Actuarial Assumptions

Investment Earnings Assumptions

Fixed Dollar Account

The assumed investment return for these assets, which is used to value the pension benefits[1] for Pensioners and Beneficiaries whose benefits commenced on or before August 1, 1982 (as identified by Prudential Investments), is determined by a schedule of rates that varies by calendar year, starting at 6.70% in 2013 and decreasing to 6.50% in 2015 and thereafter.

1982/1984 Annuity Account

The assumed rate of return for these assets, which is used to value the pension benefits[1] for Pensioners and Beneficiaries whose benefits commenced from September, 1982 through December, 1984 (as identified by Prudential Investments), is 6.59%.

Strategic Bond Account (SBA)

The assumed rate of return for these assets is 4.42%. This assumption is used to value 85.20% of the pension benefits[1] related to service through December 31, 1985, based on December 31, 1984 Plan provisions and not covered by the prior asset dedications.

Remaining Assets

The assumed rate of investment return which is used to value all benefits expected to be paid out of remaining assets and future contributions is 7.00%, net of investment expenses.

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[1]Single sum death benefits are not valued using the investment earnings assumptions described above. Instead, the "Remaining Assets" assumption is used.

Post-retirement Mortality Rates

For males

- Ages up through 29, male employee table,
- Ages 30-49, male employee table with blue collar adjustment
- Ages 50-70, custom blend of the healthy male annuitant and the employee tables, starting at 50%/50% at age 50, to 98%/2% at age 70. The blended table is adjusted by male blue collar adjustments
- Ages 70 and above, healthy male annuitant, adjusted by blue collar adjustments
- All projected to 2015 using male Scale AA

For females

- Ages up through 29, female employee table
- Ages 30-49, female employee table, with blue collar adjustment
- Ages 50-70, custom blend of the healthy female annuitant and the employee table starting at 69%/31% at age 50 to 100%/0% at age 70, adjusted by female blue collar adjustments and small annuities
- Ages 70 and above, healthy female annuitants adjusted by female blue collar adjustments and small annuities
- All projected to 2017 using scale AA

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Special mortality tables, reflecting Plan experience, are used for disabled pensioners. Examples of mortality rates used are shown in the table below:

Annual Probability of Death						
Age Last Birthday	Non-Retired Participants		Age Retirees & Beneficiaries		Disabled Retirees	
	Male	Female	Male	Female	Male	Female
25	0.0003	0.0002	0.0003	0.0002	0.0244	0.0176
40	0.0012	0.0007	0.0012	0.0007	0.0244	0.0176
55	0.0027	0.0026	0.0046	0.0040	0.0252	0.0182
70	0.0156	0.0135	0.0222	0.0199	0.0336	0.0242
85	0.1086	0.0797	0.1086	0.0797	0.1362	0.0981

Pre-retirement Mortality Rates

The assumed annual rates of healthy mortality for males is based on the RP 2000 Mortality Tables for Male Employees adjusted for Blue Collar and projected by Scale AA to 2015.

The assumed annual rates of healthy mortality for females were changed to the RP 2000 Mortality Tables for Female Employees adjusted for Blue Collar and projected by Scale AA for to 2017.

Provision for Non-investment Expenses

Administrative expenses are assumed to be $87 million per year, payable mid-year.

Age Retirement Rates

Age retirement rates apply only to retirement eligible participants.

We use five retirement rate tables. Their values are displayed in the three columns of table (1), and the fourth and fifth columns of table (2), below. (Note that the first two columns of table (1), and the first two columns of table (2), represent the <u>same</u> two tables).

In general, for a given participant in a PEER unit, two or more of these tables may be accessed during a single run, with the lower rates applying until the participant is projected to attain the required number of age plus service points, (80, 82, or 84).

