

Pension Benefit Guaranty Corporation

2015 Actuarial Report

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ACTUARIAL VALUATION REPORT- 2015 FISCAL YEAR

The 2015 Annual Report of the Pension Benefit Guaranty Corporation (PBGC) contains a summary of the results of the September 30, 2015 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 2014 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, 2015 consisted of:

- (1) \$107.26 billion for the 4,706 plans that have terminated; and
- (2) \$1.23 billion for the five 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 2015 Annual Report.

For the multiemployer program, the liability as of September 30, 2015 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) \$1,627 million for probable and estimable post-MPPAA losses due to financial assistance to 55 multiemployer pension plans that were currently receiving PBGC assistance; and
- (3) \$52,559 million for probable and estimable post-MPPAA losses due to financial assistance to 105 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 – 2015

	<u>Number of Plans</u>	<u>Estimated Number of Participants (in thousands)</u>	<u>Liability (in millions)</u>
I. Single-Employer Program			
A. Terminated plans			
1. Seriatim at fiscal year-end (FYE)	4,222	1,035	\$74,002
2. Seriatim at DOPT, adjusted to FYE	55	104	12,262
3. Nonseriatim ¹	429	234	20,936
4. Missing Participants Program (seriatim) ²	--	24	64
Subtotal	4,706	1,397	\$107,264
B. Probable terminations (nonseriatim) ³	5	27	1,226
Total ⁴	4,711	1,424	\$108,490
II. Multiemployer Program			
A. Pre-MPPAA termination (seriatim)	10	*	\$**
B. Post-MPPAA liability (net of plan assets)			
1. Currently receiving assistance	55	76	1,627
2. Probable for assistance	105	1,019	52,559
Total	170	1,095	\$54,186

*Fewer than 500 participants

** Less than \$500,000

Notes:

- 1) The liability for terminated plans has been increased by \$26 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 \$163 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 \$641 million. Thus, the net claims for probable terminations as reported in the financial statements are \$1,226 million less \$641 million, or \$585 million.
- 4) The PVFB in the financial statements (\$106,926 million) is net of estimated plan assets and recoveries on probable terminations (\$641 million), estimated recoveries on terminated plans (\$476 million), and estimated assets for plans pending trusteeship (\$447 million), or, \$108,490 million less \$641 million less \$476 million less \$447 million = \$106,926 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 - whether PBGC's computer system contained enough of the plan's 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 4,222 pension plans (90% of the single-employer plans) representing \$74,002 million (68%) in liabilities and about 1,035,000 (73%) participants. This was an increase of 57 plans over the 4,165 plans valued seriatim at September 30, 2014.

The critical error rates for 625 plans or 14.8% of the seriatim plans (lower percentage than last year) exceeded 5%. The overall error rate for the group of 4,222 seriatim plans was 1.5%, which is similar to 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 55 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, 2015 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

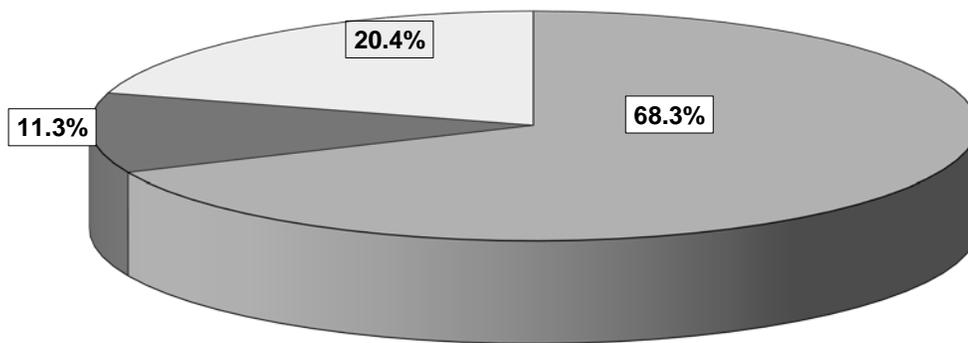
- (4) the effect on the liability of time elapsed between the valuation date and September 30, 2015.

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 five probable terminations, PBGC calculated the liability as of September 30, 2015 using the nonseriatim method with an assumed date of plan termination.

