PBGC

MPRA REPORT

Protecting America's Pensions

Pension Benefit Guaranty Corporation
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Office of the Director

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U.S. House of Representatives Committee on Education and the Workforce
U.S. House of Representatives Committee on Ways and Means
U.S. Senate Committee on Health, Education, Labor, and Pensions
U.S. Senate Committee on Finance

The Multiemployer Pension Reform Act of 2014 (MPRA) was enacted on December 16, 2014. Section 131(c) of MPRA requires PBGC to submit a report to Congress that analyzes whether current premium levels are sufficient for the PBGC to meet its multiemployer financial assistance obligations for ten- and twenty-year periods beginning with 2015. If current premium levels are not sufficient, the Act also requires a proposed schedule of revised premiums that will meet (but not exceed) such obligations.

This report is issued in accordance with the above requirements. We look forward to working with Congress to ensure the longer term solvency of multiemployer plans and a strong guarantee system.

Sincerely,

WTReeder

W. Thomas Reeder

MPRA REPORT

SUMMARY

PBGC insures about 1,400 multiemployer defined benefit pension plans covering more than 10 million participants. Multiemployer plans are collectively bargained plans maintained by one or more unions and multiple companies. Generally, the companies are in the same industry or members of an association. When a multiemployer plan becomes insolvent, PBGC provides financial assistance to the plan to pay guaranteed benefits to participants and the plan's administrative expenses.

The statutory guarantee limit for participants in multiemployer plans has two tiers and varies in proportion to years of service. For a participant with 25 years of service, PBGC guarantees 100 percent of benefits up to an annual benefit of $3,300; benefits in excess of this level are 75 percent guaranteed subject to a cap. In total, PBGC's guaranteed annual payment for a multiemployer participant with 25 years of service will not exceed $10,725. Similarly the guaranteed annual payment will not exceed $12,870 for an individual with 30 years of service. The multiemployer guarantee is less than the benefits many multiemployer plans provide and less than the PBGC guarantee for single-employer plans.

Multiemployer plans pay PBGC a premium for this insurance. The premium is structured as a flat amount per participant per plan year. The premium rate is indexed to grow with national average wages, but was also increased by the Multiemployer Pension Reform Act of 2014 (MPRA). The rate was $12 for 2014, $26 for 2015, and $27 for 2016, indexed thereafter. PBGC multiemployer premium revenues were $212 million for FY 2015 reflecting a blend of premium rates for the 2014 and 2015 plan years, which overlap PBGC's fiscal year.

MPRA requires PBGC to submit a report to Congress that analyzes whether current premium levels are sufficient for PBGC to meet its average projected obligations for financial assistance to plans through the end of FY 2025 and 2035. If premiums are not projected to be sufficient, MPRA also requires a proposed schedule of revised premiums sufficient to meet (but not exceed) such obligations.

Under the current premium structure, PBGC will be unable to meet its average projected financial assistance obligations through 2025 or 2035. Projected premiums at the MPRA legislated rates, plus current assets and likely investment returns become insufficient to pay average projected financial assistance obligations during FY 2024.

As shown in this report, the amount of premium revenue needed to pay average projected obligations varies substantially depending on whether premiums are to be sufficient for 10 or for 20 years, the degree to which plans adopt suspensions and partitions, and the extent to which premiums are not paid out of existing plan assets or otherwise assessed so as to avoid accelerating the insolvency of troubled plans. The range of potential increases is wide, ranging from 59 percent to 85 percent for 10 year solvency and from 363 percent to 552 percent for 20 year solvency.

Given the scale of the necessary premium increases, their design and structure are critical. A well designed increase may encourage additional contributions, encourage continued participation in plans, and strengthen the multiemployer system. A poorly designed premium increase may encourage employer withdrawals and accelerate plan insolvency with a resulting cost to plan participants and a need for even larger premiums.

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FREQUENTLY USED ABBREVIATIONS

FY	Fiscal Year
ME	Multiemployer
MPRA	Multiemployer Pension Reform Act of 2014
PBGC	Pension Benefit Guaranty Corporation
PIMS	Pension Insurance Modeling System
SE	Single-employer

UNDERSTANDING AND USING THIS REPORT

This report is an actuarial evaluation. It contains estimates and projections for PBGC's multiemployer program over the next two decades, based on current economic conditions and our understanding of current law. The standard for such evaluations is that the estimates be reasonable and be based on the use of reasonable methods and assumptions. In the professional opinion of the signers, this report meets those standards.

The values shown are estimates, not predictions, and reflect averages of a reasonable range of values that could result based on the assumptions and behavioral relationships that underlie PBGC's projection model.

To make the projections, PBGC uses a stochastic modeling system: the Multiemployer Pension Insurance Modeling System (ME-PIMS).[1] ME-PIMS runs many simulations of highly variable factors such as future interest rates, future equity returns, and future plan decisions to derive a range of future outcomes. No single projection can predict the results under the program – actual results that occur in future years can and likely will vary materially from the projections in this report.

Expected claims for financial assistance under the multiemployer program primarily depend on (1) the likelihood that a plan will fail, or become insolvent (i.e., run out of assets to pay benefits and expenses), either in the course of ongoing operations or following a mass withdrawal, (2) the value of the benefits promised by the plan and (3) the percentage of benefits that will be guaranteed.

Claims may also be generated by a plan that requests financial assistance from PBGC under MPRA, either through a facilitated merger or through partition[2] of a plan into an ongoing plan and an insolvent successor plan that provides the guarantee amounts, thereby generating a claim on PBGC's resources for support. Financial assistance in partition and merger are limited because of constraints on PBGC under MPRA, including that PBGC assistance to one plan not impair its existing obligations to provide financial assistance to certain other plans.

Given the similar impairment constraints on financial assistance, the facilitated merger authority is not separately modeled in ME-PIMS, but is incorporated within the modeling of the constrained financial assistance available under partition. Scenarios that assume no future partitions also assume no future facilitated mergers.

This report is based on a version of ME-PIMS derived from that described in PBGC's 2015 Projections Report.[3] The model has been enhanced in two respects:

- The model incorporates changes to allow additional flexibility in modeling increases in premiums in excess of current law. Under the ME-PIMS model, current law premium rates are assumed to be paid as part of plan administrative expenses and incorporated into the expense load assumption as discussed in the Projections Report. The changes to the model allow the evaluation of increases in premiums under two scenarios: (1) where troubled plans are at increased risk for insolvency due to the payment of

[1] For more information on PIMS, including links to user publications and peer review papers see the PIMS web page: http://www.pbgc.gov/about/projections-report/pension-insurance-modeling-system.html
[2] For more information on partitions of ME plans see PBGC's Partition FAQs: http://www.pbgc.gov/prac/pg/mpra/partition-faqs-for-practitioners.html
[3] PBGC's 2015 Projections Report is available at http://www.pbgc.gov/about/projections-report.html.

additional premiums directly from plan assets, and (2) where insolvency risk for troubled plans is not increased. Under the second scenario, the insolvency risk does not increase either because (a) the assessment is not paid from plan assets, as in the case of an assessment of an exit premium to employers leaving the plan, or (b) the assessment has sufficient flexibility to avoid increasing insolvency risk for troubled plans.

- The Projections Report assumptions reflect assumed constraints on the number of plans PBGC will be able to provide financial assistance to via partition or merger. Those constraints limit the assumed number of plans that will receive partition or merger assistance to 10 percent. In scenarios where PBGC has sufficient premium levels to remain solvent for 20 years the constraints on providing financial assistance to plans are assumed relaxed and we assume that 30 percent of plans needing partition or merger assistance will be eligible to receive it.

In all other respects the Projections Report contains detailed descriptions of the assumptions, methodology and results of the modeling underlying the numerical results contained in this Report, including an extensive discussion of the uncertainties surrounding modeling of suspension and partition under MPRA.

USES OF THIS REPORT UNDER THE STATUTE

MPRA was enacted on December 16, 2014. In accordance with the Act, PBGC is required to submit a report to Congress that analyzes whether current premium levels are sufficient for PBGC to meet its average expected financial assistance obligations for ten- and twenty-year periods beginning with 2015.[4] If projected levels of premiums are insufficient, MPRA also requires a proposed schedule of revised premiums sufficient to meet (but not exceed) such obligations. This report is issued in accordance with these requirements.

