Milliman analysis: 2020 ends with the Milliman 100 PFI funded ratio at 88.2%

PFI year-end discount rate settles at 2.46%, down 74 basis points, with double-digit investment gains of 11.72% powering funding for the year

Forecast for end of year 2021 and 2022

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Year in review

The year 2020 was characterized by strong investment gains alongside sharply decreasing discount rates that resulted in an overall $50 billion increase of the funded status deficit. While similar to the 2019 net asset and liability changes, 2020 had a unique set of circumstances, namely the catastrophic impact on people's lives and the financial markets due to the COVID-19 pandemic. After experiencing steep declines in the first quarter, asset returns roared back for the remainder of 2020 and limited the funded status deterioration due to declining discount rates. The funded status deficit of $234 billion at the end of December was the lowest monthly funded status deficit recorded in 2020.

Discount rates have declined in seven of the last 10 years. The Milliman 100 discount rates fell 74 basis points to 2.46% at the end of 2020 from 3.20% at the end of 2019. The discount rate at year-end 2020 was the lowest year-end discount rate and second lowest monthly discount overall that has been recorded in the 20-year history of the Milliman 100 Pension Funding Index (PFI).

HIGHLIGHTS

	$ BILLION			
	MV	PBO	FUNDED STATUS	FUNDED PERCENTAGE
NOVEMBER	1,713	1,980	(266)	86.5%
DECEMBER	1,747	1,981	(234)	88.2%
MONTHLY CHANGE	+34	+1	+33	1.7%
YTD CHANGE	+124	+175	(50)	-1.6%

Note: Numbers may not add up precisely due to rounding

Net asset performance was well above the expected 6.5% annual investment gain. During 2020, these pension assets posted an annual return of 11.72% following the strong 2019 investment gain of 15.66%. By comparison, the 2020 Milliman Pension Funding Study (PFS) reported that the monthly median expected investment return during 2019 was 0.53% (6.5% annualized). The year 2020 was very favorable for both fixed income and equity investment classes, similar to 2019. The PFS has observed investment returns above expectations in seven of the last 10 years.

