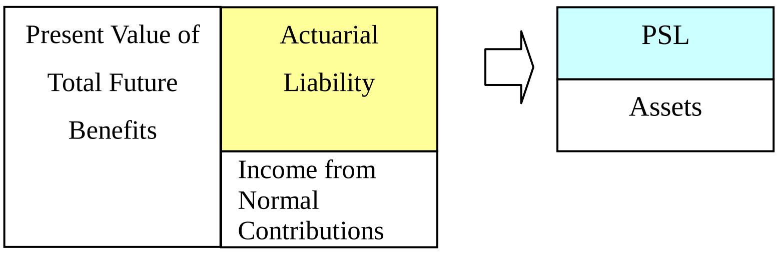
Defined Benefit Pension Plan (2): Special Contributions

This article explains how the special contributions for amortization of Past Service Liabilities (PSL) are calculated. The contributions for Defined Benefit Pension Plan are composed of the "Normal Contribution" to fund the benefits for future service period, and the "Supplemental Contribution" to fund any other costs, and the Special Contribution is a part of the Supplemental Contribution.

Type of Contributions	Description	Relevant Regulations
Normal Contribution	Contribution to fund the benefits for future service period	Article 45-2 of DB Law
Special Contribution	Contribution to amortize the PSL	Article 46 of DB Law
Exceptional Contributions	Contribution to: -amortize the expected shortfall accrued until the next recalculation of the contribution rates -recover the minimum funding requirement -pay for the benefits when the funding balance becomes zero -pay for the withdrawal from the plan -cover the underfunding in aggregate when transferring to a DC plan	Article 47, 59, 64, 88 of DB Law, Article 91 of Enforcement Ordinance

1. What is Past Service Liability?
   PSL is an amount calculated by deducting the present value of the income from normal contributions (present value of the projected future normal contributions) and the assets from the present value of total benefits (present value of projected future benefits).



Note: The assets can be a fair market value or actuarial value calculated by smoothing method by reducing the impact of market volatility by recognizing future asset deviations gradually. If the exceptional contribution to amortize the expected shortfall until the next re-valuation is applied, the contribution income shall be deducted from the actuarial liability.

2. Setting the Special Contributions
   The PSL shall be amortized by setting a special contribution through either of the following methods:

(1) Equal Amortization Method
This method is to amortize the PSL by equal payment for a period between 3 and 20 years starting from the planned payment day of the special contributions. The contribution rate can be set either at the fixed amount or rate of salary per participant or at the fixed total amortization amount per annum.
Special Contribution Amount (Rate) = PSL / [No. of participants (total base salary) times Present Value Rate of the Fixed Annuity]

(E.g.) PSL: JPY12,000 Million, Monthly Salary: JPY1,800 Million
Interest Rate: 3.0%,
10 year Amortization (Monthly Payment):Conversion Rate of Annuity 103.76241
Special Contribution Rate = JPY12,000 Million / (JPY1,800M x 103.76241) = 6.4% (per month)

Note: In reality, there should be adjustments of special contribution income and the period from the valuation date to starting date of special contribution payment (the same shall apply hereinafter). In the Employee's Pension Fund (EPF), the amortization period of 20 years shall apply from the valuation date instead of the beginning of contribution payment except for the time of establishment.

(2) Accelerated Amortization Method
Calculate two types of special contribution rates with different amortization periods based on the method (1), and the actual contributions to be used are determined every year in between the two rates. Combinations of two amortization periods are predetermined as follows based on the longer period chosen.

Expected Amortization Period (Maximum)	Expected Amortization Period (Minimum)
Below 5 years	3 years
5 to 7 years	4 years
7 to 9 years	5 years
9 to 11 years	6 years
11 to 13 years	7 years
13 to 14 years	8 years
14 to 15 years	9 years
More than 15 years	10 years

If the accelerated amortization method is chosen based on the example (1), the maximum amortization period is set at 10 years and the minimum period will be 6 years accordingly.

