Pension Benefit Guaranty Corporation

2016 Actuarial Report

Table of Contents

ACTUARIAL VALUATION REPORT- 2016 FISCAL YEAR

The 2016 Annual Report of the Pension Benefit Guaranty Corporation (PBGC) contains a summary of the results of the September 30, 2016 actuarial valuation. The purpose of this separate Actuarial Valuation Report is to provide greater detail concerning the valuation of future benefits than is presented in PBGC's Annual Report.

Overview of Valuation Results

PBGC calculated and validated the present value of future benefits (PVFB) for both the single-employer and multiemployer programs and of nonrecoverable future financial assistance (NRFFA) under the multiemployer program. Generally, we used the same methods and procedures as in 2015 for the Single-Employer and Multiemployer Programs. These calculations reflect the present value of claims as of the date of the financial statements. They present a snapshot of the liabilities as of a point in time and do not include liability projections over the period subsequent to the date of the financial statements.

For the single-employer program, the liability as of September 30, 2016 consisted of:

(1) $114.2 billion for the 4,769 plans that have terminated; and

(2) $653.2 million for the three probable terminations.

Liabilities for "probable terminations" reflected reasonable estimates of the losses for plans that are likely to terminate in a future year. These estimated losses were based on conditions that existed as of PBGC's fiscal year-end. Management believes it is likely that one or more events subsequent to PBGC's fiscal year-end will occur, confirming the fact of the loss. In addition, the liability for reasonably possible terminations has been calculated and is discussed in a note to the financial statements of PBGC's 2016 Annual Report.

For the multiemployer program, the liability as of September 30, 2016 consisted of:

(1) less than $500,000 for 10 pension plans that terminated before the passage of the Multiemployer Pension Plan Amendments Act (MPPAA) and of which PBGC is trustee;

(2) $2,139 million for estimable post-MPPAA losses due to financial assistance to 65 multiemployer pension plans that were currently receiving PBGC assistance; and

(3) $58,870 million for probable estimable post-MPPAA losses due to financial assistance to 103 multiemployer pension plans that were probable to receive PBGC assistance in the future.

The results of the valuation (the present value of future benefits and nonrecoverable future financial assistance) are presented in Table 1 and are displayed in the graphs on pages 9 and 10.

Table 1:
Present Value of Future Benefits and Nonrecoverable Future Financial Assistance – 2016

	Number of Plans	Estimated Number of Participants (in thousands)	Liability (in millions)
I. Single-Employer Program			
A. Terminated plans			
1. Seriatim at fiscal year-end (FYE)	4,259	1,022	$78,966
2. Seriatim at DOPT, adjusted to FYE	81	161	22,601
3. Nonseriatim[1]	429	192	12,542
4. Missing Participants Program (seriatim)[2]	--	24	67
Subtotal	4,769	1,399	$114,176
B. Probable terminations (nonseriatim)[3]	3	4	653
Total[4]	4,772	1,403	$114,829
II. Multiemployer Program			
A. Pre-MPPAA termination (seriatim)	10	*	$**
B. Post-MPPAA liability (net of plan assets)			
1. Currently receiving assistance	65	86	2,139
2. Probable for assistance	103	1,078	58,870
Total	178	1,164	$61,009

*Fewer than 500 participants
** Less than $500,000

Notes:
1) The liability for terminated plans has been increased by $21 million for settlements.

2) The Missing Participants Program refers to a liability that PBGC assumed for unlocated participants in standard plan terminations.

3) The net claims for probable plans reported in the financial statements include $127 million for not-yet-identified probable terminations. The assets for the probable plans, including the expected value of recoveries on employer liability and due-and-unpaid employer contributions claims, are $277 million. Thus, the net claims for probable terminations as reported in the financial statements are $653 million less $277 million, or $376 million.

4) The PVFB in the financial statements ($113,704 million) is net of estimated plan assets and recoveries on probable terminations ($277 million), estimated recoveries on terminated plans ($569 million), and estimated assets for plans pending trusteeship ($279 million), or, $114,829 million less $277 million less $569 million less $279 million = $113,704 million.

Single-Employer Program

PBGC calculated the single-employer program's liability for benefits for each of the terminated plans and for each of the plans considered to be a probable termination using one of three methods:

(1) seriatim at fiscal year-end (FYE);

(2) seriatim at date of plan termination (DOPT), adjusted to FYE; and

(3) nonseriatim.

In addition, PBGC included liabilities for incurred but not reported (IBNR) plans, for the Missing Participants Program, and for the Collins Settlement.

