benefit trends
the multiemployer retirement plan landscape: defined benefit plans

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The 15-year period from 2002 through 2016 was turbulent for multiemployer defined benefit (DB) pension plans. Financial markets were volatile, and 2008 saw the biggest market collapse since the Great Depression. Demographic trends also became less favorable, as the number of actively working participants shrank relative to the number of inactive and retired participants.

Most plans have shown resilience, however, in spite of these recent challenges. Plan trustees have made difficult decisions to improve plan funding, and financial markets have recovered somewhat from the 2008 collapse. As a result, the majority of multiemployer DB plans is in position for continued improvement in their funded condition.

These results are from The Multiemployer Retirement Plan Landscape: A 15-Year Look (2002-2016), a report based on the latest available Form 5500 reports filed by 1,359 multiemployer DB pension plans with the U.S. Department of Labor. For the first time, the report tracks trends over a 15-year time horizon and provides new measures for trustees to gauge the status of multiemployer DB plans and benchmark their own plans.

Plans in the Study

The total number of multiemployer DB plans decreased from 1,409 in the 2002 plan year to 1,359 for the 2016 plan year. Conversely, the number of insolvent plans receiving financial assistance from the Pension Benefit Guaranty Corporation (PBGC) has generally increased, reaching 58 plans in 2016. Factors such as the establishment of new plans, mergers and plan terminations contributed to changes in the overall counts over the 15-year period.

Of the plans in this study, 56.8% are in the construction industry, followed by transportation (11.4%), manufacturing (10.2%), retail or wholesale trade (7.6%), service (3.9%) and entertainment (3.8%). Geographically, 45.7% are located either in the Northeast or mid-Atlantic regions, 28.3% are in the Midwest, 17.6% are in the West, and 8.5% are located in the South.

The 1,359 multiemployer plans in the study have a combined market value of assets of about $496 billion. At an individual plan level, 13.5% have assets of at least $500 million, while 7.4% have assets of at least $1 billion. Focusing on medium-sized and smaller plans, 29.4% have assets of at least $100 million but less than $500 million. More than one-half (52.8%) of plans have asset values of less than $100 million, while 36.3% have assets of less than $50 million.

The 1,301 solvent plans in the study have more than 10.8 million covered participants and beneficiaries. Again, looking at the individual plan level, 13.5% of solvent plans have at least 10,000 participants, 5.6% have at least 25,000 participants, and 2.6% have 50,000 participants or more. More than one in three (36.7%) plans have fewer than 1,000 participants, while 18.5% have fewer than 500 participants. Only 1.8% of solvent plans have fewer than 100 participants.

The median number of plan participants is 1,572, while the average number of plan participants is 8,325.

Of the plans that provided this information, 35.6% have fewer than 25 participating employers, while 55.0% have fewer than 50 participating employers. More than one in four (27.2%) plans have at least 100 participating employers, while 3.4% have at least 1,000 participating employers. The median number of participating employers is 42, while the average number of participating employers is 164.

Plan Demographics

Plans cover both active participants (those working) and inactive participants (those no longer work-
The aggregate number of participants increased over the 15-year period, from 8.91 million at the end of 2002 to 10.79 million at the end of 2016. It is important to note, however, that this increase is due to growth in the number of inactive participants. The aggregate number of active participants declined from 2008 through 2011 but has since rebounded.

Another way to analyze plan demographics is to look at the ratio of active participants to inactive participants. At the end of the 2002 plan year, the ratio of active participants to inactive participants was 1.04. By the end of 2016, the median ratio had declined to 0.60, a significant demographic shift.

Plan Cash Flows
The study tracks both contributions and disbursements. Contributions are made by employers on behalf of active plan participants. In most cases, contributions are the sole source of noninvestment cash going into the plan. Disbursements are primarily the benefits paid to retired participants and beneficiaries of deceased participants. If “cash in” exceeds “cash out,” the plan has a positive cash flow. On the other hand, if contributions do not cover disbursements, the plan has a negative cash flow.

Aggregate employer contributions increased from $12.7 billion in 2002 to $28.7 billion in 2016. At the same time, disbursements increased from $22.8 billion in 2002 to $43.3 billion in 2016. Net cash flows became increasingly negative, with the total shortfall growing from $10.1 billion in 2002 to $14.6 billion in 2016.

Another way to evaluate the effects of positive or negative cash flows is to express the net cash flow as a percentage of plan assets. For a plan with a negative cash flow, this percentage represents the return on investments needed to keep the plan’s asset value from declining. The median net cash flow for multiemployer pension plans increased from −2.9% of assets in 2002 to −2.6% in 2007. However, following the market collapse of 2008, the median net cash flow dropped to −4.3% in 2009. Since then, there has been modest improvement, with the median net cash flow rising to −3.1% in 2016. This improvement is due to increases in contribution rates as well as increases in asset values as a result of investment gains. Overall, 28% of plans have a positive cash flow, while the other 72% of plans have a negative cash flow.