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

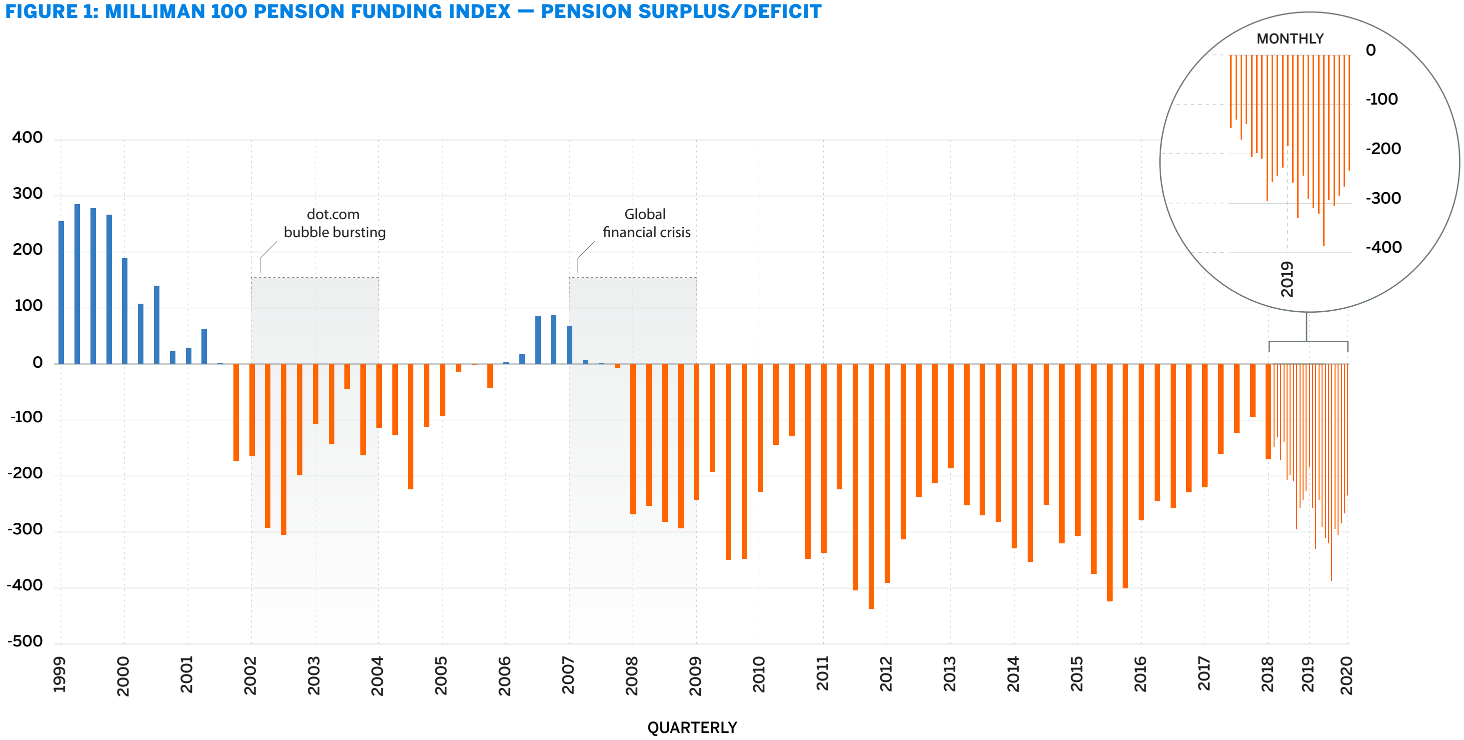
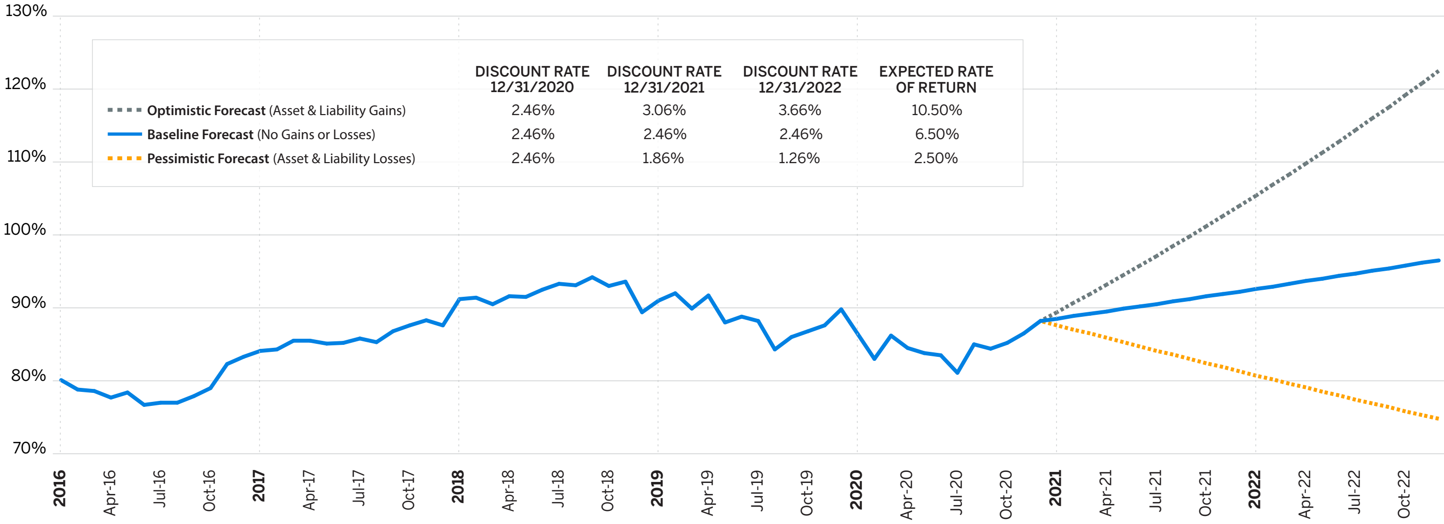


FIGURE 2: MILLIMAN 100 PENSION FUNDING INDEX — PENSION FUNDED RATIO



With the year-over-year $50 billion funded status deterioration noted above, the year-end 2020 funded ratio declined to 88.2% from 89.8% at the end of 2019. While plan assets were up nearly $125 billion for the year, plan liabilities increased $175 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 2021 PFS, including summarizing and reporting the most recent plan sponsor Securities and Exchange Commission financials. The 2021 PFS will also reflect reported pension settlement and annuity purchase activities that occurred during 2020. 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 2020, the cumulative investment return was 11.72% while the cumulative liability return (e.g., the projected benefit obligation [PBO] increase) was 13.73%. The $50 billion funded status drop during 2020 resulted in a year-end funded status deficit of $234 billion.

Taking a closer look by quarter, 2020 was off to a disastrous start as the investment return for the Milliman 100 plans began with a loss, at -5.84% in the first quarter. The funded status deficit worsened from $184 billion at the beginning of the year to $243 billion by end of March 2020. The resulting funded ratio was 86.2% as of March 31, 2020. Positive investment experience ensued during the second quarter of 2020, but the funded status further declined as discount rates continued their descent.