Seriatim at FYE Method

The liability for each participant's benefit was calculated separately at FYE for plans for which PBGC had sufficiently complete and accurate data. This was termed the seriatim at FYE method. PBGC selected plans to be valued using the seriatim at FYE method according to two criteria:

(1) completeness -

participant records and whether enough of those records had been finalized; and

(2) accuracy - whether the participant's record contained enough of the critical elements of data that were necessary to perform an actuarial valuation.

For this valuation, these criteria were met by 4,259 pension plans (89% of the single-employer plans) representing $78,966 million (69%) in liabilities and about 1,022,000 (73%) participants. This was an increase of 37 plans over the 4,222 plans valued seriatim at September 30, 2015.

The critical error rates for 527 plans or 12.4% of the seriatim plans (lower percentage than last year) exceeded 5%. The overall error rate for the group of 4,259 seriatim plans was 1.3%, which is lower than last year. A data error is considered critical if the value of the data element in error has a major impact on the liability associated with a benefit record.

Seriatim at DOPT Method

There were 81 plans for which a final seriatim valuation as of date of plan termination (DOPT) had been completed, but the Office of Benefit Administration of PBGC had not finished processing the case as of year-end (e.g., participant data had not been fully loaded into PBGC's computer database, or the data lacked too many critical elements to be valued by the seriatim at FYE method). When PBGC benefit calculations were finalized but not ready for seriatim valuation as of fiscal year-end, PBGC valued the plan's liability seriatim as of the plan's termination date and brought the total amounts forward to September 30, 2016 using the nonseriatim method outlined below. Because PBGC had finalized and valued these benefits for each participant and valued them using PBGC assumptions and regulations as of each plan's date of termination, these amounts are more accurate than similar calculations for plans whose benefits are not final.

Nonseriatim Method

If calculations of benefits provided by PBGC were not final, PBGC based the liability calculations on the plan's most recent actuarial valuation performed before the termination date that is available to PBGC. For the 429 terminated plans valued nonseriatim, PBGC obtained the liability for each plan as of the most recent available actuarial valuation date for each category of participant: retired, active, and terminated vested. These liabilities were adjusted to reflect such factors as:

(1) benefits accrued between the valuation and plan termination dates;

(2) differences between the interest rates assumed by the plans' actuaries and those assumed by PBGC;

(3) differences between the mortality, retirement age, and expense assumptions used by the plans' actuaries and those used by PBGC; and

(4) the effect on the liability of time elapsed between the valuation date and September 30, 2016.

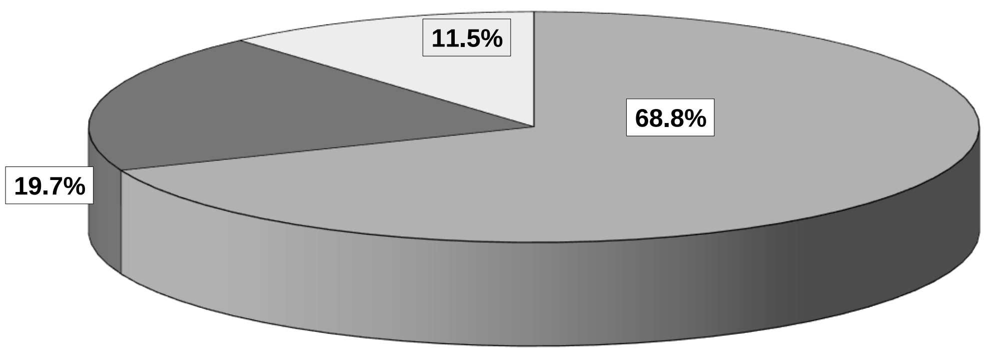
PBGC based the adjustment factors used in the nonseriatim procedure on its experience in routinely estimating the liability for benefits for administrative purposes.

For each of the three probable terminations, PBGC calculated the liability as of September 30, 2016 using the nonseriatim method with an assumed date of plan termination.

<u>Distribution of FYE16 Single-Employer Liability by Method of Calculation</u>

Liability for Benefits: $114,829

(Dollars in Millions)