[4] Per §131(c) of MPRA, PBGC is to submit a report to Congress "… that includes (1) an analysis of whether the premium levels enacted … are sufficient for the Pension Benefit Guaranty Corporation to meet its projected mean stochastic basic benefit guarantee obligations for the ten- and twenty-year periods beginning with 2015, including an explanation of the assumptions underlying this analysis; and (2) if the analysis under paragraph (1) concludes that the premium levels are insufficient to meet such obligations (or are in excess of the levels sufficient to meet such obligations), a proposed schedule of revised premiums sufficient to meet (but not exceed) such obligations."

OVERVIEW OF THE MULTIEMPLOYER PROGRAM

PBGC's multiemployer program guarantees a portion of pension benefits for over 10 million participants, roughly one-quarter of private sector defined benefit pension participants. Multiemployer plans are collectively bargained plans that are maintained by one or more unions and multiple companies, generally in the same industry or as members of an association.

By law, PBGC's insurance program for multiemployer plans operates very differently than its single-employer program. The insured event in the multiemployer program is plan insolvency -- a year in which the plan is anticipated to have insufficient funds to pay benefits and expenses. Even after a multiemployer plan becomes insolvent (i.e., has exhausted its funds), PBGC does not take over the assets and administration of the plan, but rather is limited to providing financial assistance to cover the plan's guaranteed benefits and its expenses.[5] The premiums and the guarantees under the multiemployer program are generally smaller than in the single-employer program.

The statutory minimum funding requirements for multiemployer plans are also substantially different than for single-employer plans as are the average funded statuses of plans within the two systems. While multiemployer plans are typically less well funded than single-employer plans, most multiemployer plans are projected to remain solvent over the next 20 years. However, a core group of plans appears unable to raise contributions sufficiently to avoid insolvency.

For certain plans facing insolvency within the next 20 years, MPRA allows trustees to permanently reduce benefit promises to participants if by "suspending benefits" the plan can remain solvent over the long term and preserve benefits at levels above the PBGC guarantee amounts. MPRA also gives PBGC new capabilities to help plans remain solvent, by providing financial assistance to plans through plan partitions or facilitated mergers, and provides additional premiums to help fund PBGC's multiemployer program. This report, which analyzes whether PBGC has sufficient resources to meet its expanded obligations, is also required by MPRA.

CURRENT GUARANTEE

By statute, PBGC's maximum guarantee for a multiemployer participant varies based on the participant's service. The amount of the guarantee has two tiers and is based on the participant's monthly accrual rate as shown in Figure 1.

PBGC guarantees 100 percent of a benefit up to $11 per month per year of service. This translates to a 100 percent guarantee of benefits up to $330 per month or $3,960 per year for a participant with 30 years of service, and up to $110 per month or $1,320 per year for a participant with 10 years of service.

PBGC partially guarantees (at a 75 percent level) the next $33 per month per year of service. Thus the maximum guarantee amount for a participant with 30 years of service is $1,072.50 per month ($12,870 per year); for an individual with 10 years of service the maximum is one-third of that level -- $357.50 per month or $4,290 per year. Similarly, for an individual with 40 years of service the maximum guarantee is $17,160 per year. The two-tier structure of the guarantee implies that individuals receiving the maximum guarantee

[5] Formally this financial help is in the form of loans. However, with only one exception over PBGC's history, the loans have never been repaid.

amount will have a reduction of at least 18 percent in the benefit promised and potentially much more, for plans with benefit accrual rates in excess of $44 per month per year of service.

Figure 1: Guarantee Levels Vary Based on Service and Benefit Generosity

Participant Years of Credited Service	Plan Benefit Monthly Accrual Rate				
	$10	$30	$50	$70	$90
10	$1,200	$3,030	$4,290	$4,290	$4,290
	(100%)	(84%)	(72%)	(51%)	(40%)
20	$2,400	$6,060	$8,580	$8,580	$8,580
	(100%)	(84%)	(72%)	(51%)	(40%)
30	$3,600	$9,090	$12,870	$12,870	$12,870
	(100%)	(84%)	(72%)	(51%)	(40%)
40	$4,800	$12,120	$17,160	$17,160	$17,160
	(100%)	(84%)	(72%)	(51%)	(40%)

Guarantee varies based on each participant's years of service and the plan's monthly benefit accrual rate. The amounts shown above assume that plan benefits are determined by multiplying a plan-specified benefit accrual rate by years of service (as is the case for many multiemployer plans). For each row based on years of credited service, the top figure shows the annual pension guarantee, the bottom figure shows the percentage of the plan level benefit amount that is provided by the guarantee.

This table applies only to plans that became insolvent on or after December 31, 2000.

By comparison, under the single-employer program, the guaranteed annual benefit for 2015 and 2016[6] for a retiree receiving a straight-life annuity at age 65 is $5,011.36 per month, or $60,136 per year. The single-employer guarantee varies based on both the age at which payments begin and the form of benefit and is not dependent upon the participant's service once the participant is fully vested. The limit that applies to participants in terminating single-employer plans is adjusted annually for inflation. [7]

FINANCIAL ASSISTANCE TO TROUBLED PLANS

PBGC's multiemployer guarantee is provided through financial assistance to plans, rather than being paid directly to individuals. PBGC primarily pays financial assistance to multiemployer plans in the form of loans

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[6] In October, 2015 PBGC announced the 2016 single-employer guarantee levels would remain unchanged from 2015. Increases in the single-employer guarantee are linked to the cost-of-living-adjustment for Social Security, which was zero for the relevant determination period. Annual guarantee levels generally apply to plans as of the earlier of the plan's termination date or the date the plan's sponsor entered bankruptcy proceedings.

[7] For more information on the structure and coverage of PBGC's multiemployer guarantee see the 2015 Multiemployer Guarantee Study at http://www.pbgc.gov/documents/2015-ME-Guarantee-Study-Final.pdf .

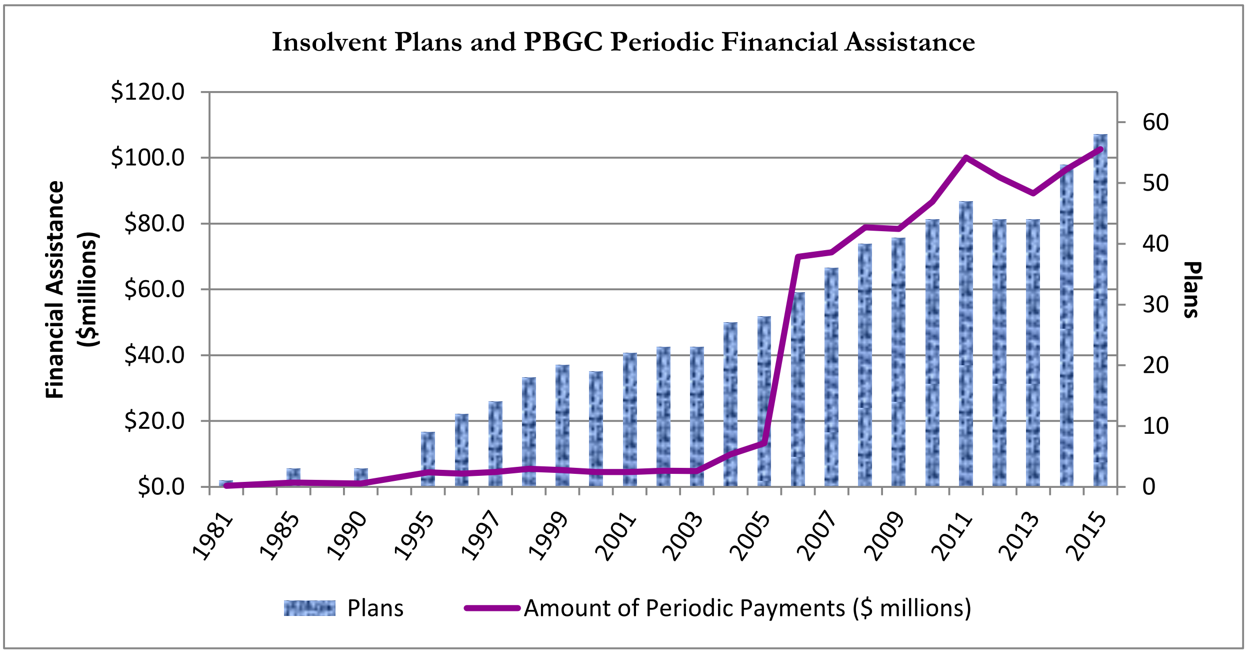
in the event of plan insolvency. The loans are sufficient so that the plans can provide benefit levels at the guarantee amount and pay the expenses of the plan. Historically, financial assistance has taken two forms:

- Periodic payments to pay guaranteed benefits to plan participants and cover the administrative expenses of the plan.
- A one-time or other non-periodic payment to purchase annuities or to facilitate merger of the plan with a healthier plan.

