

Despite a disappointing 2015 investment return of only 0.9%, the year-end 2015 funded ratio managed to increase slightly to 81.8% from 81.7% a year ago due to a 25 basis point increase in discount rates and an update to life expectancy assumptions

Thirty-seven of Milliman 100 plan sponsors disclose adoption of spot rate accounting method for fiscal year 2016 pension expense

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In a tumultuous year that buffeted pension plans with volatile markets and interest rate movement, the 100 largest corporate defined benefit (DB) pension plans made little progress in 2015.

The year for DB plans was much like being a passenger on a fishing boat caught in a squall. Heart stopping thunder and lightning swirled and waves crashed. But when it all blew by, DB plans' funded ratios were in roughly the same place as they'd been before the storm, with a slight improvement as the pension funding deficit declined by \$19 billion, settling at \$307 billion at the end of 2015.

Somewhat of a surprise is the disclosure that 37 of the largest 100 plan sponsor companies will record fiscal year 2016 pension expense using an accounting calculation method change linked to the spot interest rates derived from yield curves of high quality corporate bonds. Changing to the spot rate method for determining the interest cost of pension expense will result in pension expense savings in 2016 for these 37 plan sponsors.

The December 31, 2015, funded ratio of the plans, as measured from a review of public Securities and Exchange Commission (SEC) filings, was 81.8%, almost indistinguishable from the December 31, 2014, funded ratio of 81.7%.

With all of the controversy around the Federal Reserve's interest rate action—or perhaps not enough action—the 2015 discount rate settled at 4.25%, up 25 basis points from the 2014 discount rate of 4.00%. Admittedly, DB plan obligations are only modestly affected by the Fed's action on short-term rates as long-term rates are used to measure long duration pension obligations.

Pension obligations (as measured by the projected benefit obligation or PBO) at the end of 2015 were further reduced for corrections to life expectancy (or more pessimistically – higher mortality) assumptions. While we are unable to collect specific detail regarding the reduction in PBO for this revision, a 1% to 2% decrease is the anecdotal evidence recited by employers and actuaries. Additional changes in life expectancy assumptions may be published in the fourth quarter of 2016.

FIGURE 1: HIGHLIGHTS (FIGURES IN \$ BILLION)

	FISCAL YEAR ENDING		CHANGE
	2014	2015	
MARKET VALUE OF ASSETS	\$1,453.6	\$1,377.8	(\$75.8)
PROJECTED BENEFIT OBLIGATION	\$1,779.7	\$1,685.2	(\$94.5)
FUNDED STATUS	(\$326.1)	(\$307.4)	(\$18.7)
FUNDED PERCENTAGE	81.7%	81.8%	0.1%
NET PENSION INCOME/(COST)	(\$37.3)	(\$33.7)	\$3.6
EMPLOYER CONTRIBUTIONS	\$39.7	\$30.7	(\$9.0)
DISCOUNT RATE	4.00%	4.25%	0.25%
ACTUAL RATE OF RETURN	10.8%	0.9%	-9.9%

NOTE: NUMBERS MAY NOT ADD UP PRECISELY DUE TO ROUNDING

The two most adverse effects on the funded ratio were the result of 2015 capital market experience and lower-than-expected employer contributions:

1. The actual return on the pension trusts was an anemic 0.9% when the expectation was 7.2%, which created a shortfall in the reduction of the deficit of almost \$86 billion.
2. Employers reduced 2015 cash contributions by almost \$9 billion compared to 2014. Approximately \$31 billion was contributed in 2015, compared to approximately \$40 billion in 2014; a probable cause is the continuation of funding relief in the Bipartisan Budget Act of 2015.

Pension expense in 2015 declined \$3.6 billion to \$33.7 billion from \$37.3 billion in 2014. While one may reasonably conclude that pension expense will increase dramatically in 2016 due to the considerably disappointing 2015 asset performance, there are some offsetting components that should be considered. Offsets will result from changes in the assumptions under which pension expense is calculated. Thirty-seven of the Milliman 100 companies indicated in Form 10-K that they plan to adopt a "spot rate" approach, which is

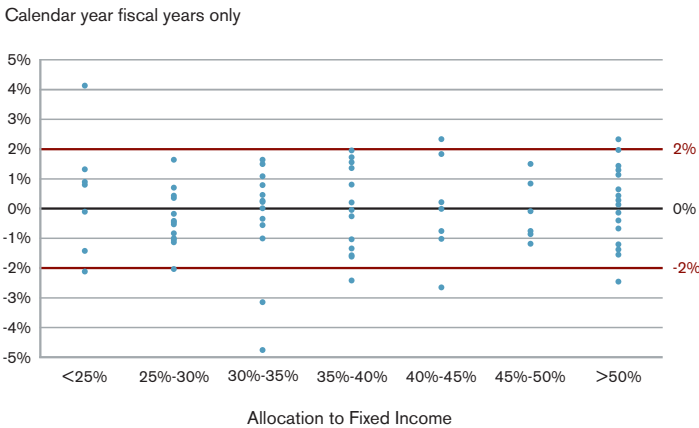
a refined use of the individual “spot” interest rates on the corporate bond yield curve used to develop the actuarial liabilities or PBO. For an upwardly sloping yield curve, the use of the spot rate method is expected to lower interest cost and therefore total pension expense in comparison to using the former single weighted average discount rate methodology. In fact, had all of the Milliman 100 companies adopted the spot rate accounting method to calculate the interest cost component of pension expense in 2016, the pension expense savings is estimated to be \$14 billion. This calculation assumes a 20% reduction in the interest cost for a typical company in the Milliman 100 study adopting the spot rate methodology.

De-risking transactions continued in 2015, and the estimated dollar volume of pension risk transfers collected from the accounting disclosures was nominally higher in 2015 (\$11.6 billion) compared to 2014 (\$11.4 billion). Note that the Department of Labor prefers the use of “pension risk transfer” (PRT) when referring to these transactions in which the complete divestiture of DB plan obligations to participants or to insurance companies occurs.