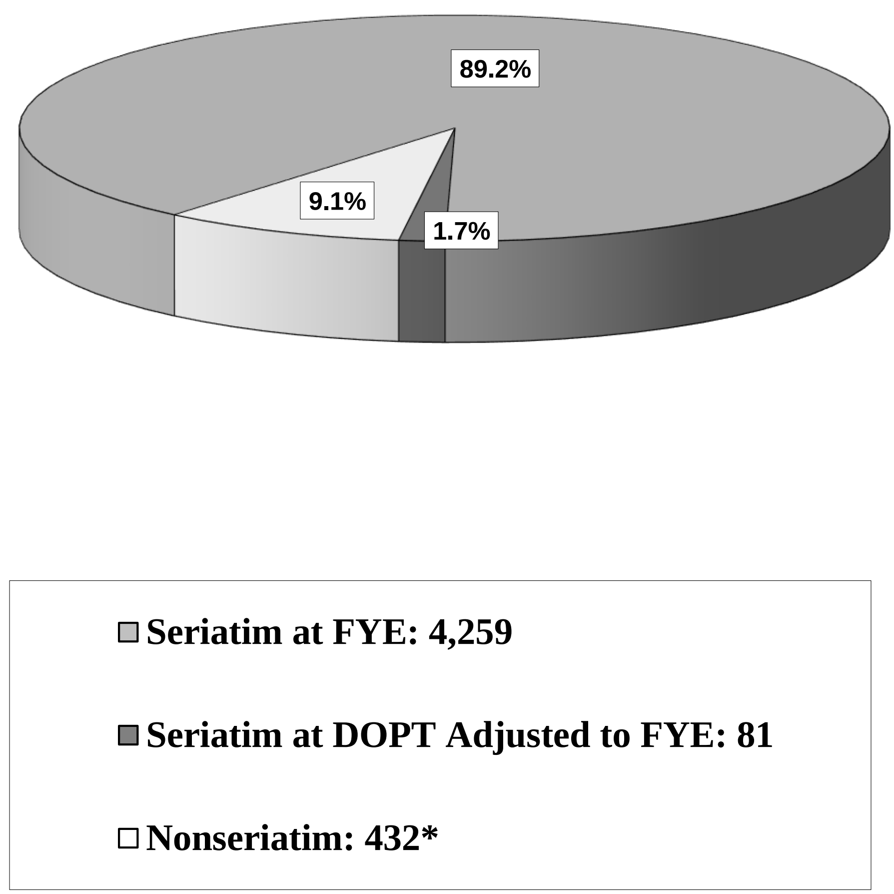
- **Seriatim at FYE: $79,033***
- **Seriatim at DOPT Adjusted to FYE: $22,601**
- **Nonseriatim: $13,195****

***Seriatim at FYE includes the Missing Participants Program**

****Nonseriatim includes Probable terminations**

Distribution of FYE16 Single-Employer Plans by Method of Calculation

Total Plans: 4,772



***Nonseriatim includes Probable terminations**

Missing Participants Program

The Missing Participants Program refers to a responsibility that PBGC has assumed under the Retirement Protection Act of 1994 to act as a clearinghouse for unlocated participants in standard plan terminations. As with other parts of PVFB, only the liabilities are shown here. Because plan administrators have transferred a corresponding asset amount to PBGC, the net increase in liabilities of PBGC due to this program, if any, will be negligible. Changes to this program due to the Pension Protection Act of 2006 have not yet been implemented.

Collins Settlement

The Collins Settlement refers to the liability for benefits that PBGC incurred as a result of the settlement of a class action lawsuit during fiscal year 1996. This settlement provides benefits for participants in plans which terminated between January 1, 1976 and December 31, 1981 without having remaining liability under this settlement is included in the nonseriatim portion of the liability.

Multiemployer Program

There were a total of ten pre-MPPAA terminations, nine of which were granted discretionary coverage under the provisions of ERISA as passed in 1974. The remaining plan terminated when coverage under Title IV was mandatory (from August 1, 1980 until September 25, 1980). PBGC calculated the liability for these ten terminations under the seriatim at FYE method using the same assumptions as for the single-employer program.

The post-MPPAA portion of the liability represented the present value, as of September 30, 2016, of net losses that PBGC expected to incur from non-recoverable future financial assistance to 168 pension plans of which 65 were insolvent (i.e., currently receiving PBGC financial assistance) and 103 were expected to become insolvent. The liability for each plan was calculated (using the cash flow method) as the present value of future guaranteed benefit and expense payments, net of the present value of future employer contributions and withdrawal liability payments. This liability was determined as of the later of September 30, 2016 and the actual or projected date of insolvency, and then discounted back to September 30, 2016 using interest only. The most recent available actuarial reports and information provided by representatives of the affected plans served as the basis for the valuations.

Projected benefit payments were estimated based on liabilities, current benefit payments and estimated average ages for actives, terminated vesteds and retirees from the most recent actuarial reports, combined with assumptions of retirement ages and of future rates of mortality and termination. Projected expense payments were estimated as a constant percentage of the projected benefit payments; this percentage is equal to the ratio of current expense payments to current benefit payments. The projected date of insolvency was then established using a cashflow model with initial assets, expense payments, contributions, and projected benefit and withdrawal liability payments as inputs, estimated when necessary.