Distribution of FYE15 Single-Employer Liability by Method of Calculation

Liability for Benefits: \$108,490
(Dollars in Millions)



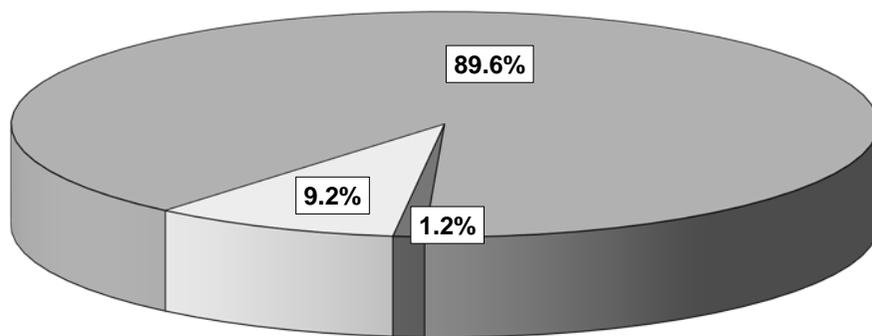
- **Seriatim at FYE: \$74,066***
- **Seriatim at DOPT Adjusted to FYE: \$12,262**
- **Nonseriatim: \$22,162****

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

****Nonseriatim includes Probable terminations**

Distribution of FYE15 Single-Employer Plans by Method of Calculation

Total Plans: 4,711



- Seriatim at FYE: 4,222**
- Seriatim at DOPT Adjusted to FYE: 55**
- Nonseriatim: 434***

***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 been amended to conform to ERISA's vesting requirements. The 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, 2015, of net losses that PBGC expected to incur from non-recoverable future financial assistance to 160 pension plans of which 55 were insolvent (i.e., currently receiving PBGC financial assistance) and 105 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, 2015 and the actual or projected date of insolvency, and then discounted back to September 30, 2015 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, projected benefit and withdrawal liability payments as inputs, estimated when necessary.

The post-MPPAA liability of \$54,186 million as of September 30, 2015 is about \$9,996 million higher than it was a year earlier. This increase in liability is mostly attributable to the addition of 17 new probable plans and the decrease in the interest factors used for previously identified multiemployer probable plans at September 30, 2015.

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.

As in previous valuations, the select and ultimate interest factors used to value PBGC's liabilities were derived using an assumed underlying mortality basis and current annuity purchase prices. The interest factors so determined for the September 30, 2015 valuation were 2.80% for the first 25 years after the valuation date and 2.86% thereafter. For the September 30, 2014 valuation the interest factors were 3.35% for the first 25 years and 3.25% thereafter. These interest factors are dependent upon PBGC's mortality assumption.

Beginning with the June 30, 2011 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 RP-2000 Combined Healthy Male and Female Mortality Tables. The study also recommended that continuing mortality improvements be taken into account by using Projection Scale AA 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 (2000) 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 2015 valuations 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 years recognizes the 15 years from 2000 to 2015 plus the 13 year duration of the September 30, 2014 liabilities.

This is an approximation to generational mortality tables. The 2014 assumption incorporated a 25 year projection, determined as the sum of the 14 years from 2000 to 2014 and the 11 year duration of the September 30, 2013 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 FY2015. The FY2015 SPARR of 9.29% is used for the September 30, 2015 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 2015 fiscal year, PBGC also improved the system that calculates the liabilities to: (1) make enhancements to begin to address some of the valuation and security audit findings surrounding the valuation systems and (2) upgrade all reports to a more current computer language.

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

Table 2A

Actuarial Valuation Assumptions

	Previous Valuation as of 9/30/14	Current Valuation as of 9/30/15
Interest Factors	Select & Ultimate: 3.35% for 25 years, 3.25% thereafter	Select & Ultimate: 2.80% for 25 years, 2.86% thereafter
Mortality Healthy Lives	RP-2000 Combined Healthy Male and Female Mortality Tables, each projected 25 years to 2025 using Scale AA and set back one year.	RP-2000 Combined Healthy Male and Female Mortality Tables, each projected 28 years to 2028 using Scale AA and set back one year.
Disabled Lives Eligible for Social Security (SS) Disability Benefits	1994 Group Annuity Mortality Static Male and Female Tables, each projected 31 years to 2025 using Scale AA and set forward six years.	1994 Group Annuity Mortality Static Male and Female Tables, each projected 34 years to 2028 using Scale AA and set forward six years.
Disabled Lives Not Eligible for SS Disability Benefits	1994 Group Annuity Mortality Static Male and Female Tables, each projected 31 years to 2025 using Scale AA and set forward three years.	1994 Group Annuity Mortality Static Male and Female Tables, each projected 34 years to 2028 using Scale AA and set forward three years.
SPARR	Calculated SPARR through fiscal year ending 9/30/14.	Calculated SPARR through current fiscal year ending 9/30/15. 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, which provides participants with a portion of PBGC's recoveries. The SPARR has been determined by PBGC for 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 2015, the SPARR had been calculated for plan terminations initiated in fiscal years 1991-2015. The FY 2015 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%		