Plans may receive one or both types of financial assistance. While about half of all plans that received financial assistance over time got some type of non-periodic assistance, those amounts represented less than 20 percent of financial assistance expenditures over the history of the program.[8] Most financial assistance is periodic and pays for guaranteed benefits and plan administrative expenses.[9]

As shown in Figure 2, the number of plans receiving periodic financial assistance has grown fairly steadily over time, while the amount of total periodic financial assistance has risen sharply since 2005. Occasional decreases in the number of plans and periodic payments reflect PBGC providing a lump sum of financial assistance, rather than a general decrease in PBGC obligations. (In essence, these instances of lump sum financial assistance are provided so that a plan may purchase annuities sufficient to provide the guarantee and close down operations.) PBGC projections show continued and significant growth in the amount of projected financial assistance as plans near insolvency run out of money over the next few years.

Figure 2: Financial Assistance to Insolvent Plans has Grown Since 1981



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[8] Approximately 60 percent of non-periodic financial assistance relates to a single plan. Excluding financial assistance for that plan, non-periodic assistance is less than 10 percent of aggregate financial assistance. Some non-periodic payments are to assist a plan to purchase annuities, eliminating future periodic payments.

[9] A summary of PBGC's financial assistance payments over time is set forth in Table M-4 of PBGC's 2014 Databook, http://www.pbgc.gov/documents/2014-data-tables-final.pdf. Periodic assistance payments include payments following a plan partition.

ANALYSIS OF PREMIUMS

HISTORICAL PREMIUM RATES

The PBGC premium rate for multiemployer plans is currently a flat $27 per participant for plan years beginning in 2016 and increases by an inflation factor in subsequent years. Multiemployer pension plans pay the flat rate per-participant premium for each participant in the plan.

Premium rates associated with the current structure of PBGC's multiemployer insurance program have a history that dates back to the Multiemployer Pension Plan Amendments Act of 1980. It contained a schedule of PBGC premium rates increasing over a nine-year period. Rates increased gradually from the 50 cents per participant annual rate that had been in effect through 1979 to $2.60 per participant per year for plan years beginning on or after September 27, 1988.[10]

The Deficit Reduction Act of 2005 increased the annual premium rate for multiemployer plans from $2.60 per participant to $8, effective for plan years beginning after December 31, 2005. It also indexed the multiemployer premium to National Average Wages. The indexing resulted in an increase in the rate to $9 per participant for the 2008 plan year.

The Moving Ahead for Progress in the 21st Century Act increased multiemployer premiums to $12 per participant beginning in 2013, indexed thereafter. In October, 2014 PBGC announced that the indexation would increase the rate to $13 per participant for 2015.

MPRA doubled premiums to $26 for 2015, indexed thereafter. Total multiemployer premiums paid during the fiscal year ended September 30, 2015, were approximately $212 million.[11] The 2016 rate after reflecting indexing is $27 (indexed thereafter).

For single-employer plans, on the other hand, the flat per-participant premium increased to $57 in 2015 and then to $64 for 2016 (up from $49 in 2014); the single-employer flat rate will be $69 in 2017 and increases in steps to $80 in 2019, indexed thereafter. In addition, underfunded single-employer plans pay a variable-rate premium which is set at a rate of 3 percent of underfunding for 2016, subject to a cap of $500 per participant. The rate increases annually for inflation and also due to specified increases through 2019, at which point it will exceed 4.1 percent of underfunding. Finally sponsors of certain terminated plans pay termination premiums. There are no variable-rate or termination premiums for underfunded multiemployer plans.[12]

Figure 3 shows a comparison of the premium rates for single-employer and multiemployer plans from 1980. Compared to the single-employer program, multiemployer premiums have increased at a lower rate since 1980.

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[10] Public Law 96-364 §105.
[11] Based on approximately 10.3 million participants in 2014, split between the $12 and $26 rate.
[12] Summary information on PBGC historical and projected premium rates is available on PBGC's website at http://www.pbgc.gov/prac/prem/premium-rates.html.

Figure 3: Multiemployer Premium Rates Have Grown at a Slower Pace than Single-Employer Rates

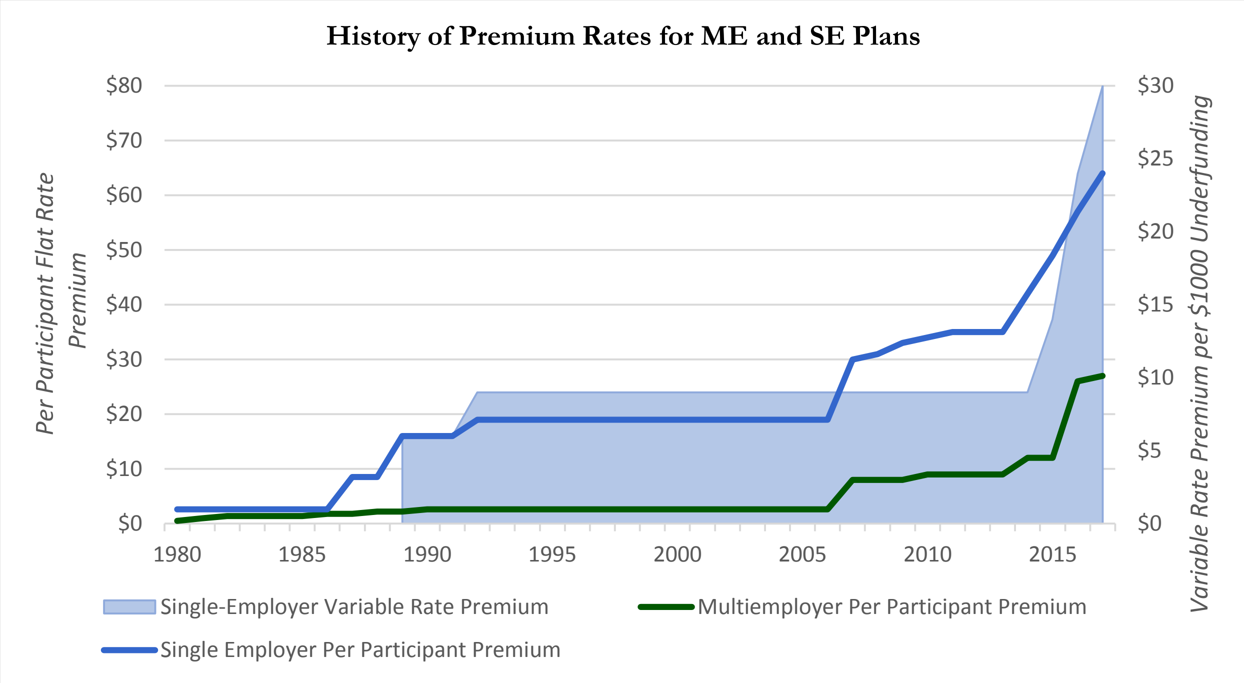

Figure 3 looks at the growth in premium ***rates***. Another useful indicator may be the ***average premiums paid*** per participant in the single-employer system (SE) and the multiemployer system (ME). In FY 2014, the average premium paid was $127 per participant for SE and $12 per participant for ME. Likewise, in FY 2015, the average premium paid was $138 per participant for SE and $21 per participant for ME.[13] Approximately 60 percent of the single-employer premiums for the two years were due to the variable rate premium.