The post-MPPAA liability of $61,009 million as of September 30, 2016 is about $6,823 million higher than it was a year earlier. This increase in liability is mostly attributable to the addition of eleven new plans and the decrease in the interest factors from September 30, 2015 to September 30, 2016.

These increases were partially offset by a change in the estimated guarantee factor that PBGC uses in determining PBGC guaranteed liabilities for multiemployer plans. The change reflects a revised procedure for determining the guaranteed benefit reduction factor, based on an assumption that both retirees and terminated vested participants have lower average years of service compared to estimates used prior to September 30, 2016. In FY 2016, PBGC hired an actuarial firm to conduct a study of

at all plans in the PBGC multiemployer probable plan universe where guarantee benefit data were available. This study found that the PBGC guarantees a smaller percentage of the multiemployer plan liabilities than previously estimated. As a result, PBGC updated the assumption to reflect the lower guarantee. This change in the guaranteed factor assumption accounted for nearly a $4,051 million reduction in the estimated guaranteed liabilities.

Actuarial Assumptions, Methods, and Procedures

PBGC continues to review the actuarial assumptions used in the valuation to assure that they remain consistent with current market conditions in the insurance industry and with PBGC's experience. The actuarial assumptions, which are used in both the single-employer and multiemployer valuations, are presented in Table 2A. Assumptions concerning data that were not available are discussed in the data section of this report.

were derived using an assumed underlying mortality basis and current annuity purchase prices. The interest factors so determined for the September 30, 2016 valuation were 2.27% for the first 20 years after the valuation date and 2.14% thereafter. For the September 30, 2015 valuation the interest factors were 2.80% for the first 25 years and 2.86% thereafter.

mortality assumption.

Beginning with the June 30, 2016 valuation, PBGC updated the mortality assumptions by adopting the recommendations from a study by an independent consulting firm. The study recommended that, when conducting valuations for its financial statements, PBGC use the adjusted RP-2014 Healthy Male and Female Mortality Tables. The study also recommended that continuing mortality improvements be taken into account by using Projection Scale MP-2015 to project these tables a fixed number of years. At each valuation date the fixed number of years will be determined as the sum of the elapsed time from the date of the table (2014) to the valuation date, plus the period of time from the valuation date to the average date of payment of future benefits (the duration). Thus, the mortality tables used for healthy lives in the FY 2016 valuations are the RP-2014 Healthy Male Table times 1.09 and Healthy Female Table times 0.99, each projected 15 years to 2029 using Scale MP-2015. The 15 years recognizes the 2 years from 2014 to 2016 plus the 13 year duration of the September 30, 2015 liabilities.

This is an approximation to generational mortality tables. The mortality tables used for healthy lives in the FY 2015 are the RP-2000 Combined Healthy Male and Female Mortality Tables, each projected 28 years to 2028 using Scale AA and set back one year. The 28 year projection was determined as the sum of the 15 years from 2000 to 2015 and the 13 year duration of the September 30, 2014 liabilities.

Retirement age assumptions were not changed.

The SPARR (Small Plan Average Recovery Ratio) assumptions as shown in Table 2B were updated to reflect the SPARR calculated in FY2016. The FY2016 SPARR of 9.39% is used for the September 30, 2016 valuation.

PBGC used the same explicit loading factors as used since FY2007 for expenses in all terminated plans and single-employer probable terminations. The reserve for expenses was assumed to be 1.37% of the liability for benefits plus additional reserves for cases whose plan asset determinations, participant database audits, and actuarial valuations were not yet complete. The factors to determine the additional reserves were based on case sizes (large/small), number of participants, and time since trusteeship. The factors used in the expense reserve formula are shown in Table 2C.

During the 2016 fiscal year, PBGC improved the system that calculates the liabilities to address some of the valuation and security audit findings surrounding the valuation systems. In this year we have made improvements to our ability to value temporary disability benefits and benefit recoupments, as well as increase and improve the reports available for the analysis of our results.

We continue our ongoing efforts to improve the quality of the seriatim data and, as in other years, made various changes to generally improve the accuracy, speed, security and auditability of the calculations as well as integrate with the evolving PBGC technologies.