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

The seriatim portion of this valuation was based on participant data maintained by PBGC's 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 50, 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 2015 valuation for the single-employer program included approximately 1,397,000 participants owed future payments in terminated plans as of September 30, 2015 and approximately 27,000 participants in plans that will probably terminate. For the multiemployer program, the FY 2015 valuation included, as of September 30, 2015, 53 participants in terminated pre-MPPAA plans and approximately 76,000 participants in post-MPPAA plans receiving financial assistance and 1,019,000 participants in post-MPPAA plans expected to receive financial assistance. Of these, about 833,000 participants from terminated single-employer plans and 42 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 2015 was \$557 (including supplemental benefits) for the single-employer program and \$130 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**

Age	Single-Employer					Multiemployer			
	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	1,735	\$121	\$198	\$74	*%	0	-	\$0	0%
50-54	2,909	318	261	250	*%	0	-	0	0
55-59	21,725	335	196	1,769	4%	0	-	0	0
60-64	72,940	443	285	6,898	14%	0	-	0	0
65-69	146,206	513	493	13,749	27%	0	-	0	0
70-74	139,779	559	356	12,024	24%	0	-	0	0
75-79	115,737	584	314	8,376	17%	0	-	0	0%
80-84	90,386	531	186	4,597	9%	2	46	*	3%
85-89	61,850	443	134	1,949	4%	14	124	*	44%
Over 89	37,652	357	141	676	1%	26	140	*	53%
TOTAL	690,919	\$507	\$296	\$50,362	100%	42	\$130	\$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**

Age	Single-Employer					Multiemployer			
	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	2,628	\$182	\$0	\$60	0%	0	-	\$0	0%
40-44	12,193	208	69	365	2%	0	-	0	0
45-49	34,527	284	119	1,694	7%	0	-	0	0
50-54	67,127	351	133	4,799	20%	0	-	0	0
55-59	82,229	414	185	8,133	34%	0	-	0	0
60-64	65,951	380	155	6,663	28%	0	-	0	0
Over 64	16,223	308	112	1,430	6%	0	-	0	0
Other***	63,289	-	-	496	2%	11	-	*	100%
TOTAL	344,167	\$370	\$149	\$23,640	100%	11	-	\$*	100%

* Less than 0.5% or less than \$500,000

** Fewer 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	30	\$12,195	35.6%
B. Other	<u>25</u>	<u>\$67</u>	<u>0.2%</u>
Subtotal	55	\$12,262	35.8%
Plans with Non-Final DOPT Benefits			
	Number of Plans	Liability (millions)	Percent of Liability
A. Large	141	\$20,061	58.6%
B. Other	<u>288</u>	<u>\$849</u>	<u>2.5%</u>
Subtotal	429	\$20,910	61.1%
Probable Plans			
	Number of Plans	Liability (millions)	Percent of Liability
A. Large	4	\$1,063	3.1%
B. Other	<u>1</u>	<u>\$0</u>	<u>0.0%</u>
Subtotal	5	\$1,063	3.1%
Total	489	\$34,235	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	\$50,360	\$16,176	\$66,536	\$0	\$66,536	61.3%
Pending Trusteeship	<u>2</u>	<u>431</u>	<u>433</u>	<u>423</u>	<u>856</u>	<u>0.8%</u>
Total	\$50,362	\$16,607	\$66,969	\$423	\$67,392	62.1%
Not Receiving Payments						
Trusteed	\$23,704	\$16,168	\$39,872	\$0	\$39,872	36.8%
Pending Trusteeship	<u>0</u>	<u>423</u>	<u>423</u>	<u>803</u>	<u>1,226</u>	<u>1.1%</u>
Total	\$23,704	\$16,591	\$40,295	\$803	\$41,098	37.9%
All Payment Statuses						
Trusteed	\$74,064	\$32,344	\$106,408	\$0	\$106,408	98.1%
Pending Trusteeship	<u>2</u>	<u>854</u>	<u>856</u>	<u>1,226</u>	<u>2,082</u>	<u>1.9%</u>
Total	\$74,066	\$33,198	\$107,264	\$1,226	\$108,490	100.0%
Percent of Terminated	69.1%	30.9%	100.0%			
Percent of Total	68.3%	30.6%	98.9%	1.1%	100%	

Notes:

- 1) Recipient status for Seriatim, Missing Participants, IBNR and Collins liabilities refers to status as of 9/30/15. 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 Populations (including 4022(c)) by Trusteeship Status, Recipient Status, and Valuation Method
(Populations in thousands)