ANALYSIS OF PREMIUM SUFFICIENCY

Subsection 131(c) of MPRA requires that PBGC report to Congress on whether the premium levels enacted under MPRA are sufficient for the PBGC to meet its projected mean stochastic basic benefit guarantee obligations for the ten- and twenty-year periods beginning with 2015.

Under the current premium structure, PBGC will not be able to meet its projected mean stochastic basic benefit guarantee obligations for the ten- and twenty-year periods beginning with 2015. Projections of premiums at the MPRA legislated rates plus current assets and likely returns on those assets appear sufficient to cover PBGC's average projected multiemployer program cash flow needs only through a portion of 2024, not for the full ten-year period extending through FY 2025. These projections depend heavily on the timing of projected cash flows, which in turn are sensitive to variations in plan investment returns and the occurrence and timing of withdrawals from plans by contributing employers.

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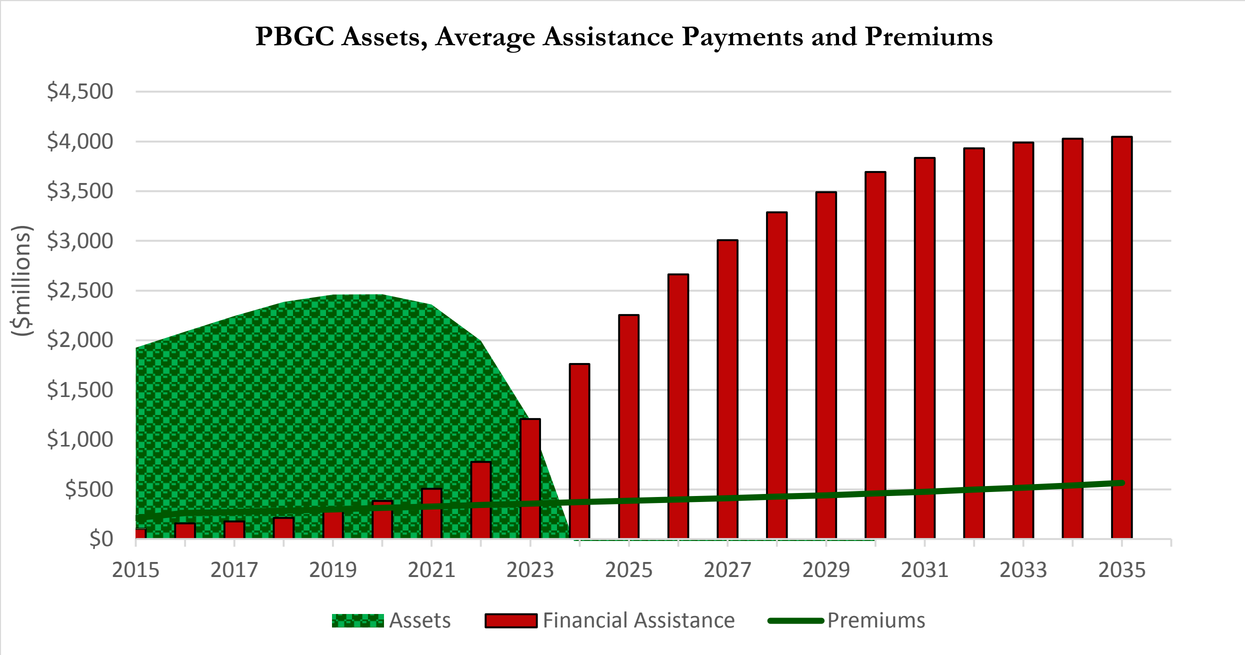
[13] Because PBGC's fiscal year often overlaps plan years, average fiscal year premiums paid generally represent a blend of premiums at two plan year rates.

The multiemployer program had a net deficit of $52.3 billion as of the end of FY 2015, the result of liabilities of $54.2 billion and assets of $1.9 billion.[14] Because the multiemployer program has only a small base of assets, the program's large deficit carries a substantial risk of exhaustion of multiemployer fund assets in the foreseeable future.

Figure 4 shows the effect of projected increases in average assistance payments[15] on PBGC multiemployer fund assets, assuming no future suspensions or partitions[16] (since facilitated mergers are incorporated with the modeling of partitions, this also implies no future facilitated merger assistance). Assets are shown as of the end of each fiscal year. They are projected to increase to a maximum of $2.46 billion for fiscal year ending 2020 and then decline steadily until 2024, the year during which assets are projected to become depleted based on payment of average projected financial assistance amounts. Financial assistance amounts are illustrated as the amount payable at the current guarantee levels, in order to show the difference between the amount needed to continue the current guarantee and anticipated premium receipts.

Figure 4: PBGC ME Fund Exhausted During FY 2024, Assuming No Future Suspensions or Partitions



As in PBGC's 2015 Projections Report, our projections also illustrate a scenario reflecting assumptions that some plans and participants will elect to use suspension and partition under MPRA. Choosing to suspend benefits represents a difficult choice: whether to act early to cut benefits so as to preserve plan solvency at a

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[14] Figures cited are for the 2015 Fiscal year, which can be found in the Pension Benefit Guaranty Corporation Annual Report FY 2015, page 25. The annual report is available at http://www.pbgc.gov/about/reports/ar2015.html. The September 30, 2015 asset values for FY 2015 are the starting position for measurement in this report.

[15] ME-PIMS simulates financial assistance payments from PBGC to insolvent multiemployer plans to pay retiree benefits and maintain the plans. PBGC generally provides financial assistance only after a plan becomes insolvent. Thus, financial assistance payments projected over the next 10 years are generally due to previous claims (i.e., plans already booked as losses).

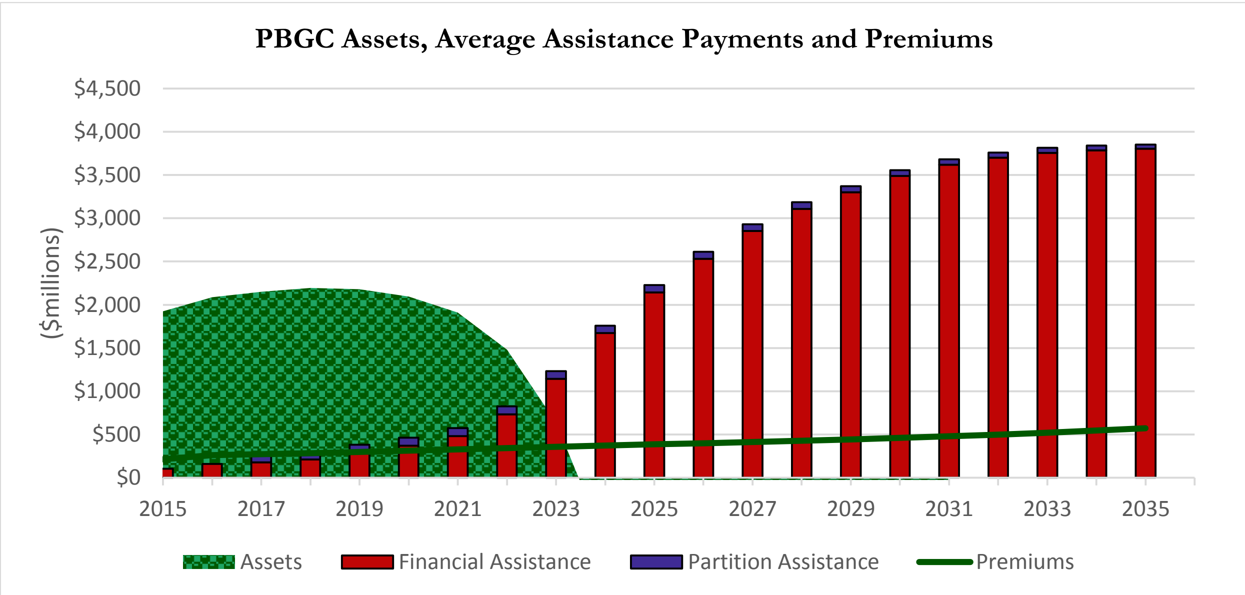
[16] Since, as of September 30, 2015 no plan had yet completed a suspension or partition, this report's assumption of no future suspensions or partitions is the same as assuming ***no*** use of suspensions or partitions by plans at any point in time.

level potentially sufficient to pay benefits higher than current PBGC guarantee amounts, or to delay and risk deeper benefit cuts and reliance upon the level of PBGC guarantees after plan insolvency and potential insolvency of PBGC's multiemployer fund.