Table 2A

Actuarial Valuation Assumptions

	Previous Valuation as of 9/30/15	Current Valuation as of 9/30/16
Interest Factors	Select & Ultimate: 2.80% for 25 years, 2.86% thereafter	Select & Ultimate: 2.27% for 20 years, 2.14% thereafter
Mortality **Healthy Lives**	RP-2000 Combined Healthy Male and Female Mortality Tables, each projected 28 years to 2028 using Scale AA and set back one year.	RP-2014 Healthy Male Table times 1.09 and RP-2014 Healthy Female Mortality Table times 0.99, each projected 29 years to 2029 using Scale MP-2015.
Disabled Lives Eligible for Social Security (SS) Disability Benefits	1994 Group Annuity Mortality Static Male and Female Tables, each projected 34 years to 2028 using Scale AA and set forward six years.	Healthy Male and Female Mortality Tables as described above, set forward 7 years for male lives and 8 years for female lives.
Disabled Lives Not Eligible for SS Disability Benefits	1994 Group Annuity Mortality Static Male and Female Tables, each projected 34 years to 2028 using Scale AA and set forward three years.	Healthy Male and Female Mortality Tables as described above, set forward 5 years for male lives and 7 years for female lives.
SPARR	Calculated SPARR through fiscal year ending 9/30/15.	Calculated SPARR through current fiscal year ending 9/30/16. See Table 2B for values and notes.
Retirement Ages	(a) Earliest possible for shutdown companies. (b) Expected retirement age (XRA) tables from 29 CFR 4044 for ongoing companies. (c) Deferred participants past XRA are assumed to be in pay status, retroactive to their XRA. To reflect lower likelihood of payment: (d) Unlocated deferred participants past age 65 are phased out over 3 years. (e) Located deferred participants are fully phased out past age 70. (f) Deferred participants in the Missing Participants Program are phased out over 10 years past age 70.	Same
Expenses	All terminated plans and single-employer probable terminations: 1.37% of the liability for benefits plus Additional reserves as shown in Table 2C for cases where plan asset determinations, participant database audits and actuarial valuations were not complete.	Same

Table 2B

Small Plan Average Recovery Ratio (SPARR) Assumptions

The SPARR is used in the calculation of the liability for benefits determined under section 4022(c) of ERISA,

terminations initiated in a given fiscal year based on actual recoveries and unfunded benefit liabilities for plan terminations initiated during a five year averaging period. As of the end of fiscal year 2016, the SPARR had been calculated for plan terminations initiated in fiscal years 1991-2016. The FY 2016 SPARR is assumed for probable plans affected by future SPARRs.

Fiscal Year	SPARR	Fiscal Year	SPARR
1991	12.01%	2004	3.42%
1992	7.73%	2005	4.39%
1993	7.44%	10/1/05 9/15/06	4.13%
		9/16/06 9/30/06	3.50%
1994	7.04%	2007	4.35%
1995	7.22%	2008	4.26%
1996	7.90%	2009	3.85%
1997	5.98%	2010	9.15%
1998	6.84%	2011	12.30%
1999	8.01%	2012	12.56%
2000	4.58%	2013	17.23%
2001	4.94%	2014	4.93%
2002	9.60%	2015	9.29%
2003	7.86%	2016	9.39%

Table 2C

Reserve Factors for Expenses

Large Plans (more than 100 participants)							
	Plan Asset Determinations	Participant Database		Actuarial Valuation			Interim Benefits Administration
Years Since Trusteeship	Per Large Plan	Per Large Plan	Per Large Plan	Per Participant for the First 100 Participants in Plan	Per Participant for the Next 400 Participants in Plan	Per Participant for the Remaining Participants in Plan	Per Participant
0<=y<1	$23,020	$78,290	$118,640	$1,130	$370	$15	$330
1<=y<2	15,270	48,470	69,450	660	220	10	190
2<=y<3	12,050	35,970	40,380	380	130	5	110
3<=y	8,570	33,130	31,730	300	100	5	90

Small Plans (100 or fewer participants)							
	Plan Asset Determinations	Participant Database		Actuarial Valuation			Interim Benefits Administration
Years Since Trusteeship	Per Small Plan	Per Small Plan	Per Small Plan	Per Participant for the First 100 Participants in Plan	Per Participant for the Next 400 Participants in Plan	Per Participant for the Remaining Participants in Plan	Per Participant
0<=y<1	$11,500	$21,470	$118,640	$1,130	N/A	N/A	$330
1<=y<2	7,320	18,060	69,450	660	N/A	N/A	190
2<=y<3	5,550	15,130	40,380	380	N/A	N/A	110
3<=y	5,040	11,430	31,730	300	N/A	N/A	90

In addition to the reserve factors shown, an expense reserve equal to 1.37% of the liability for benefits applies to both Large Plans and Small Plans.