It is likely that PRT transactions may increase in 2016, spurred by the significant increases during 2015 in the premiums payable to the Pension Benefit Guaranty Corporation (PBGC). These premium increases were part of the Highway and Transportation Funding Act of 2014. The Bipartisan Budget Act of 2015 included additional premium increases for future years.

We are also watching the trend of the divestiture of OPEB liabilities from \$320 billion in 2003 to \$207 billion in 2015.

FIGURE 2: DISPERSION OF 2015 RATES OF RETURN



Weak year for investment returns irrespective of asset allocation

Rates of return earned in 2015 for the 85 pension plans with calendar year fiscal years were tightly banded between -2% and 2% with an average return of -0.1%. Interestingly, average returns and the dispersion of returns varied little across different asset allocations. Of these 85 plans, 75 earned rates of return between -2% and 2%, with seven plans earning returns less than -2% and only three with investment returns greater than 2%.

FIGURE 3: FIXED-INCOME ALLOCATION 50% OR HIGHER

Calendar year fiscal years only

Year	Fixed-income Allocation 50% or Higher		All Others	
	Number of Companies	Average Investment Return	Number of Companies	Average Investment Return
2015	21	-0.1%	64	-0.1%
2014	17	13.3%	68	9.6%
2013	13	4.0%	72	12.2%
2012	13	11.1%	72	12.3%
2011	8	9.3%	77	3.9%

Equity allocations in the pension portfolios dropped to 36.8% by the end of 2015, marking their lowest concentration in the 16-year history of the Milliman Pension Funding Study (PFS). The companies comprising the Milliman PFS have generally shifted toward higher allocations to fixed income investments in recent years. This trend has surfaced as plan sponsors reconfigured allocations to de-risk their pension plans over the past several years.

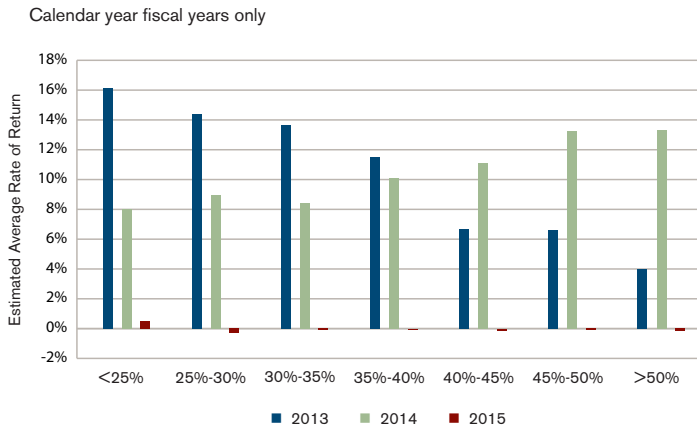
The actual asset return for the plan sponsor with the highest allocation to equities (79.6%) was 0.9%, and this was not much better than the return of -0.7% for the plan sponsor with lowest allocation to equities (8.0%) in 2015. The highest asset return among all companies with calendar year fiscal years was 4.1%, while the lowest was -4.8%.

In prior years, investment allocations made by plan sponsors had showed a trend toward implementing liability-driven investment (LDI) strategies. Generally, this involves shifting more assets into fixed income strategies. However, this trend slowed during 2015. The percentage of pension fund assets allocated to equities, fixed income, and other investments was 36.8%, 42.7%, and 20.5%, respectively, at the end of 2015, compared with 37.6%, 42.2%, and 20.2%, respectively, at the end of 2014.

Unlike in 2014, when plans with high allocations to fixed income (>50%) outperformed the other plans (13.3% average return compared to 9.6%), in 2015 the plans with high allocations to fixed income earned the same average rate of return as the other plans (-0.1%).

Over the last five years, the plans with consistently high allocations to fixed income have slightly outperformed the other plans while experiencing lower funded ratio volatility. Among the 85 companies in the Milliman PFS with calendar year fiscal years, 16 pension plans had fixed income allocations greater than 40% at the end of 2010 and maintained an allocation of at least 40% to fixed income through 2015. Over this five-year period, these 16 plans experienced lower funded ratio volatility than the other 69 plans (an average funded ratio volatility of 3.8% versus 6.4% for the other 69 plans) while earning a slightly higher five-year annualized rate of return (an average of 7.6% versus 7.4%). Unlike in 2014, when these 16 plans outperformed relative to the other 69 plans (14.0% average return versus 9.5%), they slightly underperformed the other plans in 2015 (-0.4 average return versus 0.0%).

FIGURE 4: ESTIMATED AVERAGE RATE OF RETURN BY ALLOCATION TO FIXED INCOME – 2013-2015



Overall allocations to equities decreased during 2015, resulting in an average allocation of 36.8% – the lowest equity allocation in the 16-year history of the Milliman PFS. Only one of the 100 companies had increases to its equity allocations of more than 10% in 2015. Only five companies decreased their equity allocations by more than 10% in 2015, compared with 12 companies in 2014, five in 2013, four in 2012, and 12 in 2011.