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Participants with fewer than 25 Years of Service

Age Last Birthday	Non-PEER Eligible Actives	PEER Eligible Actives	Non-PEER Eligible Vested Terminated
49	0.030	0.150	NA
50	0.030	0.150	NA
51	0.030	0.150	NA
52	0.030	0.150	NA
53	0.030	0.150	NA
54	0.080	0.160	0.160
55	0.060	0.120	0.120
56	0.060	0.120	0.060
57	0.060	0.120	0.060
58	0.060	0.120	0.060
59	0.100	0.200	0.100
60	0.100	0.200	0.100
61	0.350	0.350	0.300
62	0.350	0.350	0.200
63	0.150	0.150	0.150
64	0.300	0.300	0.300
65	0.300	0.300	0.200
66	0.200	0.200	0.060
67	0.200	0.200	0.060
68	0.200	0.200	0.060
69	1.000	1.000	1.000

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Participants with 25 or more Years of Service

Age Last Birthday	Non-PEER Eligible Actives	PEER Eligible Actives	Non-PEER Eligible Vested Terminated	PEER Eligible Vested Terminated
49	0.030	0.150	0.150	0.230
50	0.030	0.150	0.150	0.230
51	0.030	0.150	0.150	0.230
52	0.030	0.150	0.150	0.230
53	0.030	0.150	0.150	0.230
54	0.080	0.160	0.160	0.350
55	0.060	0.120	0.120	0.250
56	0.060	0.120	0.090	0.200
57	0.060	0.120	0.090	0.180
58	0.060	0.120	0.090	0.180
59	0.100	0.200	0.150	0.300
60	0.100	0.200	0.150	0.300
61	0.350	0.350	0.350	0.350
62	0.350	0.350	0.350	0.350
63	0.150	0.150	0.150	0.150
64	0.300	0.300	0.300	0.300
65	0.300	0.300	0.300	0.300
66	0.200	0.200	0.200	0.200
67	0.200	0.200	0.200	0.200
68	0.200	0.200	0.200	0.200
69	1.000	1.000	1.000	1.000

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Disability Retirement

Disability rates apply only to employees with 4 or more years of vesting service.

Age Last Birthday	Examples of Annual Probability of Disability Retirement
32	0.0006
37	0.0008
42	0.0011
47	0.0017
52	0.0030
57	0.0052

Employee Termination Rates

The termination rates shown below exclude death, disability and retirement rates. Termination rates are not applied when an individual is eligible for age retirement. Below are examples of annual probabilities of employment termination for active employees with less than 9 years of coverage.

Non-Seasonal Employees				
Age Last Birthday	Years Since First Covered Hour			
At First Covered Hour	0	1	2	8
22	0.0945	0.1795	0.2272	0.1120
32	0.0844	0.1478	0.1914	0.0896
42	0.0776	0.1214	0.1674	0.0784
52	0.0641	0.0898	0.1435	0.0784
62	0.0574	0.0686		
Seasonal Employees				
Age Last Birthday	Years Since First Covered Hour			
At First Covered Hour	0	1	2	8
22	0.7004	0.5443	0.3039	0.1600
32	0.6254	0.4482	0.2559	0.1280
42	0.5754	0.3682	0.2240	0.1120
52	0.4753	0.2721	0.1920	0.1120
62	0.4253	0.2081		

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Examples of annual probabilities for termination are listed below for Non-Seasonal and Seasonal Active employees with 9 or more years of coverage.

Non-Seasonal and Seasonal Employees		
	After 9 or more Years Since First Covered Hour	
Age Last Birthday	Non-Seasonal	Seasonal
32	0.0734	0.0978
42	0.0435	0.0790
52	0.0422	0.0562
62	0.0077	0.0102

Future Annual Hours and Contributions

Projected benefit amounts for 2014 were calculated assuming that: (a) Active Non-Seasonal employees work an average of 1800 hours per year; (b) Active Seasonal employees work an average of 600 hours per year; and (c) contribution rates would continue at the December 31, 2013 levels.

A non-retired participant was considered Active as of January 1, 2014 if he or she earned at least 250 covered hours during 2013, or at least 1 covered hour in 2013 and at least 250 covered hours in 2012.

Expected Annual Employer Contributions

The annual employer contributions expected during 2014 have been assumed to be $1.401 billion. This amount is used to determine the projected Funding Standard Account and the expected amortization period of the UAL.

Sample Valuation Data

We have relied on data supplied by Prudential Investments and Northwest Administrators. The actuarial values for non-retired participants are based on a sample of the employees covered under the Plan, as described in Appendix B. The actuarial values for records with valid data are adjusted for sampling and incomplete data, and the results are assumed to represent the values of the entire covered group.

Form of Payment

Participants without recent coverage are assumed to elect the single life annuity. Participants with recent coverage are assumed to elect a four year certain and life annuity. A factor of 1.0045 is applied in order to account for the availability of a subsidized joint and survivor benefit.