Data Sources and Assumptions

Office

of Benefits Administration. For the seriatim liability, benefit amounts have been determined for each participant using plan documents, together with ERISA and PBGC regulations relating to guaranteed benefits and the allocation of assets. If specific data were not available for deferred vested participants under the seriatim method, participants were assumed to be married and to elect the qualified Joint and Survivor (J&S) benefit; wives were assumed to be four years younger than their husbands. When certain other data elements for a participant were missing, they were replaced by the average for the plan. When the plan average was not available, the average for all plans valued seriatim was used.

The nonseriatim liability was based on the plan's most recent actuarial valuation performed before the termination date that is available to PBGC. The valuation information generally was obtained from actuarial reports or Schedule SB or MB filings. For nonseriatim plans and probable terminations, provision generally has been made to reduce benefits to guaranteed levels. Attained ages for active participants, terminated vested participants, and retired participants were assumed to be ages 53, 53 and 69 respectively for new nonseriatim plans when plan data were unavailable. For post-MPPAA multiemployer plans, the assumed ages are 55, 56 and 65, respectively.

Valuation Statistics

The FY 2016 valuation for the single-employer program included approximately 1,399,000 participants owed future payments in terminated plans as of September 30, 2016 and approximately 4,000 participants in plans that will probably terminate. For the multiemployer program, the FY 2016 valuation included, as of September 30, 2016, 44 participants in terminated pre-MPPAA plans and approximately 86,000 participants in post-MPPAA plans currently receiving financial assistance and 1,078,000 participants in post-MPPAA plans expected to receive financial assistance. Of these, about 837,000 participants from terminated single-employer plans and 34 participants from terminated multiemployer plans were receiving benefits from PBGC at fiscal year-end.

The average monthly benefit paid by PBGC for participants in pay status during FY 2016 was $563 (including supplemental benefits) for the single-employer program and $115 for the multiemployer program in the ten pre-MPPAA plans.

Tables 3 through 6 summarize the detailed results of the seriatim and nonseriatim valuations for both the single-employer and multiemployer programs.

Table 3:
Liability for Pay-Status Recipients in "Seriatim at FYE" Method

	Single-Employer					Multiemployer			
Age	Number of Benefit Recipients**	Average Monthly Benefit	Average Supplemental Monthly Benefit	Liability (Millions)	Percent of Liability	Number of Benefit Recipients	Average Monthly Benefit	Liability (Millions)	Percent of Liability
Under 50	1,714	$114	$211	$76	*%	0	-	$0	0%
50-54	2,628	312	262	240	*%	0	-	0	0
55-59	19,383	328	177	1,681	3%	0	-	0	0
60-64	67,595	427	235	6,692	12%	0	-	0	0
65-69	139,718	504	416	14,022	26%	0	-	0	0
70-74	147,341	550	328	13,639	25%	0	-	0	0
75-79	119,425	585	332	9,442	17%	0	-	0	0%
80-84	91,405	548	189	5,271	10%	1	42	*	2%
85-89	62,909	459	84	2,287	4%	11	109	*	45%
Over 89	39,467	366	179	794	1%	22	121	*	52%
TOTAL	691,585	$507	$257	$54,144	100%	34	$115	$0	100%

* Less than 0.5% or less than $500,000
** Approximately 1% of participants are receiving supplemental benefits.
Note: The liability in this table does not include the liability for the Missing Participants Program.

Table 4:
Liability for Deferred Participants in "Seriatim at FYE" Method

	Single-Employer					Multiemployer			
Age	Number of Benefit Recipients**	Average Monthly Benefit	Average Supplemental Monthly Benefit	Liability (Millions)	Percent of Liability	Number of Benefit Recipients	Average Monthly Benefit	Liability (Millions)	Percent of Liability
Under 40	1,690	$183	$0	$46	0%	0	-	$0	0%
40-44	9,824	201	66	330	1%	0	-	0	0
45-49	29,312	264	108	1,519	6%	0	-	0	0
50-54	62,154	339	138	4,759	19%	0	-	0	0
55-59	79,000	405	177	8,305	33%	0	-	0	0
60-64	67,790	392	155	7,649	31%	0	-	0	0
Over 64	18,189	308	121	1,712	7%	0	-	0	0
Other***	62,250	- -	- -	502	2%	10	-	*	100%
TOTAL	330,209	$356	$145	$24,822	100%	10	-	$*	100%

* Less than 0.5% or less than $500,000
** Less than 1% of participants (not including others) will receive supplemental benefits.
*** "Other" refers to participants scheduled at year-end for lump sum payments.
Note: The liability in this table does not include the liability for the Missing Participants Program.