FIGURE 5: ASSET ALLOCATION – EQUITIES

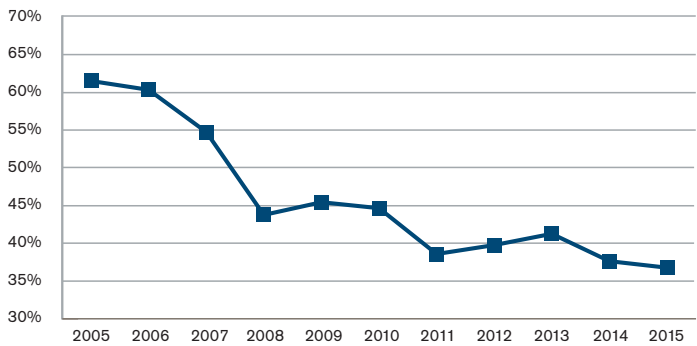
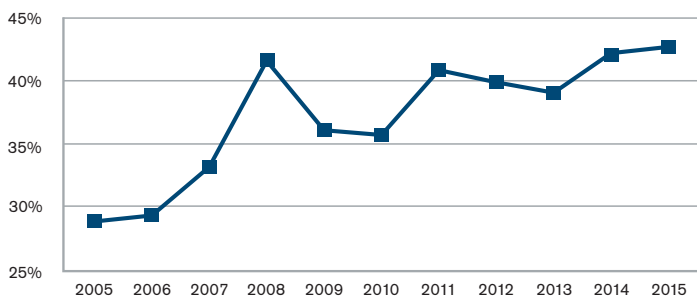
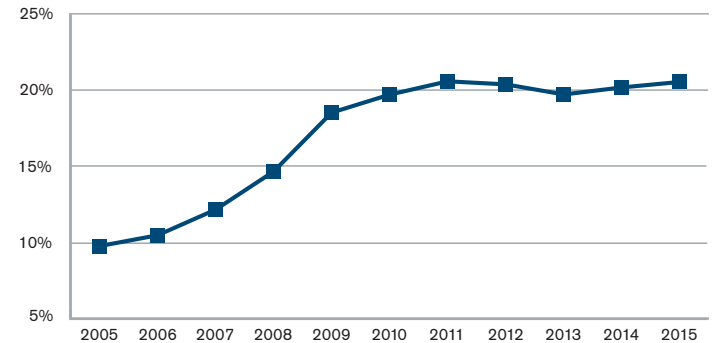


FIGURE 6: ASSET ALLOCATION – FIXED INCOME



Overall allocations to fixed income increased in 2015, resulting in an average allocation of 42.7%. Only one company had a decrease of more than 10% in its fixed income allocation. Four companies, however, increased their fixed income allocations by more than 10% in 2015, compared with seven in 2014, four in 2013, three in 2012, and six in 2011.

FIGURE 7: ASSET ALLOCATION – OTHER



Other asset classes include real estate, private equity, hedge funds, commodities, and cash equivalents. More specific details on how investments are allocated to the other categories are generally not available in the companies' SEC filings. Overall allocations to other asset classes remained stable in 2015. Seven companies increased their allocations by 5% or more to other asset classes during 2015.

In summary, the allocation to equities was down from 60% at the end of 2006 and the allocation to fixed income instruments was up from 29% at the end of 2006. The percentage of investments in other asset classes was also up from the 10% allocation at the end of 2006.

Pension Risk Transfer (PRT) activities continue

Similar to 2014, plan sponsors continued to execute pension risk transfer activities in 2015 as a way of divesting pension obligations from their DB plans and corporate balance sheets. Large scale pension buyout programs were transacted for four of the Milliman 100 companies as pension assets and liabilities were transferred to an insurance company. Pfizer, Verizon Communications Inc., Kraft Heinz Company and Hewlett Packard reported transactions of \$2.6 billion, \$2.3 billion, \$1.6 billion and \$1.1 billion, respectively. Kimberly-Clark Corporation, a former Milliman 100 company not included in the 2016 Study, had the largest PRT transfer during 2015 of \$2.5 billion. The settlement was significant enough to drop Kimberly Clark from the largest 100 plan sponsor companies listing of the Milliman Pension Funding Study.

The 2015 PRT market was not much different when compared to the 2014 market. While the precision of extracting the dollar volume of PRT activities is an estimate, it appears that the dollar volume in 2015 was \$11.6 billion, an increase of \$200 million compared to the 2014 dollar volume of \$11.4 billion.

PRTs are deemed an effective way to reduce a pension plan's balance sheet footprint by plan sponsors, but generally they have an adverse effect on the plan's funded status as assets paid to divest accrued pension benefits are higher than the corresponding

actuarial liabilities that are extinguished from plans. Much of this incongruity stems from Internal Revenue Service (IRS) pension plan valuation rules differing from the insurance company's underwriting assessment of its new future risks.

Last year, we reported that a more prevalent de-risking measure came in the form of a "lump-sum window" program in which some plan sponsors settle the pension obligation by distributing a payment to a specific group of former participants. However, the IRS issued Notice 2015-49 that effectively and permanently ended the ability of a plan sponsor to offer a lump-sum settlement to retirees or their surviving beneficiaries who were collecting annuities. On the other hand, lump-sum offerings via windows to terminated vested plan participants continued in 2015 and more are expected in 2016 as well.

Last year, we also reported on an analysis of mortality experience of participants in all U.S. Defined Benefit (DB) plans. While we don't plan to delve into the development of life expectancy factors in this study, we reference below a couple of noteworthy items that will affect funded status.

1. A refinement of the mortality study by the Society of Actuaries in October 2015 reduced expected rates of mortality improvements. The revisions shorten life expectancy by a few years and reduced the fiscal year end PBO. While we are unable to collect specific details of the reduction, a 1% to 2% decrease is the anecdotal evidence recited by employers and actuaries. There is a modest expectation that mortality improvement assumptions will be lowered again before the end of 2016 based on 2012 and 2013 experience of the Social Security Administration.
2. The Bipartisan Budget Act of 2015 included a new pension law provision that permits a plan sponsor to develop mortality tables based on the "credibility" of its own participant data. The IRS is said to be working diligently to draft these regulations. The IRS is also required to update the mortality assumptions regulations for DB plan calculations for plan sponsor minimum contribution funding and the payment of regulated lump sums.
 - a. An ancillary but important issue that was part of the Bipartisan Budget Act of 2015 was a dual increase in the flat rate and variable rate premiums required to be paid to the PBGC in order to insure certain accrued pension benefits to participants if an employer becomes insolvent. The flat dollar amount will increase to at least \$80 per participant in 2019 compared to \$64 in 2016. The variable rate premium will increase to at least 4.1% of the DB plan's PBGC funded status deficit in 2019, from 3.0% of the 2016 deficit. A note to readers is the DB plan's PBGC funded status deficit is measured differently than for the funding deficit for accounting upon which this 2016 Milliman PFS is based.