Figure 5 shows a similar set of results to Figure 4, but assumes that some plans and participants will choose suspensions and partitions under MPRA. The FY 2015 Projections Report adopts new assumptions regarding election of suspensions and partitions that reflect emerging experience under the program. In particular, the new assumptions reflect the fact that the largest troubled plan applied for benefit suspensions in September 2015, but its application was denied in May 2016 for failure to comply with the statute and regulations. The plan subsequently announced that it would not reapply for benefit suspensions. Other assumptions regarding election of suspensions were also reduced as discussed in detail in the FY 2015 Projections report. Thus assumptions used in this report include a 0 percent likelihood that the largest troubled plan will suspend benefits and a 30 percent likelihood that other plans that can maintain solvency through suspensions alone will elect suspensions.

When suspensions alone will not enable a plan to remain solvent, it may request financial assistance from PBGC via a partition. MPRA requires PBGC to limit its assistance to plans so as to be able to certify to Congress that providing assistance to a particular plan will not impair its ability to provide assistance to certain other plans. The FY 2015 assumptions recognize this constraint by limiting the group approved for partition assistance to 10 percent of plans that would benefit (as opposed to the 30 percent assumption for plans that might become solvent over the long term through suspension alone).

Figure 5: PBGC ME Fund Exhausted During FY 2024, but Suspensions/Partitions Reduce Long Term Payment Obligations



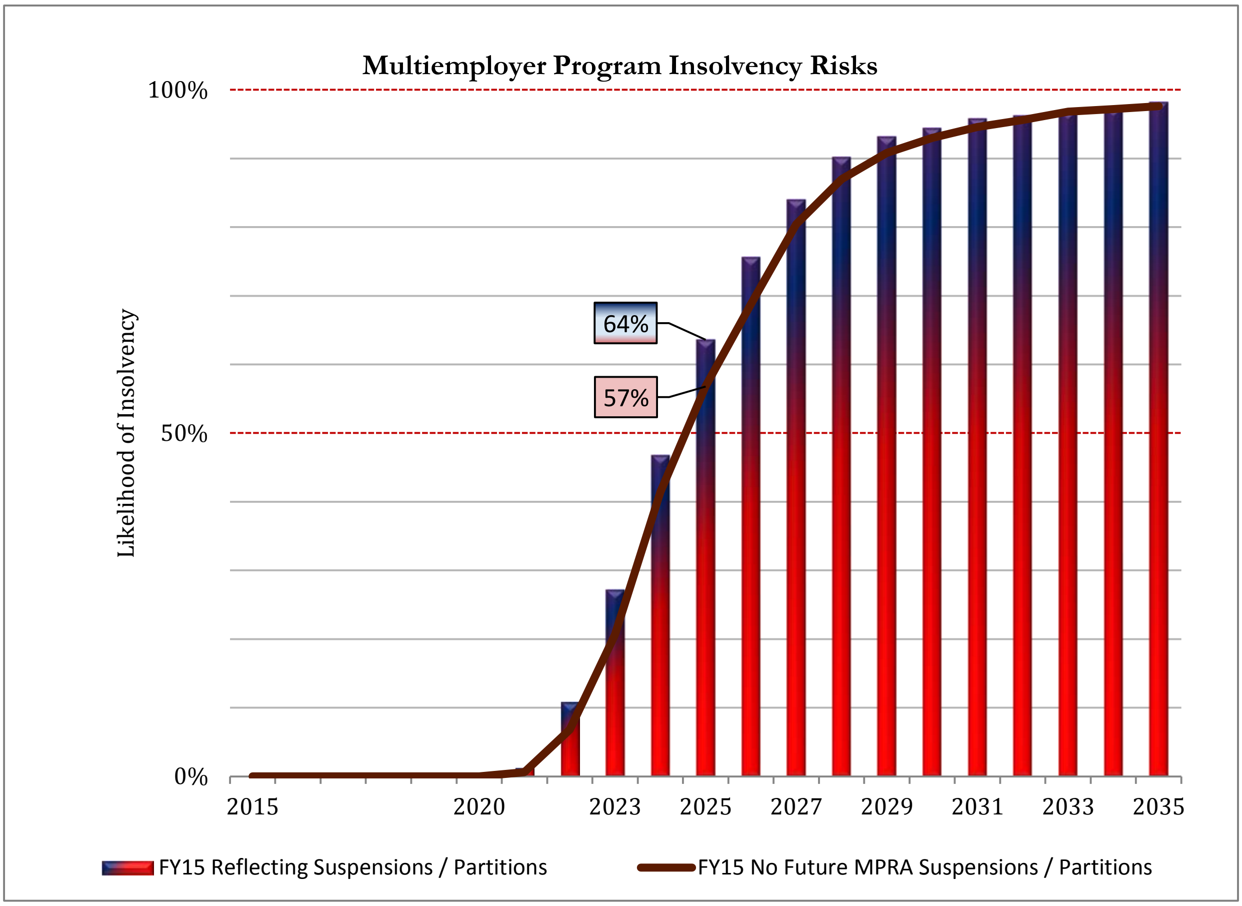
Under this scenario, PBGC assets are projected to increase to a maximum of $2.2 billion as of the end of FY 2018 and then decline steadily until assets are expected to become depleted during FY 2024. This compares with the "no suspensions or partitions" scenario shown in Figure 4 where assets grow a little higher (to $2.46 billion) but also are fully drained during FY 2024, lasting only several months longer. The fund exhaustion dates are similar due to the constraint imposed by MPRA that PBGC's provision of financial assistance to a particular troubled plan should not impair its ability to help other troubled plans.

Comparing the financial assistance on insolvency in the "no suspensions or partitions" scenario, which rises to over $4 billion by the end of the projection, with the sum of the financial assistance on insolvency plus assistance provided through partitions, which remains less than $4 billion, demonstrates that the long term costs are smaller.

The above charts show projected dates of exhaustion of PBGC's multiemployer fund assuming that PBGC will pay out the average (mean) projected financial assistance amounts. The average financial assistance is taken from our ME-PIMS model results, which look at a variety of future economic paths. Along good economic paths, PBGC's financial assistance may be smaller than along bad economic paths, but the amount will never be less than zero. Thus, average financial assistance will generally be larger than that projected at the median (the 50th percentile point). This implies that the median outcome for when the PBGC multiemployer fund is depleted may be later than the date based on mean financial assistance outflows. This is particularly the case today, when the assets and premium income are small compared to liabilities, implying that financial assistance payments (and their variability) will dominate other items of cash-flow.

Figure 6 illustrates this difference. It projects the likelihood that the multiemployer program fund will be insolvent (i.e., the assets will be exhausted) by a given year over a 20-year projection period. Assuming no changes either in multiemployer plans or in PBGC's multiemployer program, there is more than a 50 percent likelihood that the assets of PBGC's multiemployer insurance program will be exhausted by the end of 2025 (57 percent if no plans elect to suspend or partition, 64 percent using FY 2015 assumptions of future suspensions and partitions) and a 98 percent likelihood of exhaustion by the end of the projection period whether or not plans elect to suspend or partition benefits.

Figure 6: Significant and Rising Risks of PBGC ME Fund Insolvency After 2021



Most of the risks of insolvency are focused within a six-year period. The risk rises significantly above the 10 percent level for FY 2023 and is near 90 percent by the end of FY 2028.

