

## Are we on another wild ride? Will the investment markets settle down, and if so, where will funds be after the dust settles?

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Welcome to Milliman's Fall 2015 Multiemployer Pension Funding Study. This study reports on the estimated funded status of the nearly 1,300 U.S. multiemployer plans as of June 30, 2015, and shows the change in funding levels from December 31, 2014.

### KEY FINDINGS

- The aggregate funded percentage for multiemployer plans was estimated to be 79% as of June 30, 2015, compared with 80% as of December 31, 2014.
- For most multiemployer pension plans, the 2015 investment experience through June 30, 2015, has underperformed expected returns, and that doesn't take into account the turmoil in the investment markets since then.
- Over one-half of the total underfunding for multiemployer plans continues to be attributable to the 200-plus plans that are less than 65% funded.
- With a return through June 30 of about 2%, it will take a 3% return for the last six months of 2015 to sustain the June 30 funded percentage as of December 31, 2015.

### CURRENT FUNDED PERCENTAGE

Figure 1 shows that the overall funding shortfall for all plans increased by \$8 billion for the six-month period ending June 30, 2015, while the aggregate funded percentage decreased slightly from 80% to 79%.

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

	12/31/2014	6/30/2015	CHANGE
LIABILITY FOR ACCRUED BENEFITS	\$597	\$604	\$7
MARKET VALUE OF ASSETS	480	479	(1)
SHORTFALL	\$117	\$125	\$8
FUNDED PERCENTAGE	80%	79%	(1%)

\*Based on plans with complete IRS Form 5500 filings. Includes 1,278 plans as of December 31, 2014 and 1,280 plans as of June 30, 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 about 7.5%.

### HISTORICAL FUNDED PERCENTAGE

Figure 2 provides a historical perspective on the aggregate funded percentage of all multiemployer plans since the end of 2007, on a market value basis. Multiemployer plans were more than 85% funded prior to the 2008 financial crash, recovering from an unfavorable investment environment in the early 2000s and funding rules that did not allow plans to build large surpluses. The graph in Figure 2 shows that these plans were subject to the same market forces in 2008 and early 2009 that affected all retirement plans, including 401(k) plans and other similar savings vehicles as well as the personal savings of millions of Americans. While there has been significant recovery from the low point in 2009, the aggregate funded percentage has not yet returned to pre-2008 levels.

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



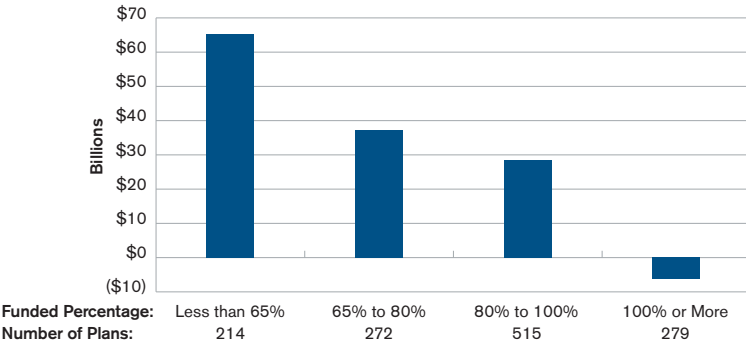
Despite continuing growth in liabilities, at an average rate of about 7.5% per year, there has been a significant improvement in aggregate funded status since early 2009, which reflects not only favorable investment returns, but also contribution increases (including withdrawal liability collections) and benefit reductions enacted by plans as they responded to the financial crisis.

### RESULTS VARY BY PLAN

While aggregate funding levels of multiemployer plans have nearly returned to pre-crash levels, the financial crisis affected individual plans in different ways. Figure 3 looks at the funding shortfall by funded percentage for the plans covered in the survey.

In Figure 3, we see that 279 multiemployer plans are over 100% funded as of June 30, 2015, with an aggregate surplus of about \$6 billion, which is unchanged from December 31, 2014. The shortfall for multiemployer plans that are less than 65% funded grew from \$60 billion to \$65 billion. This group now represents about 17% of all plans and continues to account for more than half of the aggregate deficit for all multiemployer plans of \$125 billion. For more well-funded plans, a mediocre asset return doesn't have nearly the impact as it does on poorly funded plans. The more poorly funded plans need strong returns or they will likely remain underfunded.

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



NEGATIVE CASH FLOW CREATES STRAIN

One of the primary reasons more mature plans struggle to recover from poor experience continues to be that benefit payments and plan expenses increasingly outweigh contributions. Figure 4 shows that, in the aggregate for all multiemployer plans, benefit payments plus expenses are well in excess of contributions. Large negative cash flows magnify the impact of investment volatility and make it harder for plans to recover from an underfunded status, as they are forced to liquidate assets to meet obligations and deplete the assets available to experience good investment returns.

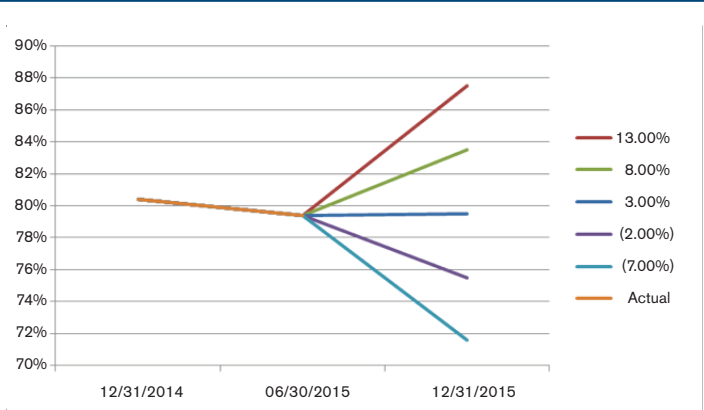
**FIGURE 4: APPROXIMATE ANNUAL CASH FLOW, ALL PLANS IN AGGREGATE (IN \$ BILLIONS)**

CONTRIBUTIONS	\$25
BENEFIT PAYMENTS	(39)
EXPENSES	(3)
NET CASH FLOW	(\$17)
NET CASH FLOW AS % OF ASSETS	(3.7%)

WHERE DO WE GO FROM HERE?

So, what happens if the market doesn't recover? Can funds survive, especially those plans that have a significant negative cash flow? Figure 5 shows the impact of various returns for the period July 1, 2015 through December 31, 2015. Please note that some of these returns may not seem realistic, but after 2008, many trustees are painfully aware that anything is possible. With a variety of alternative returns, the results look like a rake. In the aggregate, the return for the last six months in 2015 needs to be 3% to remain at the current 79% funded percentage level. The return for our sample portfolio from July 1, 2015 to September 30, 2015, was negative 5%. That result would potentially place the aggregated funded percentage between the lower two prongs of the rake for the year ended December 31, 2015.

**FIGURE 5: IMPACT OF VARIOUS RETURNS FOR THE 6-MONTH PERIOD ENDING DECEMBER 31, 2015, ON AN AGGREGATED BASIS**



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#### **ABOUT THE MILLIMAN MULTIEMPLOYER PENSION FUNDING STUDY**

The results in this study were derived from publicly available Form 5500 data as of August 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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