

## Milliman analysis shows continued decline in multiemployer pension funded status. Multiemployer plans experience \$26 billion increase in funded status deficit.

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Welcome to Milliman's Spring 2016 Multiemployer Pension Funding Study. This study reports on the estimated funded status of all U.S. multiemployer plans as of December 31, 2015, and shows the change in funding levels from June 30, 2015.

### KEY FINDINGS

- The aggregate funded percentage for multiemployer plans is estimated to be 75% as of December 31, 2015, compared with 79% as of June 30, 2015.
- For most multiemployer pension plans, estimated 2015 investment experience was flat or slightly negative, far below expected returns.
- Over one-half of the total underfunding for multiemployer plans continues to be attributable to plans that are less than 65% funded.
- Of the nearly 200 critical plans with 2014 information available, about 40% are projected to be insolvent at some point. Will these plans be able to be helped by benefit suspension provisions of the Multiemployer Pension Reform Act of 2014 (MPRA)?
- About 200 funds have reduced their assumed rate of return over the past several years, typically by 0.25% or 0.5%; 7.50% remains the most common assumed rate in use.

### CURRENT FUNDED PERCENTAGE

Figure 1 shows that the overall funding shortfall for all plans increased by \$26 billion for the six-month period ending December 31, 2015, while the aggregate funded percentage decreased from 79% to 75%.

**FIGURE 1: FUNDED PERCENTAGE, ALL MULTIEMPLOYER PLANS\* (IN \$ BILLIONS)**

	6/30/2015	12/31/2015	CHANGE
LIABILITY FOR ACCRUED BENEFITS	\$604	\$612	\$8
MARKET VALUE OF ASSETS	479	461	(18)
SHORTFALL	\$125	\$151	\$26
FUNDED PERCENTAGE	79%	75%	(4%)

\*Based on plans with complete IRS Form 5500 filings. Includes 1,280 plans as of June 30, 2015, and 1,286 plans as of December 31, 2015.

The key assumption here is the discount rate used to measure liabilities, with each plan using its actuary's assumed return on assets assumption. Assumed returns are generally between 6% and 8%, with a weighted average assumption for all plans of just below 7.5%. It is noteworthy that about 200 plans have decreased their assumed rate of return over the last several years, which contributes to an increase in the shortfall.

### HISTORICAL FUNDED PERCENTAGE

Figure 2 provides an historical perspective on the aggregate funded percentage of all multiemployer plans since the end of 2007 on a market value basis. Multiemployer plans had made progress through the end of 2013. The aggregate funded percentage had climbed up to an 80% funded level, which reflects favorable investment returns as well as contribution increases (including withdrawal liability collections) and benefit reductions enacted by plans as they responded to the financial crisis of 2008. Since the end of 2013, however, plans have not been able to make additional progress in the wake of less than favorable investment returns in 2014 and 2015. In general, the funded status of these plans continues to be driven largely by investment performance.

**FIGURE 2: AGGREGATE MULTIEMPLOYER PLAN HISTORICAL FUNDED PERCENTAGE – MARKET VALUE BASIS**

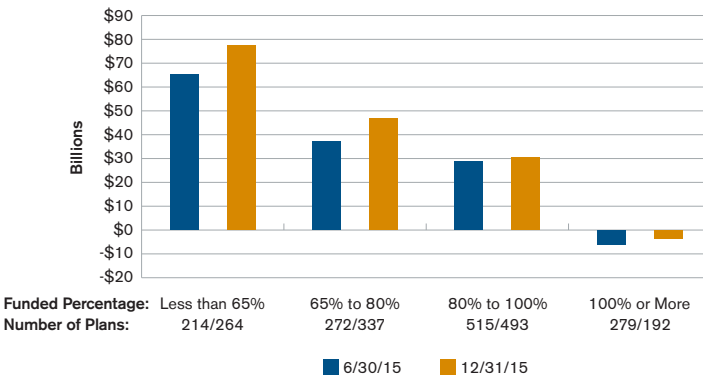


### RESULTS VARY BY PLAN

Aggregate funding levels of multiemployer plans have declined over the past two years, but as might be expected, individual plans are affected in different ways. Figure 3 looks at the funded percentage distribution of individual plans.

In Figure 3, we see that 192 multiemployer plans are over 100% funded as of December 31, 2015, a significant reduction from the 279 that were over 100% funded as of June 30, 2015. These 192 plans have an aggregate surplus of about \$4 billion. While the number of plans that are 80% to 100% funded has declined, the funding shortfall for this group has increased. The number of plans that are less than 65% funded grew from 214 to 264, with a shortfall of \$77 billion. This group now represents over 20% of all plans and continues to account for more than half of the aggregate deficit for all multiemployer plans of \$151 billion.

**FIGURE 3: DISTRIBUTION OF PLANS BY FUNDED PERCENTAGE AND SHORTFALL – MARKET VALUE BASIS**



**CAN THE MOST POORLY FUNDED PLANS RECOVER?**

Since our first study as of December 31, 2013, the percentage of plans in critical status has remained consistent at about 25%. Starting with 2014 Form 5500 filings, new information is provided for critical plans. Though not all 2014 filings are available at this time, we have reviewed the new statistics for the available filings, representing over half of all critical plans. Of these, 40% are projected to become insolvent at some point, while the remainder are projected to emerge from critical status at some point in the future.

Figure 4 shows the aggregate funding shortfall for the plans that are in critical status and projected to become insolvent, broken down by the year of projected insolvency.