STRUCTURE OF PREMIUM INCREASES

The analysis in the prior sections of this report have demonstrated that the current premium structure is ***not*** "…sufficient for the Pension Benefit Guaranty Corporation to meet its projected mean stochastic basic benefit guarantee obligations for the ten- and twenty-year periods beginning with 2015." This and the following section address "…a proposed schedule of revised premiums sufficient to meet (but not exceed) such obligations."

The form of the schedule of revised premiums is not set forth in MPRA. As discussed in the section "Historical Premium Rates" above, Congress has historically used different structures for assessing the single-employer and multiemployer premiums. Initially both were based solely on per-participant premium rates. The multiemployer program remains structured solely as a per-participant premium, but the single-employer program has a multi-part premium structure, comprised of a flat rate (per-participant) premium plus a variable rate premium based on underfunding (with a per-participant cap) and a termination premium.

The President's 2017 budget proposal (Budget)[17] suggests a structure for assessing increased premiums under the multiemployer program. Under this structure, with a target amount of premium revenue to be raised, PBGC's Board would be directed to adjust premiums to better account for the risk that different sponsors and plans pose. The Board would presumably consider a number of factors, including increases in the risk of losses to PBGC when plans or participants exit the system, the need to avoid premium increases exacerbating outcomes in the most troubled plans, the burden on plan sponsors, and the amount of a plan's underfunding.

The Budget assumes that the Board would raise these revenues by using its premium-setting authority to create a variable-rate premium, similar to the single-employer program, and an exit premium. A variable-rate premium would provide plan sponsors some additional incentive to improve plan funded status. An exit premium assessed on employers that withdraw from a plan would compensate PBGC's insurance fund for additional risk imposed on it when healthy employers exit.

Multiemployer plans typically pay all administrative costs from plan assets, including PBGC premiums, while single-employer practice varies among plans and sponsors. As an assessment on employers leaving the plan, rather than on plans, the exit premium would not necessarily be payable from plan assets.

This report adopts the overall structure of the premium proposal set forth in the Budget under which the PBGC Board has discretion to adjust premiums while targeting a specific level of premium revenue. Thus, this report presents premium schedules in terms of the target revenue amounts to be raised.

PROPOSED SCHEDULE OF REVISED PREMIUMS

The following charts show the increased premium schedule needed for PBGC to remain solvent for 10 and 20 years based on average projected future financial assistance payments. Premium levels are set at the minimum amount needed assuming that asset levels will also be drawn down (i.e. if average financial assistance obligations are met, PBGC's assets are anticipated to be exhausted in year 11 or year 21 respectively).[18]

Figure 7 graphs the 10-year cumulative amount of premiums needed for PBGC to meet its average financial obligations for a 10-year period under four different scenarios and compares them with the current schedule of premiums (shown in green). The four scenarios show the interaction of two issues:

- The extent to which plans and participants will elect to use the suspension and partition provisions of MPRA. Scenarios that assume no future suspension or partitions are shown in red.
- The extent to which increased premium revenues increase the risk of plan insolvency. Scenarios shown as dashed bars assume increases in premiums do ***not*** increase risk of plan insolvency. Under these scenarios, either increases are not paid from plan assets (as in the case of an exit premium on employers) or increases are carefully assessed to avoid increasing insolvency risk for troubled plans. Scenarios shown as solid bars assume the full level of premium increase is paid from plan assets and there are no special waivers or other actions taken to avoid increasing the risk of insolvency among troubled plans. The current level of premium revenue (shown in green) is also assumed to remain paid from plan assets.

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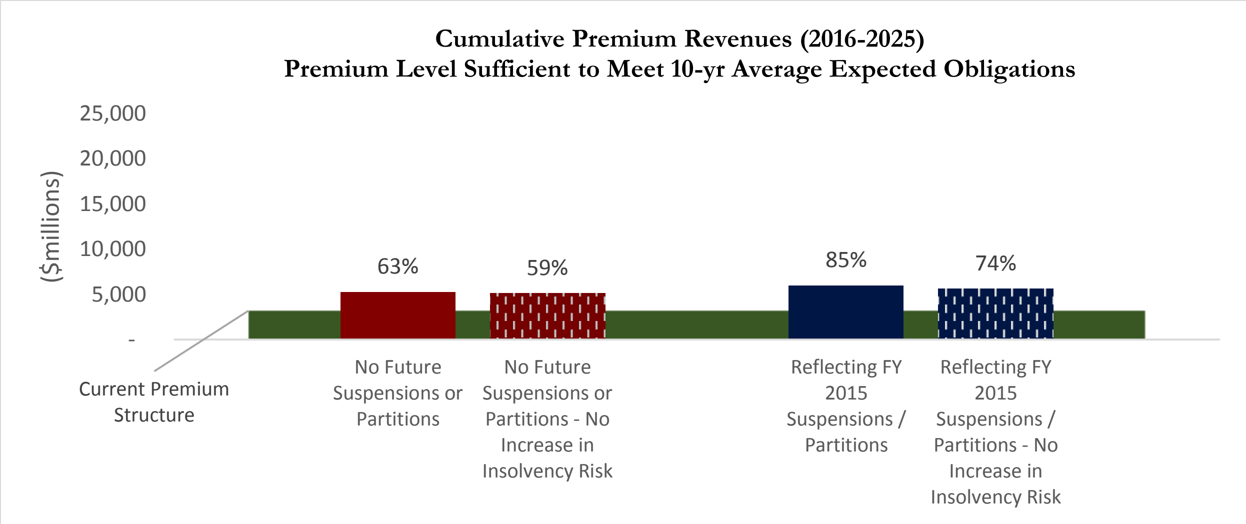
[17] The 2017 Budget Proposals for PBGC are summarized at https://www.whitehouse.gov/sites/default/files/omb/budget/fy2017/assets/opportunity.pdf (see p.46).
[18] Asset levels and premium amounts are projected on an accrual basis and include premiums receivable net of prepaid premiums.

Figure 7: Premium Sufficient to pay 10-Year Obligations Rises 59% to 85%



In essence, the additional premiums are providing benefits for an additional year and some number of months. This is due to the short period between PBGC's anticipated date of insolvency during FY 2024 and the end of FY 2025. Although the premium increases shown are set only at a level to meet, but not exceed, a 10-year solvency period, the scale of the graph is the same as later used to illustrate the amounts needed to provide for a 20-year solvency period (as shown in Figure 9 below).

Comparing the red bars with the blue bars shows that, for a 10 year solvency horizon, somewhat lower premiums may be required in order to provide funding for average financial obligations through FY 2025 assuming no suspensions and partitions. The several month earlier exhaustion of PBGC's funds under the scenario assuming suspensions and partitions accounts for the increase in the premium rates shown.

Comparing the dashed bars to the solid bars (scenarios that assume all increased premiums are paid from plan assets) illustrates the need for carefully assessing premiums so as not to exacerbate underfunding in troubled plans and accelerate their insolvency. In essence, the distance between the dashed and solid bars measures, in premium dollars, the potential effect of an increased premium that is assessed on a plan that cannot bear the additional expense and becomes insolvent as a result. In addition to the effects measured in premium dollars, many plan participants would bear a cost as well, due to earlier reduction in benefits to guarantee levels.

The difference between a measure of premiums that either does or does not account for feedback on the plan assets of troubled plans illustrates an important aspect of setting a premium structure and format. As premiums increase it will be important to avoid exacerbating the risk of plan insolvency. Mechanisms to avoid this problem may require a system of appropriate waivers and careful targeting of the premium needs. The Budget anticipates that this type of careful targeting would be done by PBGC's Board, which would have authority to structure the premiums. The Budget also illustrates the advantages of providing a portion of any needed increase in revenue through exit premiums that do not directly affect plan assets.

Figure 8 shows the schedule of premiums needed for PBGC to meet its projected mean stochastic basic benefit guarantee obligations for the ten-year period. Carefully assessed premiums that do not advance the risk of troubled plan insolvency would need to increase between 59 percent and 74 percent, depending on whether plans and participants are assumed to make use of suspensions and partitions.[19] A less carefully assessed premium could require premium increases of 63 percent to 85 percent.