The 2015 funded ratio of 81.8% was less than we reported in the January 2016 Milliman 100 Pension Funding Index (PFI). The January 2016 PFI funded ratio of 82.7% was based on data collected for the 2015 Milliman Pension Funding study. This revised funded ratio of 81.8% (81.4% for plans with calendar year fiscal years) reflects the collection and collation of publicly available information.

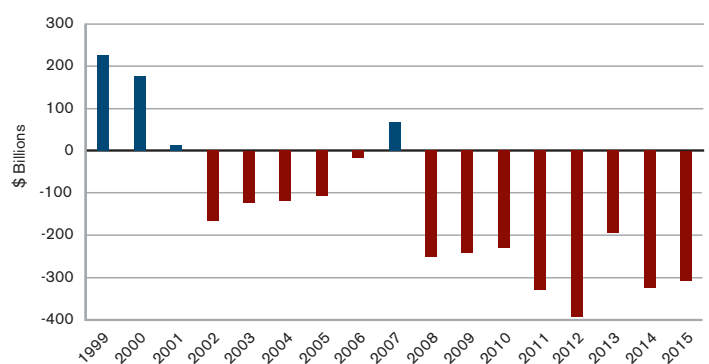
Cash contributions were \$2 billion less than we had forecasted, a key factor for the lower funded ratio. We can only speculate that plan sponsors used corporate capital in other ways and that they were well funded under pension tax and corresponding ERISA rules (which incorporate interest rate smoothing measures as introduced per the Moving Ahead for Progress in the 21st Century Act and further extended by the Bipartisan Budget Act of 2015), which are much different than accounting rules. Pension tax law contributions may use a methodology that permits averaging of interest rates for the prior 25 years. For example, discount rates under the Bipartisan Budget Act at the end of 2015 were closer to 6% versus the 4.25% discount rate under accounting rules at year-end 2015.

Impact of increasing discount rates evident in 2015 financial statements of the Milliman 100 companies

Discount rates used to measure plan obligations, determined by reference to high quality corporate bonds, increased during 2015, decreasing liabilities and reversing the trend from the prior year. The median discount rate increased to 4.25% at the end of 2015 from 4.00% in 2014. The 4.00% discount rate at the end of 2014 was the lowest in the 16-year history of the Milliman PFS. Discount rates had been generally declining from 7.63% at the end of 1999. Discount rates were 210 basis points higher at the end of 2008.

The impact of the increasing discount rates in 2015 and reduced PBO was obliterated with a very disappointing investment gain of 0.9%. This resulted in a minimal improvement in the funded status. The 2015 funding deficit of \$307.4 billion is an \$18.7 billion decrease over the year-end 2014 funding deficit of \$326.1 billion. It is the fourth-largest deficit in the 16-year history of the Milliman PFS.

FIGURE 8: PENSION FUNDING SURPLUS / (DEFICIT)

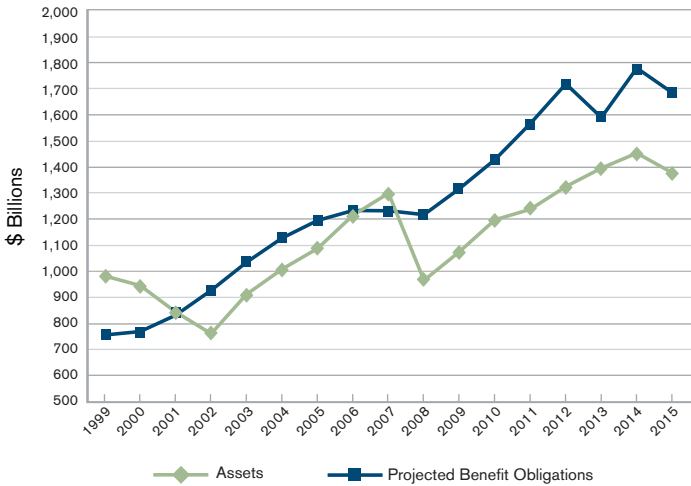


Pension expense—the charge to company earnings—also decreased to \$33.7 billion in 2015 as compared with \$37.3 billion during fiscal year 2014, a \$3.6 billion decrease. The peak level of pension expense was in 2012 when it was \$56.3 billion. In addition, 37 of the Milliman 100 companies indicated that they were adopting a "spot rate" approach for estimating the service and interest cost components of net periodic benefit cost. This approach is likely to produce a pension expense savings in the near term. In spite of the increase in discount rates during 2015 and the change in accounting method to a spot

rate approach used for the determination of service cost and interest cost, 2016 pension expense is likely to increase, primarily due to the investment losses experienced during 2015.

There is an expectation that the spot rate methodology may result in unexpected PBO losses when the PBO is re-measured at the end of fiscal year 2016 for pension disclosure. We plan to report on such losses in the Milliman 2017 Pension Funding Study.

FIGURE 9: PLAN ASSETS AND OBLIGATIONS



The effect of a 25 basis point increase in discount rates helped offset the flat investment returns during 2015.

The 5.3% decrease in pension obligations generated by the increase in discount rates and revisions to life expectancy assumptions used to measure pension plan obligations (at a median rate of 4.25% at year-end 2015, up 25 basis points from 4.00% at year-end 2014) resulted in a liability decrease of \$94.5 billion. Pension liabilities for IBM and General Motors dropped below the \$100 billion pension obligation mark, which helped their plans to maintain or improve their funded status even though they had investment gains/(losses) of -0.1% and 2.3%, respectively.