**FIGURE 4: AGGREGATE FUNDING SHORTFALL FOR PLANS PROJECTED TO BECOME INSOLVENT, BY YEAR OF PROJECTED INSOLVENCY (IN \$ BILLIONS)**

YEAR OF INSOLVENCY	NUMBER OF PLANS	FUNDING SHORTFALL
PRIOR TO 2025	31	\$4
2025 – 2034	32	24
2035 AND AFTER	13	<1
TOTAL	76	\$28

Looking ahead, the \$28 billion shortfall for plans headed toward insolvency is likely to increase, short of sustained excess returns, significant contribution increases, or benefit suspensions that may be adopted under MPRA. While some plans may become eligible

for suspensions and decide to pursue them, it is still too early to gauge the impact those potential changes might have on the health of those plans.

Figure 5 shows the \$23 billion shortfall for plans that are projected to emerge. If the projection assumptions for these plans are met, we may see a reduction in the shortfall for such plans, especially those plans expected to emerge prior to 2025.

**FIGURE 5: AGGREGATE FUNDING SHORTFALL FOR PLANS PROJECTED TO EMERGE FROM CRITICAL STATUS, BY YEAR OF PROJECTED EMERGENCE (IN \$ BILLIONS)**

YEAR OF EMERGENCE	NUMBER OF PLANS	FUNDING SHORTFALL
PRIOR TO 2025	68	\$13
2025 – 2034	22	2
2035 AND AFTER	21	8
TOTAL	111	\$23

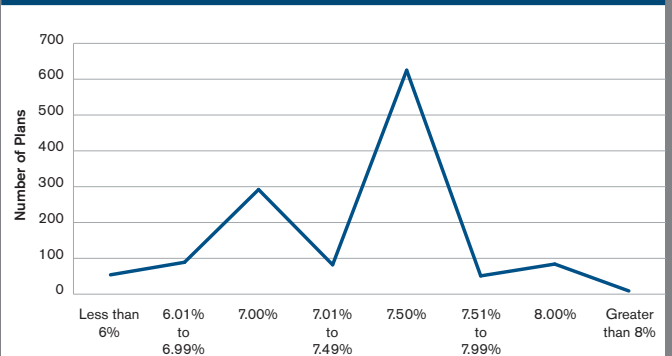
Note that the information in Figures 4 and 5 is not representative of the status of all critical plans today, as these results are largely based on projections from the beginning of 2014 and thus do not reflect the less-than-favorable investment returns for the past two years.

**CHANGES IN ASSUMED RATES OF RETURN**

As noted, plan liabilities are dependent upon the assumed investment rate of return on plan assets. Figure 6 shows the distribution of investment assumptions for all multiemployer plans as of their most recent Form 5500 filing.

Over the last several years, almost 200 plans decreased their assumed rate of return. About 75% of those were by 0.5% or less. Lowering a plan’s assumed rate of return results in higher liabilities, which increases the overall shortfall for these plans. As the overall weighted average return has stayed fairly steady at just below 7.5%, these decreases have not had a huge impact on aggregate funding levels, although they will if this trend continues.

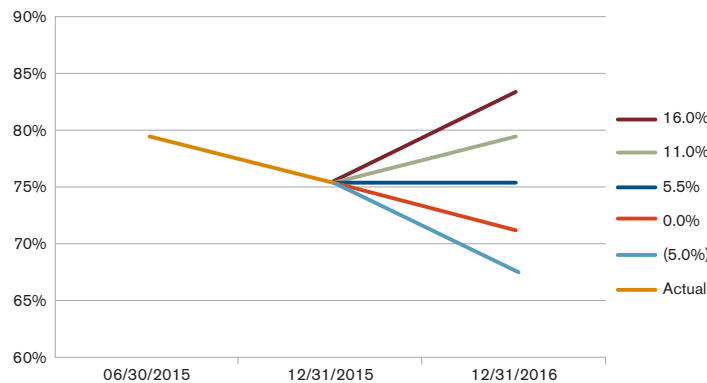
**FIGURE 6: DISTRIBUTION OF ASSUMED RATES OF RETURN ON INVESTMENTS**



**WHERE DO WE GO FROM HERE?**

So what happens if market returns don't improve? Can funds survive without better asset performance? Figure 7 shows the impact of a range of possible asset returns for the year ending December 31, 2016. With a variety of alternative returns, the results look like a rake. Please note that some of these returns may not seem realistic, but after 2008 and the roller coaster over the last several months, many trustees are painfully aware that anything is possible.

**FIGURE 7: IMPACT OF VARIOUS RETURNS FOR 2016 ON AN AGGREGATE BASIS**



In the aggregate, the return for 2016 needs to be 5.5% to remain at the current 75% funded percentage level, so returns at the overall expected level of 7.5% would show some modest improvement in funding levels. Plans would need double-digit returns for the year just to return to the June 30, 2015, funded level of 79%.

The return for our sample portfolio for the first two months of 2016 was about -3%. That result would potentially place the aggregate funded percentage between the bottom two prongs at the end of 2016. While there has been some improvement in the market during March, there is still a long way to go!

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**ABOUT THIS STUDY**

The results in this study were derived from publicly available Form 5500 data as of December 2015 for all multiemployer plans, numbering between 1,200 and 1,300, depending on the measurement date used. Data for a limited number of plans that clearly appeared to be erroneous was modified to ensure the results were reasonable and a sufficiently complete representation of the multiemployer universe.

Liability amounts were based on unit credit accrued liabilities reported on Schedule MB and were adjusted to the relevant measurement dates using standard actuarial approximation techniques. For this purpose, each plan's monthly cash flow, benefit cost, and actuarial assumptions were assumed to be constant throughout the year. Projections of asset values reflect the use of constant cash flows and monthly index returns for a simplified portfolio comprised of 45% U.S. equities, 20% international equities, and 35% U.S. fixed income investments.

Significant changes to the data and assumptions could lead to much different results for individual plans but would likely not have a significant impact on the aggregate results or the conclusions in this study.

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