Recipient Status	Seriatim/ Missing Participants	Nonseriatim	Total Terminated Population	Probables	Total Population	Percent of Total Population*
Receiving Payments						
Trusteed	691	135	826	0	826	58.0%
Pending Trusteeship	<u>0</u>	<u>7</u>	<u>7</u>	<u>9</u>	<u>16</u>	<u>1.1%</u>
Total	691	142	833	9	842	59.1%
Not Receiving Payments						
Trusteed	368	191	559	0	559	39.3%
Pending Trusteeship	<u>0</u>	<u>5</u>	<u>5</u>	<u>18</u>	<u>23</u>	<u>1.6%</u>
Total	368	196	564	18	582	41.0%
All Payment Statuses						
Trusteed	1,059	326	1,385	0	1,385	97.3%
Pending Trusteeship	<u>0</u>	<u>12</u>	<u>12</u>	<u>27</u>	<u>39</u>	<u>2.7%</u>
Total	1,059	338	1,397	27	1,424	100.0%
Percent of Terminated	75.8%	24.2%	100.0%			
Percent of Total	74.4%	23.7%	98.1%	1.9%	100%	

Notes:

- 1) Recipient status for Seriatim and Missing Participants liabilities refers to status as of 9/30/15. 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, 2015 valuation with the September 30, 2014 valuation. It shows that the \$5,077 million increase in the liability for the Single-Employer program was the net effect of:

- (1) increased liability for probable plans = \$467 million
- (2) new plan terminations as of the beginning of the year = \$1,906 million
- (3) expected interest on the liability = \$3,338 million
- (4) increased liability from change in interest rates = \$5,851 million
- (5) change in mortality assumptions = \$689 million
- (6) actual benefit payments = (\$5,570) million
- (7) other changes = (\$1,604) million.

The Multiemployer columns reconcile the liability for the post-MPPAA financial assistance to insolvent plans. There is no liability for the pre-MPPAA terminated plans in FY15.

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

	Total Single Employer	Post-MPPAA Multiemployer
1. Liability at BOY (9/30/14)		
(a) Present Value of Future Benefits for all Plans	\$103,414	\$44,190
(b) Liability for Probable Plans (gross liability including unreported)	(759)	(42,684)
(c) Liability for Unreported Terminated Plans and other settlements	(62)	0
(d) 9/30/14 Liability for Terminated Plans (a + b + c)	\$102,593	\$1,506
2. Change in Valuation Software		
(a) Effect on Liability as of DOPT	\$2	\$0
(b) Projection of (a) from DOPT to BOY + post-DOPT changes	46	0
(c) Total (a + b)	\$48	\$0
3. Net New Plans and Missing Participant Liability		
(a) New Missing Participant Liability	\$4	\$0
(b) New Termination Inventory as of DOPT	1,967	120
(c) Deletions as of DOPT	(2)	(2)
(d) Projection of (b + c) from DOPT to BOY	(59)	0
(e) Total (a + b + c + d)	\$1,910	\$118
4. Nonseriatim Data Changes and Effect of DOPT Seriatim Valuation		
(a) Effect on Liability at DOPT	(\$761)	(\$30)
(b) Projection of (a) from DOPT to BOY	(439)	0
(c) Total (a + b)	(\$1,200)	(\$30)
5. Actuarial Charges/Credits		
(a) Expected Interest	\$3,338	\$51
(b) Change in Interest Rate (from 3.35% for 25 years; 3.25% thereafter to 2.8% for 25 years; 2.86% thereafter)	5,851	77
(c) Change in Mortality Assumption	689	15
(d) Change in Method (Current Year: Seriatim at DOPT to Seriatim at FYE)	(11)	0
(e) Effect of Experience*	(288)	(7)
(f) Change in Other Assumptions (Expense, SPARR, PBGCC STD Rates)	1	0
(g) Total (a + b + c + d + e + f)	\$9,580	\$136
6. Expected Expense Payments	(\$123)	\$0
7. Actual Benefit Payments	(\$5,570)	(\$103)
8. Liabilities at End of Period (9/30/15)		
(a) Liability for all Terminated Plans = (1d) + (2c) + (3e) + (4c) + (5g) + (6) + (7)	\$107,238	\$1,627
(b) Liability for Unreported Terminated Plans and other settlements	26	0
(c) Liability for all Terminated Plans (a + b)	107,264	1,627
(d) Liability for Probable Plans (gross liability including unreported) **	1,226	52,559
(e) 9/30/15 Present Value of Future Benefits for all Plans (c + d)	\$108,490	\$54,186

* Includes change from expected benefits (\$5,631 million) to actual benefits (\$5,570 million) in Total Single Employer. Includes change from expected benefits (\$111 million) to actual benefits (\$103 million) in Post-MPPAA Multiemployer. Actual does not include payments made by employers.

** Includes \$163 million for not yet identified probable terminations. Financial statements show a liability of \$1,226 million for probable terminations, less assets of \$641 million, for a net claim of \$585 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, 2015.

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 as determined by PBGC's 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
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Enrolled Actuary
Member of the American Academy of Actuaries
Chief Valuation Actuary and Department Director
Actuarial Services and Technology Department
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