(E.g.) PSL:JPY12,000 Million, Monthly Salary: JPY1,800 Million
Interest Rate: 3.0%
6 year Amortization (Monthly Payment): Conversion Rate of Annuity 65.89536
Special Contribution Rate = JPY12,000 Million / (JPY1,800M x 65.89536) = 10.1% (per month)

Hence, the special contribution rate is set between 6.4% and 10.1% every year.

3）Proportional Amortization Method
Amortize the fixed percentage of unamortized PSL balance every year between 15% and 50%. As the amortization will never complete in this case, when the unamortized balance reaches below the normal contribution, the balance can be amortized in aggregate.

(E.g.) PSL: JPY12,000 Million, Amortization Percentage: 50%, Interest Rate: 3%

[1] Unamortized PSL Balance	[2] Special Contribution ([1] x 50%)	[3] Year-end Balance ([1] x 1.03-[2]x1.03$^{0.5)}$
12,000	6,000	6,271
6,271	3,136	3,277
3,277	3,326	0

Note: Assuming the normal contribution is JPY4,000, the balance is amortized in aggregate in the third year. Whereas in TQPP any subsequent liability to be accrued after the plan revaluation is included in the amortization, in DB plans the special contribution fixes the amortization of each year at plan revaluation.

3. Special Contribution when the previous PSL amortization is incomplete

(1) Treat the previous balance of PSL and the new PSL separately.
Amortize the previously accrued PSL over 20 years starting from the previous amortization period and the newly accrued PSL over 3 to 20 years starting from the new amortization period.

(E.g.) Total PSL: JPY9,000 Million, Monthly Salary: JPY1,800 Million
Previous PSL Balance: JPY6,418 Million (remaining years 5 years, Conversion Rate of Annuity 55.70811)
Interest Rate: 3.0%
Previous balance to be amortized over 5 years, the new PSL to be amortized over 10 years.
Special Contribution Rate:
Previous: 6.418 mil. / (1,800 mil. x 55.70811) = 6.4% (per month)
New: (9,000 – 6.418) mil. / (1,800 mil. x 103.76241) = 1.4% (per month)
Total Special Contribution Rate will be 6.4%＋1.4%= 7.8%.
The new amortization period will be:
9,000 mil. / 1,800 mil. x 7.8%) = 64.10256, which equals to 5 years and 10 months.

(2) Calculate based on the Total PSL
Amortize the total PSL by setting the special contribution using the Method (2), under which the special contribution shall not be below the previous (current) special contribution.

(E.g.) Total PSL: 9,000 mil. Monthly Salary: 1,800 mil.
Interest Rate: 3.0%, Current Special Contribution: 6.4%
Maximum Amortization Period:
9,000 mil. / (1,800 mil. x 6.4%) = 78.125 which equals to 7 years and 3 months

Therefore, minimum 3 years and maximum 7 years and 3 months will be the expected amortization period. If the remaining period of previous amortization is less than 3 years, the special contribution for the newly accrued PSL to be amortized over 3 years can be added to the previous special contribution.

(3) If the newly accrued PSL is negative
Irrespective of the above, if the recalculated PSL falls below the balance of previous PSL, (namely, if the newly calculated PSL is negative), the special contribution shall be completed within the remaining years of the previous PSL amortization. If such remaining years are less than 3 years, the remaining years shall apply.

(E.g.) Total PSL: 5,000 mil. Monthly Salary: 1,800 mil.
Interest Rate: 3.0%
Current Special Contribution: 6.4% (remaining years: 5 years. Previous PSL Balance: 6,418 mil.)
New amortization period: 5 years (which is the remaining years of previous PSL)
Special Contribution Rate:
5,000 mil./ (1,800 mil. x 55.70811) = 5.0%

If the newly accrued PSL is negative, the special contribution can be reduced to the extent where the amortization period is not extended. The same shall apply to the cases in which contributions are reduced by lowering the assets.

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