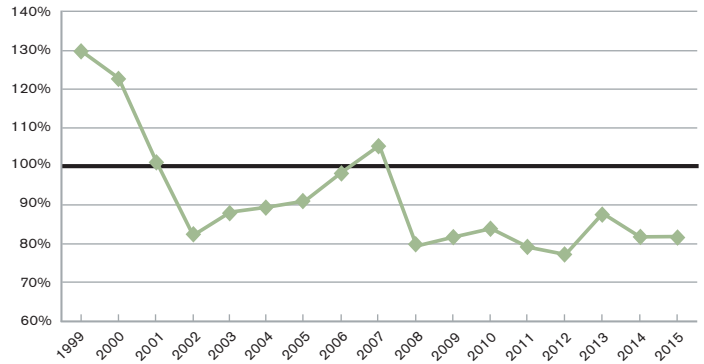
The 0.9% investment gain (actual weighted average return on assets during 2015) resulted in a decrease of \$75.8 billion in the market value of plan assets when combined with the lower contributions and approximately \$11 billion paid out in annuity purchases or lump-sum settlements. The Milliman 100 companies had set an expectation that 2015 investment returns would be, on average, 7.2%.

Funded ratios barely increase

The funded ratio of the Milliman 100 pension plans increased during 2015 to 81.8% from 81.7% at the end of 2014 (81.6% for plans with calendar year fiscal years in 2015, up from 81.3% for 2014). The aggregate pension deficit decreased by \$18.7 billion during these companies' 2015 fiscal years to \$307.4 billion from an aggregate

deficit of \$326.1 billion at the end of 2014. For fiscal year 2015, funded ratios ranged from a low of 46% for Delta Airlines to a high of 148% for NextEra Energy Inc.

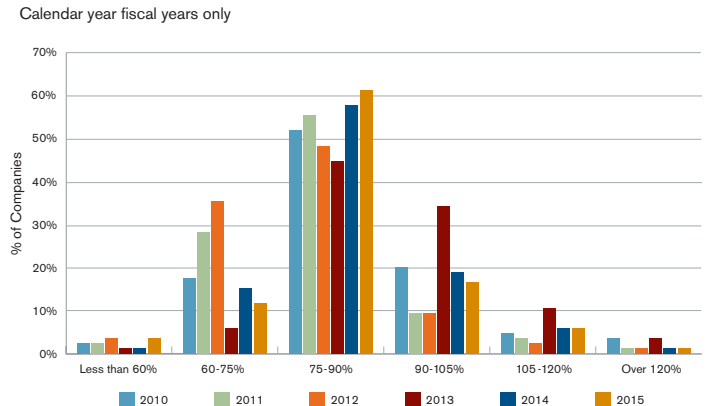
FIGURE 10: FUNDED RATIO - ASSETS / PROJECTED BENEFIT OBLIGATION



The small increase in funded ratio reversed the 2014 result and helped maintain a funded ratio comparable to year-end 2014. The funded ratio had improved to 87.8% at year-end 2013. However, the funded ratio decrease during 2014 was the largest percentage decrease after the 26.2% decrease from the surplus ratio of 105.5% in 2007 to 79.3% in 2008. Note that there has not been a funding surplus since the aforementioned 105.5% funded ratio in 2007.

Only eight of the 85 Milliman 100 companies with calendar year fiscal years reported surplus funded status at year-end 2015, compared with eight companies in 2014, 17 companies at year-end 2013, and six at year-end 2012. These numbers pale in comparison to the 50 companies with reported surplus funded status at year-end 2007. Because of the offsetting impact of flat investment returns and the decrease in liabilities caused by higher discount rates, 47 of the Milliman 100 companies reported an increase in funded ratio for 2015 compared with six for 2014.

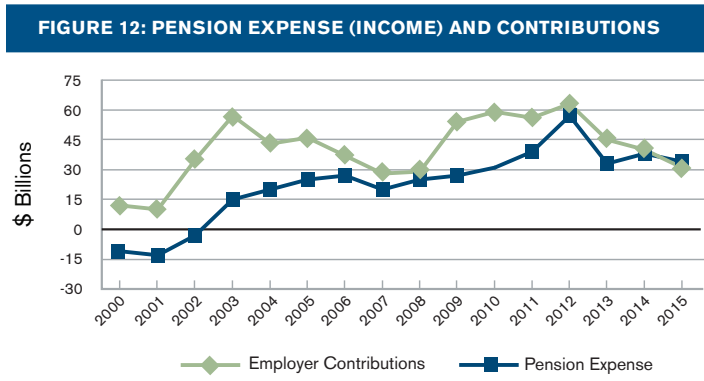
FIGURE 11: DISTRIBUTION BY FUNDED STATUS - 2010-2015



2015 pension expense decreases

There was a net decrease in 2015 pension expense: a \$33.7 billion charge to earnings (\$3.6 billion lower than in 2014). This is well below the \$56.3 billion level in 2012, which reached the highest level in the 16-year history of our study. Seventeen companies recorded 2015 pension income (i.e., a credit to earnings). Seventeen companies also recorded income in 2014 and 2013, up from 10 in 2012.

The discount rate for 2016 pension expense is based on the year-end 2015 SEC disclosures. We estimate that 2016 pension expense will increase to \$44.9 billion, an \$11.2 billion increase compared with 2015, under the assumption of a continued 4.25% discount rate. After reflecting the estimated impact of 37 of the Milliman 100 plan sponsor companies adopting the spot rate method for calculation of the interest cost component of pension expense, we expect a net 2016 pension expense increase of \$5.9 billion (i.e., a pension expense savings of \$5.3 billion from the 37 plan sponsor companies adopting the spot rate accounting method). This would result in a 2016 pension expense of \$39.6 billion.