Figure 8: Schedule of Revised Premium Revenues Sufficient to Meet Average Expected 10-Year Obligations

	Current Premiums	No Future Suspensions or Partitions		Reflecting FY 2015 Suspension / Partition Assumptions[20]	
		Paid Out of Plan Assets	No Increase in Insolvency Risk	Paid Out of Plan Assets	No Increase in Insolvency Risk
Year	*Total Premium Revenues Collected in $ millions (Premium Schedule)*				
2016	$261	426	$416	$484	$455
2017	273	448	439	508	478
2018	284	466	456	529	498
2019	298	488	477	554	521
2020	312	510	499	580	545
2021	327	534	522	607	570
2022	341	558	545	634	596
2023	356	582	569	662	623
2024	371	607	593	690	649
2025	385	628	614	715	673
Percentage Increase over Current Premium Levels		63%	59%	85%	74%

Overall, the premium rates vary modestly from scenario to scenario. For short-term solvency horizons, whether or not plans elect suspension and partition and how carefully assessed the premiums are has a relatively small impact on PBGC premium requirements for the next ten years. On the other hand, all four scenarios require a fairly substantial increase from the current $27 per participant premium rate, ranging from a 59 percent increase to an 85 percent increase. Note that this substantial increase only extends PBGC solvency by somewhat more than one year – through 2025 instead of partially through 2024.

Finally, the 2035 risk of PBGC insolvency at the proposed premium levels ranges from 93 percent to 94 percent. As previously noted, premium levels were set at the minimum amount needed assuming that asset levels will also be drawn down and are anticipated to be exhausted in year 11. As such, the likelihood PBGC remains solvent through 2035, given the above four premium scenarios, ranges from 6 percent to 7 percent.

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[19] Using FY 2015 assumptions ME-PIMS assumes that the largest systemically important plan has a 0 percent likelihood of applying for and complying with the requirements for suspending benefits. 30 percent of other plans are assumed to elect suspension (limited to 10 percent of plans requiring partition assistance from the PBGC).
[20] The current level of premium revenue is assumed to remain paid from plan assets. In columns three through six, *only the increases in premium revenue* are being modeled as being paid (or not being paid) in ways that reduce the assets of plans and increase plan insolvency risk.

Moving to analysis of 20-year solvency periods, Figure 9 again graphs the premiums anticipated to be needed for PBGC to meet its average financial obligations under four different scenarios and compares them with the current schedule of premiums. For comparison with the prior charts, the premium schedule is shown in terms of the 10-year cumulative premium revenues.[21] However, the four scenarios differ from those shown in Figure 7, due to a change in the assumed ability of PBGC to assist plans with partition.

The 2015 Projections Report models future program deficits using assumptions regarding the estimated future use of suspension and partition. It reflects the likelihood that a plan will attempt and succeed in implementing benefit suspensions through assumed election rates, modeled stochastically. Plans that will need partition as well as suspension are modeled separately, with election rates limited to reflect MPRA's requirement that PBGC's provision of financial assistance through partition not impair its ability to assist certain other troubled plans. MPRA also gives PBGC authority to support plans by providing financial assistance to help troubled plans merge. This facilitated merger authority has similar impairment constraints and is not separately modeled, but is incorporated within the modeling of the constrained financial assistance available under partition.

With one significant exception, we assume approximately 30 percent of critical and declining plans would take steps to suspend benefits that would meet the requirements for a participant vote, after reflecting the provisions for systemically important plans. For scenarios where mean premium levels are sufficient to keep PBGC solvent for 10 years, we further assumed that PBGC's ability to provide financial assistance in partition or merger is reduced to 10 percent so that the combination of suspension and suspension plus partition and merger assistance does not significantly change the risk of PBGC insolvency. But for scenarios where mean premium levels are sufficient to keep PBGC solvent for 20 years, we assumed PBGC's ability to provide assistance in partition or merger would be the full 30 percent since additional premiums would mean that such assistance would not impair PBGC's ability to assist other plans.

Thus, the four scenarios in Figure 9 show the interaction of:

- The extent to which plans and participants will elect to use the suspension and partition provisions of MPRA. This is shown using a revised assumption that PBGC will be able to assist the 30 percent of plans that would be assumed to elect suspension and would require partition. Scenarios that assume no future suspension or partitions are shown in red.
- The extent to which increased premium revenues increase the risk of plan insolvency. Scenarios shown as dashed bars assume increases in premiums do ***not*** increase risk of plan insolvency. Under these scenarios, either increases are not paid from plan assets (as in the case of an exit premium on employers) or increases are carefully assessed to avoid increasing insolvency risk for troubled plans. Scenarios shown as solid bars assume the full level of premium increase is paid from plan assets, and there are no special waivers or other actions taken to avoid increasing the risk of insolvency among troubled plans. The current level of premium revenue (shown in green) is also assumed to remain paid from plan assets.

For comparability purposes, Figure 9 shows cumulative premium needs over the same prospective 10-year period as Figure 7. However the level of premium sufficient for a 20-year solvency horizon is much greater, and the value of carefully assessing the premium so as not to exacerbate the risk of troubled plan insolvency becomes much more important, both for avoiding additional premium increases and for purposes of avoiding

[21] Premiums are set at a level to provide 20-year solvency and assumed to continue beyond the 10-year period. For the full 20-year schedule of premiums see Figure 11.

the cost to participants of earlier benefit cuts upon insolvency. Figure 9 illustrates this effect in premium dollars.

Figure 9: Premium to Meet 20-Year Obligations Increases Significantly, Especially if Plans' Insolvency is Advanced

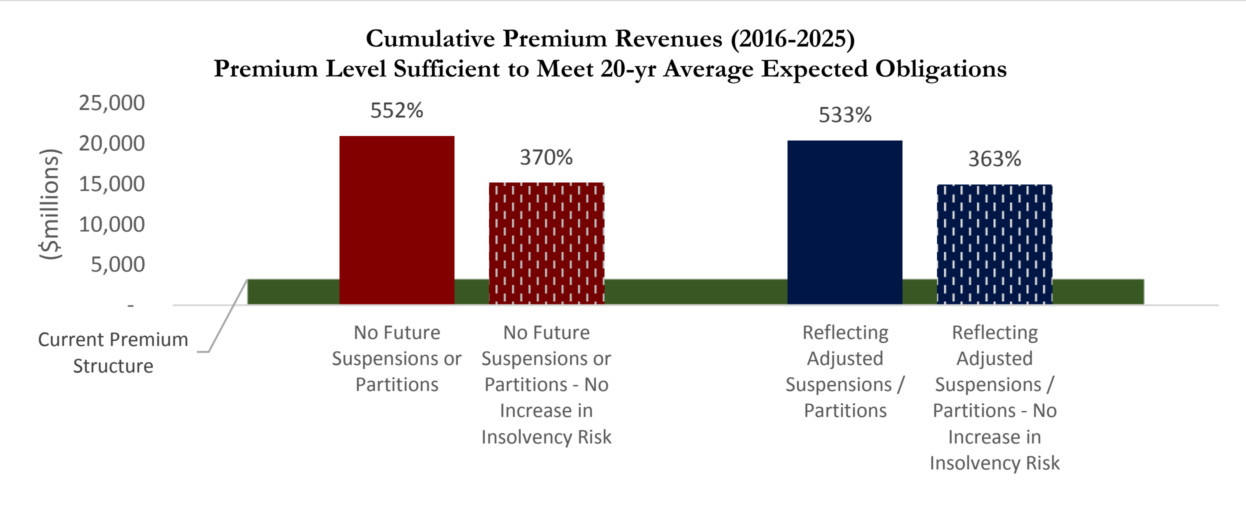

Figure 10 illustrates the potential cost to participants of a premium that is not carefully assessed to minimize the risk of insolvency. It does so by looking at the difference in long-term benefit losses for the scenario where there are no future suspensions or partitions (where the difference is largest). The dashed area graph shows benefit losses to participants, as a percent of total benefits projected to be promised under all multiemployer plans, as plans become insolvent and benefits are reduced to guarantee levels, assuming PBGC's current guarantee levels are maintained. The solid area shows the additional benefit losses due to a premium that is paid from plan assets and not carefully targeted to avoid driving additional plans to insolvency.