Another method to compare contributions with investment returns is to express contributions as a percentage of plan assets. This calculation is a new feature of this year’s report. At one end of the spectrum, 12.6% of plans have contributions below 2% of assets. These plans are likely to be vulnerable to market downturns, since they may have limited ability to reduce underfunding by increasing contributions. Conversely, 12.8% of plans have contributions in excess of 10% of assets.

Plan Investments
The 21st century has been turbulent for the financial markets, producing extensive challenges for pension plans. For the subset of 514 calendar year plans, the median annualized investment return for the 15-year period from 2002 through 2016 was 5.3%, while the annualized return for the ten-year period from 2007 through 2016 was 4.8%. For comparison, the median annualized return for the ten-year period from 2006 through 2015 was 5.1%.

Plan actuaries must evaluate asset mix in conjunction with the expected long-term returns for each asset class to develop a long-term investment return assumption. The actuaries for 84.7% of plans that specified an investment return assumption use an assumption of 7.0% to 8.0% for the most recently reported plan year. Specifically, 43.7% of plans use an assumption of 7.5%. Only
1.9% of plans use an assumption lower than 6.0%, while only 0.4% of plans use an assumption higher than 8.0%.

In addition, Schedule R requires multiemployer pension plans to indicate the percentage of plan assets invested in each class. The average asset allocation for multiemployer DB pension plans is 50% to stocks, 21% to corporate bonds, 4% to high-yield bonds, 8% to real estate and 17% to other asset classes.

**Plan Liabilities**

A new study feature measures the plan’s benefit liabilities (actuarial accrued liability) relative to its contribution base. This measurement is one way to analyze the ability for a plan to correct a funding shortfall through increased contributions. From 2002 through 2016, plan liabilities per active participant have increased substantially. As of the end of 2016, 47% of plans had liabilities per active participant of less than $200,000, while 9.4% had liabilities per active participant of $500,000 or more. Generally, the lower the benefit liability per active participant, the easier it is for the plan to correct a funding shortfall through increased contributions.

**Plan Funding**

Under the Pension Protection Act of 2006 (PPA), plan funded percentages are calculated as the ratio of the actuarial value of assets over the actuarial accrued liability. The median funded percentage for multiemployer pension plans was 75% on December 31, 2007. The historic investment losses of 2008 brought the median funded percentage down to 68% at December 31, 2008. Median funded percentages fluctuated between 2008 and 2016. Due to slightly better than assumed returns in 2016, the median funded percentage increased slightly to 83% at December 31, 2016, compared with 81% in 2015.

Also under PPA, an actuary must certify the plan’s status based on certain tests. In 2009, 34% of plans were in the green zone (generally a funding ratio of greater than 80%), and 66% of plans were in endangered, seriously endangered or critical status. Following a period of generally positive returns, combined (in some cases) with corrective actions such as increases in contribution rates and reductions in benefits, 62% of plans were in the green zone for the 2016 plan year. The remaining 38% of plans were in endangered, seriously endangered, critical, or critical and declining status.

**Plan Costs**

Finally, the report analyzes annual plan costs and compares them with employer contributions. To the extent that employer contributions exceed costs in a given plan year, the plan’s funded status is expected to improve. To the extent that employer contributions fall short of plan costs, the plan’s funded status will likely deteriorate. The median employer contribution per active participant is $9,011, as of the latest plan year. One in ten (10.0%) plans has contributions per active participant of less than $2,000, while 44.4% have contributions per active participant of at least $10,000. Fewer than one in ten (9.5%) have contributions per active participant of $20,000 or more.

When comparing contributions and costs, it is beneficial to present them as a ratio.

Ratios greater than 1.00 indicate that contributions exceed costs (a contribution surplus), while ratios less than 1.00 indicate that costs exceed contributions (a contribution shortfall). The median ratio of contributions to costs increased steadily through 2007, as plans recovered from the investment losses from 2000 through 2002. For 2007 and 2008, contributions exceeded costs for the median plan, resulting in ratios greater than 1.00, then plummeted following the 2008 investment losses. For the median plan, the ratio fell from 1.06 in 2008 to 0.60 in 2009. The investment gains during 2009 and 2010, coupled with many plans taking significant actions to improve plan funding, resulted in a sizable decrease in contribution shortfalls after 2009. By 2013, the median ratio of contributions to plan costs had risen to 0.91, indicating that contributions were only slightly lower than plan costs. For 2014, the median ratio of contributions to plan costs had increased further to 1.11, then remained level at 1.13 in 2015. A poor investment year then decreased the ratio to 1.03 in 2016.

For the sixth year in a row, Horizon Actuarial Services, LLC, and the International Foundation of Employee Benefit Plans have partnered on The Multiemployer Retirement Plan Landscape: A 15-Year Look (2002-2016), an annual benchmarking report on multiemployer pension and retirement plans. Trustees can use the report to benchmark their own plans and understand how the overall multiemployer system is doing. Members will be able to download the entire report at www.ifebp.org/MultiemployerRetirement. Nonmembers also will be able to download the report as an e-book for $195.