The aggregate 2015 cash contributions of the Milliman 100 companies were \$30.7 billion, a decrease of \$9.0 billion from the \$39.7 billion contributed in 2014, and a \$31.9 billion decrease from the 2012 record high level of \$62.6 billion. Contributions in 2015 were the lowest dollar volume since 2008. We speculate that this is due to the extension of pension funding relief via the Bipartisan Budget Act of 2015. The funded ratios under pension law are much higher than for GAAP accounting because the IRS discount rates reflect an averaging of the last 25 years.

Many plan sponsors may continue to contribute at these lower levels for 2016 if they find better investment opportunities for their potential pension contribution dollars. With interest rates at low levels, many plan sponsors are hesitant to change asset allocations to take on more fixed income positions and lock in their funded status. Locking in funded status while not being fully funded essentially guarantees a plan sponsor will need to make cash contributions to close the pension deficit.

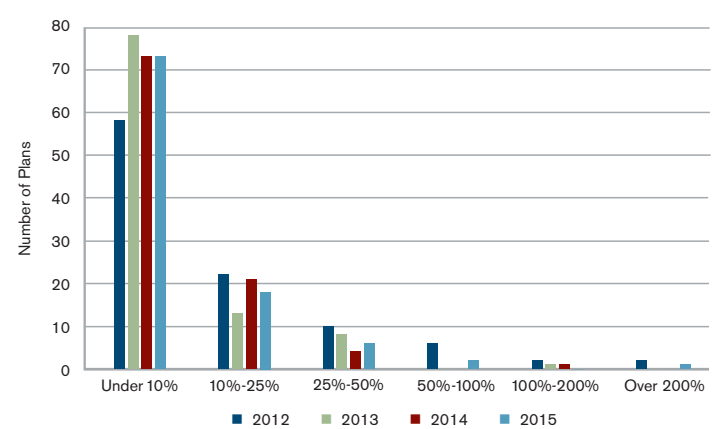
On the other hand, we also expect that some plan sponsors undertaking PRT activities (e.g., lump-sum payouts, annuity purchases, etc.) may have to increase contributions to maintain funded status.

Some plan sponsors that want to minimize PBGC premium costs may choose to accelerate plan funding to close pension deficits sooner. PBGC variable rate premium calculations are based on the pension liabilities in excess of pension assets. PBGC pension liabilities are valued using current interest rates compared with the 25-year interest rate averages used for the IRS minimum contribution funding calculations. PBGC variable rate premiums are calculated as a percentage of unfunded liability. This percentage will likely rise to at least 4.1% in 2019.

Pension deficit decreases as a percentage of market capitalization

The total market capitalization for the Milliman 100 companies decreased by 2.9%. The decrease in pension obligations (due to higher discount rates) resulted in a decrease in the unfunded pension liability as a percentage of market capitalization of 4.6% at the end of 2015 from 4.7% at the end of 2014. Pension deficits represented less than 10% of market capitalization for 73 of the Milliman 100 companies in 2015 and 2014 (down from 78 companies in 2013). However, this is still an increase from 2012 when only 58 companies had deficits that were less than 10% of their market capitalization. Since 2011, we have had investment returns exceeding expectations in three out of four years, and this has resulted in elevated levels of market capitalization. There are three companies whose deficits exceed 50% of market capitalization in 2015, up from two companies in 2014 and one company in 2013, but down from 10 in 2012.

FIGURE 13: PENSION FUNDING DEFICIT AS A PERCENTAGE OF MARKET CAPITALIZATION - 2012-2015



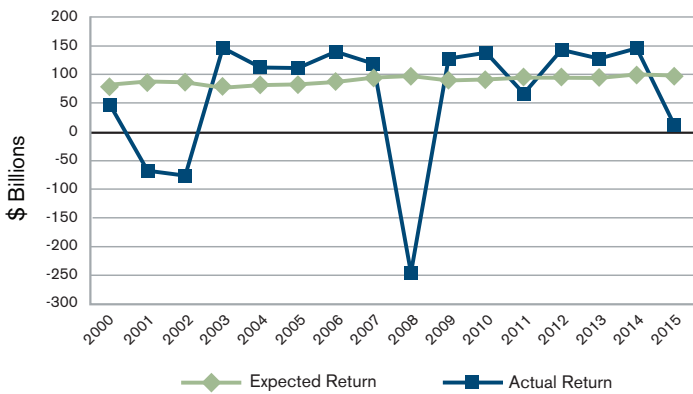
Investment performance lags expectations

The weighted average investment gain on pension assets for the Milliman 100 companies' 2015 fiscal years was 0.9%, which was below their average expected rate of return of 7.2%. Only six of the Milliman 100 companies exceeded their expected returns in 2015, and all six had off-calendar year fiscal years. But 82 companies in 2014 exceeded their expected returns compared to 76 in 2013, 89 in 2012, and 98 in 2010.

While the 2015 investment return was disappointing, investment gains above expectation during five out of the last seven years have been earned by the plan sponsors of the Milliman 100 companies. At December 31, 2015, total asset levels were \$1.378 trillion. This is \$78 billion above the value of \$1.300 trillion at the end of 2007 prior to the collapse of the worldwide financial markets.

During 2015, the combination of annuity purchases and lump-sum settlements offset by minor investment gains, decreased the market value of assets by \$76 billion. The Milliman 100 companies' actual investment return for 2015 was \$11.7 billion compared to the expected return of \$97.6 billion, a difference of \$85.9 billion. This was the largest deviation between actual and expected returns since 2008. For the five-year period ending in 2015, investment performance has averaged 7.75% compounded annually. There were three years of investment losses over the past 16 years (2001, 2002, and 2008), contributing to an annualized investment return of only 5.91% over that period.

FIGURE 14: INVESTMENT RETURN ON PLAN ASSETS



Expected rates of return

Companies continued to lower their expected rates of return on plan assets to an average of 7.2% for 2015 as compared with 7.3% for 2014, 7.4% for 2013, 7.6% for 2012, 7.8% for 2011, and 8.0% for 2010. This represents a significant drop from the average expected rate of return of 9.4% back in 2000.