Benefit losses grow over time, eventually reaching 4 percent of total benefit promises for the multiemployer system as a whole, eventually exceeding $2 billion per year. However, benefit losses due to a premium that is not carefully assessed grow over time to 5 percent, eventually exceeding $2.5 billion per year, indicating over $500 million per year of potentially avoidable benefit losses.

Figure 10: Potential Cost to Plan Participants

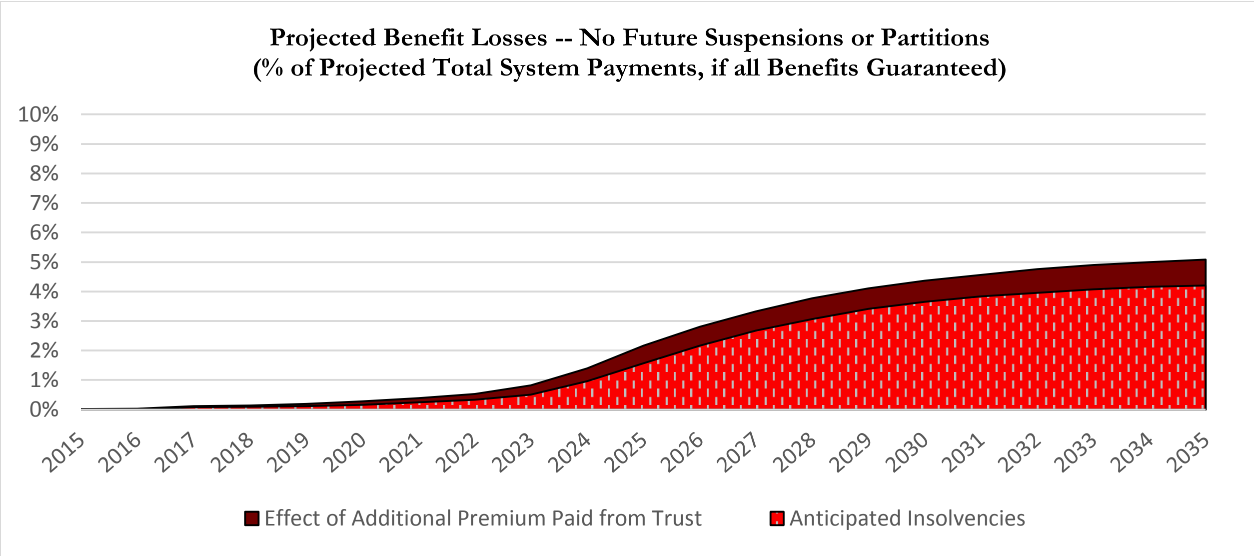

Figure 11 shows the schedule of premiums needed in order for PBGC to meet its projected mean stochastic basic benefit guarantee obligations for the twenty-year period beginning with 2015. We assume that the additional funding received in order for PBGC to meet its twenty-year obligation will be enough for the multiemployer program to finance all the assumed (30 percent of eligible) plans that might apply for assistance.

For the longer-term PBGC solvency scenarios, all four scenarios require a very substantial increase from the current $27 per participant premium rate, ranging from a 363 percent increase to 552 percent increase. Carefully targeted premiums that do not advance the risk of troubled plan insolvency would require an increase of between 363 percent and 370 percent, depending on whether plans and participants are assumed to make use of suspensions and partitions.[22] A less carefully applied premium could require much higher premium increases of 533 percent to 552 percent.

[22] Using adjusted assumptions ME-PIMS assumes that the largest systemically important plan has a 0 percent likelihood of applying for and complying with the requirements for suspending benefits. 30 percent of other plans are assumed to elect suspension, including plans which will also require partition assistance from the PBGC.

Figure 11: Schedule of Revised Premium Revenues Sufficient to Meet Average Expected 20-Year Obligations

	Current Premiums	No Future Suspensions or Partitions		Reflecting Adjusted Suspension / Partition Assumptions	
		Paid Out of Plan Assets	No Increase in Insolvency Risk	Paid Out of Plan Assets	No Increase in Insolvency Risk
Year	*Total Premium Revenues Collected in $ millions (Premium Schedule)*				
2016	$261	1,704	$1,230	$1,656	$1,210
2017	273	1,791	1,293	1,741	1,272
2018	284	1,863	1,345	1,810	1,324
2019	298	1,950	1,407	1,895	1,386
2020	312	2,040	1,473	1,983	1,450
2021	327	2,133	1,541	2,075	1,518
2022	341	2,227	1,610	2,167	1,587
2023	356	2,322	1,681	2,263	1,658
2024	371	2,412	1,752	2,354	1,729
2025	385	2,489	1,815	2,436	1,795
2026	397	2,557	1,875	2,509	1,858
2027	411	2,629	1,938	2,590	1,923
2028	425	2,706	2,006	2,676	1,995
2029	441	2,781	2,079	2,764	2,072
2030	458	2,867	2,158	2,860	2,154
2031	476	2,960	2,245	2,964	2,244
2032	496	3,064	2,340	3,077	2,342
2033	517	3,183	2,442	3,203	2,446
2034	541	3,311	2,551	3,341	2,559
2035	566	3,453	2,668	3,491	2,679
Percentage Increase over Current Premium Levels		552%	370%	533%	363%

These higher levels premiums would significantly extend PBGC's projected ability to meet the level of average projected financial assistance, from 2024 to 2035. Higher levels of premiums would also increase the likelihood PBGC remains solvent through 2035, to approximately 50 percent across the various scenarios.

NEXT STEPS

PBGC's Multiemployer Program does not have sufficient assets to provide for average anticipated financial assistance through 2025. The Budget's proposed structure can be an important way to visualize a way forward. Under that structure, PBGC's Board is given authority to carefully structure premiums -- increasing premiums and decreasing program risk through a variable rate premium and exit premium while avoiding placing an unmanageable burden on the most troubled plans.

PBGC looks forward to engaging with Congress, other agencies in the Administration and the multiemployer community in a cooperative process, to develop a supportive, financially-sound insurance program and to help preserve the multiemployer plans that provide lifetime retirement security for more than 10 million participants and their families.

STATEMENT OF ACTUARIAL OPINION

We, the undersigned, certify that this actuarial evaluation has been prepared in accordance with generally accepted actuarial principles and practices and, subject to the disclaimers herein, to the best of our knowledge, fairly reflects the projected average outcomes relative to the operations and status of the Corporation's multiemployer plan insurance program as of September 30, 2015, after reflecting estimated effects of MPRA on multiemployer plans.

In preparing this evaluation, we have relied upon information provided to us regarding plan and participant data, historic asset yield and other matters. We have checked this information for reasonableness, as appropriate, based on the purpose of the evaluation; the responsibility for the source information obtained from Forms 5500 and elsewhere rests with the preparers of these data.

The methods and assumptions used in this report are described in the Appendices to the 2015 Projections Report and on pages 3-4 of this report.

Subject to the disclaimers herein, in our opinion,

(1) The techniques and methodology used are generally acceptable within the actuarial profession

(2) The assumptions used are appropriate for the purposes of this report

(3) The resulting evaluation represents a reasonable estimate of the possible distribution of projected outcomes relative to the operations and status of the multiemployer program.

The undersigned are available to discuss the material in this report.

I, Christopher M. Bone, am the Director of PBGC's Policy, Research, and Analysis Department. I am a Member of the American Academy of Actuaries, a Fellow of the Society of Actuaries and an Enrolled Actuary. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

I, Jensen Chan, am the Supervisory Actuary at PBGC who directly oversees PIMS. I am a Member of the American Academy of Actuaries, a Fellow of the Society of Actuaries and an Enrolled Actuary. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Christopher M. Bone 6/16/16	Jensen Chan 6/16/16
Christopher M. Bone Date	Jensen Chan Date
Director, Policy, Research and Analysis Department, PBGC	*Manager, Pension Insurance Modeling Division, PBGC*
Member, American Academy of Actuaries	*Member, American Academy of Actuaries*