Table 5:
Seriatim at DOPT and Nonseriatim Liability

Plans with Final DOPT Benefits

	Number of Plans	Liability (millions)	Percent of Liability
A. Large	42	$22,483	63.1%
B. Other	39	$118	0.3%
Subtotal	81	$22,601	63.4%

Plans with Non-Final DOPT Benefits

	Number of Plans	Liability (millions)	Percent of Liability
A. Large	134	$11,683	32.8%
B. Other	295	$838	2.3%
Subtotal	429	$12,521	35.1%

Probable Plans

	Number of Plans	Liability (millions)	Percent of Liability
A. Large	3	$526	1.5%
B. Other	0	$0	0.0%
Subtotal	3	$526	1.5%
Total	513	$35,648	100.0%

Notes:

1) Final DOPT benefits refer to those benefits that PBGC has determined and valued seriatim as of DOPT for the plan. Non-Final DOPT benefits are estimates of these final DOPT benefits.
2) Large Plans in this table are those whose present value of Title IV benefits at DOPT equals or exceeds $10 million.
3) The liability shown in this table does not include the liability for settlements.
4) The liability for Probable plans is shown as a gross amount (i.e., plan assets and collections on employer liabilities are not subtracted from the liability for benefits). Also, the numbers in this table do not include the liability for not yet identified probable terminations.

Table 6A:
Distribution of Single-Employer Liability (including 4022(c)) by Trusteeship Status, Recipient Status, and Valuation Method
(Dollars in millions)

Recipient Status	Seriatim/ Missing Participants	Nonseriatim/ Collins	Total Terminated Liability	Probables/ IBNR	Total Liability	Percent of Total Liability
Receiving Payments						
Trusteed	$54,142	$16,718	$70,860	$0	$70,860	61.7%
Pending Trusteeship	2	323	325	251	576	0.5%
Total	$54,144	$17,041	$71,185	$251	$71,436	62.2%
Not Receiving Payments						
Trusteed	$24,889	$17,831	$42,720	$0	$42,720	37.2%
Pending Trusteeship	0	271	271	402	673	0.6%
Total	$24,889	$18,102	$42,991	$402	$43,393	37.8%
All Payment Statuses						
Trusteed	$79,031	$34,549	$113,580	$0	$113,580	98.9%
Pending Trusteeship	2	594	596	653	1,249	1.1%
Total	$79,033	$35,143	$114,176	$653	$114,829	100.0%
Percent of Terminated	69.2%	30.8%	100.0%			
Percent of Total	68.8%	30.6%	99.4%	0.6%	100%	

Notes:

1) Recipient status for Seriatim, Missing Participants, IBNR and Collins liabilities refers to status as of 9/30/16. For Nonseriatim and Probable liabilities, recipient status refers to the status as of the most recent actuarial valuation report (date of plan termination if benefits are "final"). The term "final" is defined in the notes to Table 5.

2) The Probable liabilities are shown as gross amounts (i.e., plan assets and collections on employer liabilities are not subtracted from the liability for benefits).

Table 6B:
Distribution of Single Employer Participants (including 4022(c)) by Trusteeship Status, Recipient Status, and Valuation Method
(Participants in thousands)

Recipient Status	Seriatim/ Missing Participants	Nonseriatim	Total Terminated Participants	Probables	Total Participants	Percent of Total Participants *
Receiving Payments						
Trusteed	692	140	832	0	832	59.3%
Pending Trusteeship	0	5	5	2	7	0.5%
Total	692	145	837	2	839	59.8%
Not Receiving Payments						
Trusteed	354	204	558	0	558	39.8%
Pending Trusteeship	0	4	4	2	6	0.4%
Total	354	208	562	2	564	40.2%
All Payment Statuses						
Trusteed	1,046	344	1,390	0	1,390	99.1%
Pending Trusteeship	0	9	9	4	13	0.9%
Total	1,046	353	1,399	4	1,403	100.0%
Percent of Terminated	74.8%	25.2%	100.0%			
Percent of Total	74.6%	25.2%	99.8%	0.2%	100%	

Notes:

1) Recipient status for Seriatim and Missing Participants liabilities refers to status as of 9/30/16. For Nonseriatim and Probable liabilities, recipient status refers to the status as of the most recent actuarial valuation report (date of plan termination if benefits are "final"). The term "final" is defined in the notes to Table 5.

2) Participant counts for IBNR and Collins are not included.

* may not add due to rounding

Reconciliation of Results

Table 7 reconciles the September 30, 2016 valuation with the September 30, 2015 valuation. It shows that the $6,338 million increase in the liability for the Single-Employer program was the net effect of:

(1) decreased liability for probable plans = ($573) million

(2) new plan terminations as of the beginning of the year = $2,023 million

(3) expected interest on the liability = $2,929 million

(4) increased liability from change in interest rates = $6,301 million

(5) change in mortality assumptions = $2,621 million

(6) actual benefit payments = ($5,659) million

(7) other changes = ($1,304) million.