Only one of the Milliman 100 companies utilized an expected rate of return for 2015, 2014, and 2013 of at least 9% whereas three companies also assumed an expected rate of return of at least 9% in 2012, 2011, and 2010, but this was down from five in 2009 and a high of 83 in 2000.

What to expect in 2016 and beyond

Our expectations in the coming year include:

- Contributions are expected to stay at their current low levels given the continued effect of interest rate relief for minimum contribution funding requirements and different use of corporate capital.
- Pension expense is expected to increase over the 2015 level primarily due to the investment losses experienced during 2015. The expense increase will be tempered by the rise in discount rates during 2015 and change to the spot rate accounting method for determining interest cost by over a third of the Milliman 100 companies.
- PBO losses at year-end 2016 due to the use of the aforementioned spot rate methods for determining the interest cost component of pension expense.
- PBO gains due to further refinements in mortality assumptions.
- IRS is expected to release guidance on mortality tables affecting 2017 minimum funding requirements and accelerated forms of payment such as lump sums.
- Further de-risking activities in the form of lump-sum windows for terminated vested participants.
- Further pension risk transfer activities depending on movement of discount rates and whether assets rebound in 2016.

HISTORICAL VALUES (All dollar amounts in millions. | Numbers may not add up correctly due to rounding.)

FUNDED STATUS

Fiscal Year	Market Value of Plan Assets	Change From Prior Year	Projected Benefit Obligation	Change From Prior Year	Funded Ratio	Change From Prior Year	Funded Status	Change From Prior Year
2015	\$1,377,769	(\$75,812)	\$1,685,172	(\$94,508)	81.8%	0.1%	(\$307,403)	\$18,696
2014	\$1,453,581	\$57,714	\$1,779,679	\$189,405	81.7%	-6.1%	(\$326,098)	(\$131,691)
2013	\$1,395,867	\$70,574	\$1,590,275	(\$128,873)	87.8%	10.7%	(\$194,408)	\$199,447
2012	\$1,325,293	\$87,242	\$1,719,148	\$151,891	77.1%	-1.9%	(\$393,855)	(\$64,649)
2011	\$1,238,051	\$40,341	\$1,567,256	\$138,582	79.0%	-4.8%	(\$329,206)	(\$98,241)
2010	\$1,197,709	\$122,308	\$1,428,675	\$111,359	83.8%	2.2%	(\$230,965)	\$10,949
2009	\$1,075,402	\$109,930	\$1,317,316	\$99,886	81.6%	2.3%	(\$241,914)	\$10,045
2008	\$965,471	(\$334,069)	\$1,217,430	(\$14,922)	79.3%	-26.1%	(\$251,958)	(\$319,147)
2007	\$1,299,540	\$84,215	\$1,232,352	(\$1,022)	105.5%	6.9%	\$67,189	\$85,237
2006	\$1,215,326	\$127,731	\$1,233,374	\$38,158	98.5%	7.5%	(\$18,048)	\$89,573
2005	\$1,087,595	\$79,204	\$1,195,216	\$67,575	91.0%	1.6%	(\$107,621)	\$11,630
2004	\$1,008,391	\$96,416	\$1,127,641	\$92,690	89.4%	1.3%	(\$119,250)	\$3,726
2003	\$911,975	\$151,344	\$1,034,952	\$108,026	88.1%	6.1%	(\$122,976)	\$43,318
2002	\$760,631	(\$83,328)	\$926,926	\$95,354	82.1%	-19.4%	(\$166,294)	(\$178,682)
2001	\$843,960	(\$101,512)	\$831,572	\$62,709	101.5%	-21.5%	\$12,388	(\$164,221)
2000	\$945,472	n/a	\$768,863	n/a	123.0%	n/a	\$176,609	n/a

RETURN ON ASSETS

Fiscal Year	Expected Rate of Return	Actual Rate of Return (Estimated)		Expected Return	Actual Return (All Plans)	Difference
		All Plans	Calendar Fiscal Years			
2015	7.2%	0.9%	-0.1%	\$97,637	\$11,664	\$85,973
2014	7.3%	10.8%	10.3%	\$99,606	\$144,945	(\$45,339)
2013	7.4%	10.0%	11.0%	\$93,287	\$127,005	(\$33,718)
2012	7.6%	11.7%	12.1%	\$93,769	\$142,284	(\$48,515)
2011	7.8%	5.7%	4.4%	\$93,925	\$66,195	\$27,730
2010	8.0%	12.9%	12.6%	\$90,784	\$137,289	(\$46,504)
2009	8.1%	14.0%	17.4%	\$89,028	\$127,158	(\$38,130)
2008	8.2%	-18.8%	-22.4%	\$96,801	(\$245,515)	\$342,316
2007	8.3%	9.9%	8.9%	\$93,941	\$118,215	(\$24,275)
2006	8.3%	12.9%	12.6%	\$86,369	\$139,054	(\$52,686)
2005	8.4%	11.2%	10.4%	\$82,193	\$110,627	(\$28,434)
2004	8.4%	12.4%	11.8%	\$80,961	\$111,580	(\$30,619)
2003	8.5%	19.3%	19.8%	\$76,354	\$145,664	(\$69,310)
2002	9.2%	-8.8%	-8.3%	n/a	n/a	n/a
2001	9.4%	-6.3%	-6.4%	n/a	n/a	n/a
2000	9.4%	4.4%	3.6%	n/a	n/a	n/a