Probability of Marriage

Non-retired participants are assumed to be married at various percentages. Below is a brief summary of these percentages.

Age	Probability of Marriage
32	69.8%
42	75.5
52	82.0
62	82.0

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Spouse Age Difference

Where applicable, husbands are assumed to be two years older than their wives.

Past Employment

Total past employment (continuous past employment plus special past employment) for each employee was calculated as the number of years from year of union membership until year of coverage, but not less than the known continuous past employment for the employee.

Survivor Benefit Costs

The family composition of covered employees was assumed to be similar to that tabulated in the 15th Actuarial Valuation published by the Railroad Retirement Board. This assumption was used to estimate the probability that an employee will be survived by a beneficiary eligible for a survivor benefit and to establish the probable duration of the benefit.

Inactive Participants

Vested inactive participants who are older than 74 as of the valuation date are assumed to be deceased and excluded from this valuation. Inactive participants who are coded as a claim for more than one year are expected to be either deceased or not eligible for a benefit from the Plan. We assume that any such participants do not have and will not create any liability for the Plan.

Assumption Changes Incorporated in the January 1, 2014 Valuation

- The current liability interest rate was decreased from 3.78% to 3.64% to remain within the IRS prescribed corridor.

- The current liability mortality tables were changed from annuitant / nonannuitant projected version of the RP-2000 Mortality Tables for 2013 to the annuitant / nonannuitant projected version of the RP-2000 Mortality Tables for 2014 as prescribed by the IRS.

- The discount rate used for the 1982/1984 Annuity Account was changed to 6.59% for 2014 from 3.55% for 2013, and the discount rate used for the SBA Dedication was changed to 4.42% for 2014 from 4.99% for 2013.

The following assumptions were changed to better reflect recent and expected future experience:

- The anticipated annual employer contributions were increased to $1.401 billion for purposes of projecting the 2014 Funding Standard Account and determining the Amortization Period.
- The subsidized joint and survivor factor was changed 1.0033 to 1.0045 to update to current assumptions.
- The future annual administrative expenses were increased to $87,000,000 from $85,000,000.
- The assumed annual rates of pre-retirement healthy mortality for males were changed to the RP 2000 Mortality Tables for Male Employees adjusted for Blue Collar and projected by Scale AA to 2015.
- The assumed annual rates of pre-retirement healthy mortality for females were changed to the RP 2000 Mortality Tables for Female Employees adjusted for Blue Collar and projected by Scale AA to 2017.

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- The assumed annual rates of post-retirement healthy mortality for males and females were changed to the RP 2000 Mortality Tables for Employees adjusted for Blue Collar and projected by Scale AA to 2015 and 2017 respectively.

Actuarial Value of Assets

The Prudential Investments Fixed Dollar Account (FDA), in general, was valued at book value. However, to the extent that cash flows from the FDA are not sufficient to provide the projected FDA benefits, certain bonds valued at amortized cost were assigned to the FDA so that all projected FDA benefits were supported by dedicated assets. The 1982/1984 Annuity Account and the SBA were valued on an amortized cost basis, running from cost at purchase to par value at maturity or earliest call date. Below is a summary of the actuarial value of the dedicated asset as of the valuation date:

Dedicated Account	**(In Thousands)**
FDA	$ 121,313
1982/1984 Annuity Account	64,520
SBA	3,559,232
Total Actuarial Value of Dedicated Assets	$ 3,745,065

The remaining assets were valued using a smoothing procedure under which the 2008 market value is recognized at the rate of 10% per year for ten years. All other market value gains and losses are recognized at the rate of 20% per year over five years. The actuarial value of the remaining assets may not be greater than 120% or less than 80% of the market value.

The actuarial value of assets for purposes of determining the unfunded vested benefit liability is the same method used for ERISA funding purposes, except the Pension Relief Act of 2010 election to smooth the 2008 investment loss is not used.

Actuarial Cost Method

The Unit Credit actuarial cost method was used for this valuation. Under this method, the Actuarial Liability is the Accrued Benefit Liability for all participants included on the valuation date. The Normal Cost is: (i.) the expected increase in Accrued Benefit Liability for these participants resulting from benefits earned during the current year, plus (ii.) the expected increase in Accrued Benefit Liabilities resulting from new participants who are covered employees on the valuation date.

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