% by the end of 2019 and 79% by the end of 2020.

About the Milliman 100 Monthly Pension Funding Index

For the past 18 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 2017 fiscal year and for previous fiscal years. This pension plan accounting disclosure information was summarized as part of the Milliman 2018 Pension Funding Study, which was published on April 19, 2018. 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 — JANUARY 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
JANUARY	2018	1,576,415	1,727,191	(150,776)	N/A	91.3%
FEBRUARY	2018	1,536,732	1,680,622	(143,890)	6,886	91.4%
MARCH	2018	1,529,451	1,688,946	(159,495)	(15,605)	90.6%
APRIL	2018	1,524,230	1,663,183	(138,953)	20,542	91.6%
MAY	2018	1,531,432	1,672,278	(140,846)	(1,893)	91.6%
JUNE	2018	1,523,684	1,644,368	(120,684)	20,162	92.7%
JULY	2018	1,537,759	1,645,155	(107,396)	13,288	93.5%
AUGUST	2018	1,546,237	1,657,345	(111,108)	(3,712)	93.3%
SEPTEMBER	2018	1,538,976	1,629,977	(91,001)	20,107	94.4%
OCTOBER	2018	1,478,981	1,586,232	(107,251)	(16,250)	93.2%
NOVEMBER	2018	1,488,164	1,584,851	(96,687)	10,564	93.9%
DECEMBER	2018	1,459,461	1,626,426	(166,965)	(70,278)	89.7%
JANUARY	2019	1,504,715	1,652,782	(148,067)	18,898	91.0%

PENSION ASSET AND LIABILITY RETURNS

END OF MONTH		ASSET RETURNS			LIABILITY RETURNS	
	YEAR	MONTHLY	YEAR-TO-DATE	DISCOUNT RATE	MONTHLY	YEAR-TO-DATE
JANUARY	2018	1.64%	1.64%	3.74%	-2.39%	-2.39%
FEBRUARY	2018	-2.25%	-0.64%	3.96%	-2.34%	-4.67%
MARCH	2018	-0.19%	-0.84%	3.91%	0.86%	-3.85%
APRIL	2018	-0.06%	-0.89%	4.03%	-1.16%	-4.96%
MAY	2018	0.76%	-0.14%	3.99%	0.92%	-4.09%
JUNE	2018	-0.22%	-0.37%	4.12%	-1.30%	-5.34%
JULY	2018	1.21%	0.84%	4.11%	0.42%	-4.94%
AUGUST	2018	0.83%	1.68%	4.05%	1.11%	-3.88%
SEPTEMBER	2018	-0.19%	1.48%	4.18%	-1.28%	-5.10%
OCTOBER	2018	-3.62%	-2.19%	4.40%	-2.30%	-7.28%
NOVEMBER	2018	0.91%	-1.30%	4.41%	0.31%	-6.99%
DECEMBER	2018	-1.64%	-2.92%	4.19%	3.01%	-4.19%
JANUARY	2019	3.35%	3.35%	4.06%	1.98%	1.98%

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