PENSION COST

Fiscal Year	Pension Income/(Cost)	Change From Prior Year	Employer Contribution	Change From Prior Year	Discount Rate
2015	(\$33,687)	(\$3,596)	\$30,733	\$9,009	4.25%
2014	(\$37,283)	\$4,341	\$39,741	\$4,889	4.00%
2013	(\$32,942)	(\$23,371)	\$44,630	\$17,929	4.76%
2012	(\$56,313)	\$17,712	\$62,559	(\$6,990)	4.06%
2011	(\$38,602)	\$8,011	\$55,569	\$3,867	4.85%
2010	(\$30,590)	\$3,475	\$59,436	(\$5,448)	5.47%
2009	(\$27,115)	\$2,529	\$53,988	(\$25,492)	5.88%
2008	(\$24,585)	\$4,584	\$28,496	(\$671)	6.35%
2007	(\$20,001)	(\$6,933)	\$27,825	\$8,749	6.20%
2006	(\$26,934)	\$1,620	\$36,574	\$8,986	5.75%
2005	(\$25,314)	\$5,133	\$45,560	(\$2,940)	5.57%
2004	(\$20,181)	\$4,947	\$42,620	\$14,158	5.75%
2003	(\$15,234)	\$18,452	\$56,778	(\$21,845)	6.10%
2002	\$3,218	\$9,406	\$34,933	(\$24,464)	n/a
2001	\$12,625	(\$1,420)	\$10,469	\$1,606	n/a
2000	\$11,205	n/a	\$12,075	n/a	n/a

HISTORICAL VALUES (All dollar amounts in millions. | Numbers may not add up correctly due to rounding.)

ASSET ALLOCATIONS

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Equity Allocation	36.76%	37.62%	41.24%	39.75%	38.57%	44.63%	45.42%	43.74%	54.71%	60.29%
Change From Prior Year	-2.28%	-8.79%	3.75%	3.05%	-13.57%	-1.75%	3.85%	-20.06%	-9.24%	-1.92%
Fixed Allocation	42.73%	42.23%	39.07%	39.90%	40.87%	35.69%	36.07%	41.62%	33.14%	29.26%
Change From Prior Year	1.18%	8.09%	-2.08%	-2.39%	14.53%	-1.07%	-13.32%	25.57%	13.29%	1.65%
Other Allocation	20.51%	20.15%	19.69%	20.35%	20.55%	19.68%	18.50%	14.64%	12.14%	10.46%
Change From Prior Year	1.78%	2.34%	-3.23%	-0.98%	4.44%	6.37%	26.36%	20.58%	16.11%	7.22%

The table below shows the trend of the divestiture of OPEB liabilities from \$320 billion in 2003 to \$207 billion in 2015.

OPEB FUNDED STATUS

Fiscal Year	OPEB MV of Assets	Change From Prior Year	OPEB APBO	Change From Prior Year	OPEB Funded Status	Change From Prior Year	OPEB Funded Ratio	Change From Prior Year
2015	\$54,940	(\$4,652)	\$207,424	(\$27,210)	(\$152,484)	\$22,558	26.5%	1.1%
2014	\$59,593	(\$1,407)	\$234,635	\$13,484	(\$175,042)	(\$13,283)	25.4%	-2.2%
2013	\$60,999	\$4,066	\$221,150	(\$40,329)	(\$161,759)	\$44,270	27.6%	5.8%
2012	\$56,933	\$3,854	\$261,479	\$11,622	(\$206,029)	(\$7,770)	21.8%	0.5%
2011	\$53,079	(\$3,696)	\$249,857	\$2,302	(\$198,259)	(\$5,376)	21.2%	-1.7%
2010	\$56,775	\$6,109	\$247,555	\$9,367	(\$192,883)	(\$5,361)	22.9%	1.7%
2009	\$50,666	(\$7,230)	\$238,188	(\$42,880)	(\$187,522)	\$35,651	21.3%	0.7%
2008	\$57,896	(\$29,703)	\$281,068	(\$42,548)	(\$223,173)	\$12,844	20.6%	-6.5%
2007	\$87,599	\$4,530	\$323,616	(\$11,119)	(\$236,017)	\$15,650	27.1%	2.3%
2006	\$83,068	\$5,836	\$334,735	(\$17,250)	(\$251,667)	\$23,085	24.8%	2.9%
2005	\$77,232	\$6,806	\$351,985	\$14,370	(\$274,752)	(\$7,563)	21.9%	1.1%
2004	\$70,426	\$15,328	\$337,615	\$17,611	(\$267,189)	(\$2,283)	20.9%	3.6%
2003	\$55,098	n/a	\$320,004	n/a	(\$264,906)	n/a	17.2%	n/a

Who are the Milliman 100 companies?

The Milliman 100 companies are the 100 U.S. public companies with the largest defined benefit pension plan assets for which a 2015 annual report was released by March 4, 2016.

This 2016 report is Milliman's 16th annual study. The total value of the pension plan assets of the Milliman 100 companies was more than \$1.37 trillion at the end of 2015.

About the study

The results of the Milliman 2016 Pension Funding Study are based on the pension plan accounting information disclosed in the footnotes to the companies' Form 10-K annual reports for the 2015 fiscal year and for previous fiscal years. These figures represent the GAAP accounting information that public companies are required to report under Financial Accounting Standards Board Accounting Standards Codification Subtopics 715-20, 715-30, and 715-60. In addition to providing the financial information on the funded status of their 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 from those for U.S. qualified pension plans. The information, data, and footnotes do not represent the funded status of the companies' U.S. qualified pension plans under ERISA.

15 of the companies in the 2016 Milliman Pension Funding Study had fiscal years other than the calendar year. The 2016 Study includes four new companies to reflect mergers, acquisitions, and other corporate transactions during 2015. Privately held companies, mutual insurance companies, and U.S. subsidiaries of foreign parents were excluded from the study.

The results of the 2016 Study will be used to update the Milliman 100 Pension Funding Index as of December 31, 2015, the basis of which will be used for projections in 2016 and beyond. The Milliman 100 Pension Funding Index is published on a monthly basis and reflects the effect of market returns and interest rate changes on pension funded status.

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