The Multiemployer columns reconcile the liability for the post-MPPAA financial assistance to insolvent plans. The liability for the pre-MPPAA terminated plans in FY16 is less than $500,000.

Table 7:
Reconciliation of the Present Value of Future Benefits (dollars in millions)

	Total Single Employer	Post-MPPAA Multiemployer
1. Liability at BOY (9/30/15)		
(a) Present Value of Future Benefits for all Plans	$108,491	$54,186
(b) Liability for Probable Plans (gross liability including unreported)	(1,226)	(52,559)
(c) Liability for Unreported Terminated Plans and other settlements	(27)	0
(d) 9/30/15 Liability for Terminated Plans (a + b + c)	$107,238	$1,627
2. Change in Valuation Software		
(a) Effect on Liability as of DOPT	$0	$0
(b) Projection of (a) from DOPT to BOY + post-DOPT changes	(1)	1
(c) Total (a + b)	($1)	$1
3. Net New Plans and Missing Participant Liability		
(a) New Missing Participant Liability	$4	$0
(b) New Termination Inventory as of DOPT	2,278	474
(c) Deletions as of DOPT	(280)	0
(d) Projection of (b + c) from DOPT to BOY	25	0
(e) Total (a + b + c + d)	$2,027	$474
4. Nonseriatim Data Changes and Effect of DOPT Seriatim Valuation		
(a) Effect on Liability at DOPT	($856)	($16)
(b) Projection of (a) from DOPT to BOY	(110)	0
(c) Total (a + b)	($966)	($16)
5. Actuarial Charges/Credits		
(a) Expected Interest	$2,929	$56
(b) Change in Interest Rate (from 2.80% for 25 years; 2.86% thereafter to 2.27% for 20 years; 2.14% thereafter)	6,301	100
(c) Change in Mortality Assumption	2,621	42
(d) Change in Method (Current Year: Seriatim at DOPT to Seriatim at FYE)	7	0
(e) Effect of Experience*	(313)	(19)
(f) Change in Other Assumptions (Expense, SPARR, PBGCC STD Rates)	89	(13)
(g) Total (a + b + c + d + e +f)	$11,634	$166
6. Expected Expense Payments	($118)	$0
7. Actual Benefit Payments	($5,659)	($113)
8. Liabilities at End of Period (9/30/16)		
(a) Liability for all Terminated Plans = (1d) + (2c) + (3e) + (4c) + (5g) + (6) + (7)	$114,155	$2,139
(b) Liability for Unreported Terminated Plans and other settlements	21	0
(c) Liability for all Terminated Plans (a + b)	114,176	2,139
(d) Liability for Probable Plans (gross liability including unreported) **	653	58,870
(e) 9/30/16 Present Value of Future Benefits for all Plans (c + d)	$114,829	$61,009

* Includes change from expected benefits ($5,791.6 million) to actual benefits ($5,658.9 million) in Total Single Employer. Includes change from expected benefits ($131.3 million) to actual benefits ($112.5 million) in Post-MPPAA Multiemployer. Actual does not include payments made by employers.

** Includes $127.5 million for not yet identified probable terminations. Financial statements show a liability of $653.2 million for probable terminations, less assets of $277.2 million, for a net claim of $376.0 million.

Statement of Actuarial Opinion

This valuation has been prepared in accordance with generally accepted actuarial principles and practices and, to the best of my knowledge, fairly reflects the actuarial present value of the Corporation's liabilities for the single-employer and multiemployer plan insurance programs as of September 30, 2016.

In preparing this valuation, I have relied upon information provided to me regarding plan provisions, plan participants, plan assets, and other matters.

In my opinion, (1) the techniques and methodology used for valuing these liabilities are generally acceptable within the actuarial profession; (2) the assumptions used are appropriate for the purposes of this statement and are individually my best estimate of expected future experience, discounted using current settlement rates from insurance companies
Policy Research and Analysis Department; and (3) the resulting total liability represents my best estimate of anticipated experience under these programs.

I, Scott G. Young, am the Chief Valuation Actuary of PBGC. 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.

Scott G. Young

Scott G. Young, FSA, EA, MAAA
Fellow of the Society of Actuaries
Enrolled Actuary
Member of the American Academy of Actuaries
Chief Valuation Actuary and Department Director
Actuarial Services and Technology Department
Pension Benefit Guaranty Corporation

April 2017