The funded ratio fell to 83.5% as of June 30 in spite of the financial market rebound of the second quarter. The lowest discount rate ever recorded in the 20-year history of the Milliman 100 PFS of 2.26% occurred at the end of July. Despite this, the funded status deficit improved by $14 billion during the third quarter based on a continuation of positive investment returns and as discount rates inched upward from their nadir. The funded ratio stood at 84.4% as of September 30. The fourth quarter of 2020 was by far the best quarter for pensions as assets posted above average returns and further discount rate drops were limited. December's $34 billion increase in market value brings the Milliman 100 PFI asset value to $1.747 trillion at year-end 2020. The Milliman 100 PFI liability value increased to $1.981 trillion at the end of December 2020. The funded ratio climbed to 88.2% by the end of the year, although behind where it started the year at 89.8%.

Pension plan accounting information disclosed in the footnotes of the Milliman 100 companies' annual reports for the 2020 fiscal year is expected to be available during the first quarter of 2021 as part of the 2021 Milliman PFS. We expect to publish our comprehensive recap in April 2021 as part of it.

2021-2022 projections

If the Milliman 100 PFI companies were to achieve the expected 6.5% median asset return (as per the 2020 PFS) and if the current discount rate of 2.46% were maintained during 2021 and 2022, we forecast that the funded status of the surveyed plans would increase. This would result in a projected pension deficit of $152 billion (funded ratio of 92.2%) by the end of 2021 and a projected pension deficit of $67 billion (funded ratio of 96.5%) by the end of 2022. For purposes of this forecast, we have assumed 2021 and 2022 aggregate annual contributions of $50 billion.

Under an optimistic forecast with rising interest rates (reaching 3.06% by the end of 2021 and 3.66% by the end of 2022) and asset gains (10.5% annual returns), the funded ratio would climb to 104% by the end of 2021 and 123% by the end of 2022. Under a pessimistic forecast with similar interest rate and asset movements (1.86% discount rate at the end of 2021 and 1.26% by the end of 2022 and 2.5% annual returns), the funded ratio would decline to 81% by the end of 2021 and 75% by the end of 2022.

MILLIMAN 100 PENSION FUNDING INDEX — DECEMBER 2020 (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	2019	1,622,903	1,806,420	(183,517)	N/A	89.8%
JANUARY	2020	1,634,276	1,892,068	(257,792)	(74,275)	86.4%
FEBRUARY	2020	1,605,039	1,934,508	(329,469)	(71,677)	83.0%
MARCH	2020	1,513,944	1,757,304	(243,360)	86,109	86.2%
APRIL	2020	1,579,719	1,869,878	(290,159)	(46,799)	84.5%
MAY	2020	1,601,435	1,911,178	(309,743)	(19,584)	83.8%
JUNE	2020	1,618,274	1,938,415	(320,141)	(10,398)	83.5%
JULY	2020	1,660,410	2,047,070	(386,660)	(66,519)	81.1%
AUGUST	2020	1,670,560	1,964,217	(293,657)	93,003	85.0%
SEPTEMBER	2020	1,649,612	1,955,391	(305,779)	(12,122)	84.4%
OCTOBER	2020	1,630,503	1,914,613	(284,110)	21,669	85.2%
NOVEMBER	2020	1,713,311	1,979,722	(266,411)	17,699	86.5%
DECEMBER	2020	1,747,293	1,981,099	(233,806)	32,605	88.2%

PENSION ASSET AND LIABILITY RETURNS

		ASSET RETURNS			LIABILITY RETURNS	
END OF MONTH	YEAR	MONTHLY	YEAR-TO-DATE	DISCOUNT RATE	MONTHLY	YEAR-TO-DATE
DECEMBER	2019	1.15%	15.66%	3.20%	-1.20%	17.35%
JANUARY	2020	1.01%	1.01%	2.85%	5.07%	5.07%
FEBRUARY	2020	-1.48%	-0.49%	2.69%	2.55%	7.75%
MARCH	2020	-5.37%	-5.83%	3.39%	-8.83%	-1.77%
APRIL	2020	4.68%	-1.42%	2.92%	6.74%	4.86%
MAY	2020	1.69%	0.25%	2.76%	2.52%	7.50%
JUNE	2020	1.37%	1.62%	2.65%	1.73%	9.36%
JULY	2020	2.92%	4.58%	2.26%	5.89%	15.80%
AUGUST	2020	0.91%	5.54%	2.54%	-3.76%	11.45%
SEPTEMBER	2020	-0.96%	4.53%	2.57%	-0.15%	11.27%
OCTOBER	2020	-0.86%	3.64%	2.71%	-1.78%	9.29%
NOVEMBER	2020	5.39%	9.23%	2.47%	3.70%	13.33%
DECEMBER	2020	2.28%	11.72%	2.46%	0.36%	13.73%

ABOUT THE MILLIMAN 100 MONTHLY PENSION FUNDING INDEX

For the past 20 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 2019 fiscal year and for previous fiscal years. This pension plan accounting disclosure information was summarized as part of the Milliman 2020 Pension Funding Study, which was published on April 28, 2020. 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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