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Service Requests 80091
UC Paid Life Insurance Salary Base Derivation

Detail Design

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Introduction

Service Request 80091 - UC Paid Life Insurance Salary Base Derivation

The service request reads as follows.

“A change to the EDB salary base values derivation was implemented in 1986 for University Paid Life Insurance (Basic Life). The University Paid Life plan was improved from a flat $5,000 plan to a one times earnings plan with a maximum of $50,000. The covered salary rate is to be the same definition used for Employee Paid Life Insurance (Supplemental Life) with the coverage amount adjusted by the appointment percentage. In 1996, a change was made to the EDB salary base values derivation to Employee Paid Life but the same change was not made to the derivation of University Paid Life. Since then the salary base value for University Paid Life will be calculated differently than the salary base value for Employee Paid Life. The salary base for University Paid Life is calculated as the sum of regular pay distributions and ALL the shift differentials, whereas the salary base for Employee Paid Life is calculated as the sum of regular pay distributions and the HIGHEST shift differential.

The Administration unit is requesting a change be made to PPS to correct the calculation of salary base values for University Paid Life. The calculation currently used to derive the Employee Paid Life base should be used for both Employee Paid Life and University Paid Life. “

During the analysis phase of this project, it was determined that the use of ALL the differential distributions rather than the HIGHEST differential distribution was not the only difference between the calculations for the two salary bases. Other differences are identified below. It was determined that changes needed to be made to both calculations to make the derivation of Basic Life Insurance (UC Paid Life Insurance) salary base and Supplemental Life Insurance (Employee Paid Life Insurance) salary base more consistent. The two calculations should be the same with the one exception. The Basic applies the Distribution Percent to the calculated amount while the Supplemental does not.

1. The distribution selection for the calculation process for Basic is driven by the DOS Calc Process Code while that for the Supplemental is driven by the DOS Pay Category, DOS Time Code and DOS Hours Code.

2. The elements used in the calculation for Supplemental included rate and the appropriate multiplier to annualize the distribution amount. The Basic did the same but then multiplied the amount by the DOS Gross Indicator and DOS Factor.

3. The Supplemental selected the HIGHEST of the Regular payments calculated as well as the HIGHEST of the Differential payments calculated. The Basic simply accumulated all the distributions applying the percent found on each; not selecting the HIGHEST distribution of either.

In general, both processes will be modified to incorporate the functions found in each. The Supplemental will be changed to include the DOS Gross Indicator and DOS Factor as variables used in its salary base calculation. Basic Life will be changed to use the same DOS elements for the distribution selection as used by the Supplemental selection.

It should be noted here that the calculation of the Supplemental (Employee Paid) Disability salary base uses the same formula as the calculation of the salary base for the Supplemental Life insurance. Therefore, any changes affecting the Supplemental Life salary base also affects the Supplemental Disability salary base.
Overview

Three processes in the Payroll/Personnel System perform the derivation of the EDB salary base values for Basic Life insurance, Supplemental Life insurance, Supplemental Disability insurance and Executive Life insurance:

- EDB Explicit Maintenance (PPEM106 and PPEM720)
- EDB Monthly Periodic Maintenance (PPEM106 and PPEM720)
- Annual Benefits Premium Audit (PPP570)

Selection and Calculation Process

In each of these processes, the selection of the employee for whom the derivation is done and the selection of the set of distributions (active or future in some cases) used in the calculations are slightly different. Selection criteria at the employee level required no changes. Selection of distributions based upon distribution end dates and based upon DOS element values requires changes to the Basic Life salary base calculation but no changes to the Supplemental Life calculation.

The calculation process described here applies to Basic Life (UC Paid) insurance, Supplemental Life (Employee Paid) insurance and Supplemental (Employee Paid) Disability insurance. It does not apply to Executive Life insurance, which is calculated by a separate program, PPEXECLF, for which no changes are required. Changes are required to both the Basic and the Supplemental salary base calculation processes in order to be consistent with the following.

For each distribution for a selected employee, the calculation process determines if the distribution belongs to one of three categories as follows: (This is NEW for Basic)

1. Regular Payments
   - Pay Category = “N” (Regular) and Hours Code = “R” (Regular)
   - OR
   - Pay Category = “S” (Suspense) and Time Code = “1” (Regular)

2. Additional Payments
   - Pay Category = “N” (Regular) and Hours Code = blank (hours not applicable)
   - OR
   - Pay Category = “S” (Suspense) and Time Code = “9” (By Agreement)

3. Shift Differential Payments
   - Pay Category = “D” (Differential)
   - OR
   - Pay Category = “S” (Suspense) and Time Code = “8” (Regular at other than regular rate)

If the distribution matches one of these categories, the distribution rate is multiplied by the appropriate multiplier to calculate an annualized distribution pay amount.

1. 2088 for hourly
2. 26 for biweekly
3. 24 for semi-monthly
4. 12 for monthly

This pay amount is then multiplied by the DOS Gross indicator and/or the DOS Factor based upon the DOS Calc Process code. (This is NEW for Supplemental)
1. For Calc code = 01, multiply by the DOS Gross indicator
2. For Calc code = 02, multiply by the DOS Gross indicator and the DOS Factor
3. For Calc code = 03, multiply by the DOS Gross indicator
4. For Calc code = 04, uses neither

After all distributions are processed, the value for each category is determined as follows:

1. The **Regular Salary** is the HIGHEST calculated annual distribution pay amount associated with the Regular Payments from the distributions selected. For Basic only, this amount is multiplied by the total of the Distribution Percents (not to exceed 1.0) for this category. (This is NEW for Basic)

2. The **Additional Salary** is the sum of all the annual distribution pay amounts associated with Additional Payments from the distributions selected.

3. The **Differential Salary** is the HIGHEST calculated annual distribution pay amount associated with the Differential Payments from the distributions selected. For Basic only, this amount is multiplied by the total of the Distribution Percents (not to exceed 1.0) for this category. (This is NEW for Basic)

The Annual Salary Total is calculated as follows:

\[
\text{Annual Salary Total} = \text{Regular Salary} + \text{Additional Salary} + \text{Differential Salary}
\]

Each Salary Base is derived using the Annual Salary Total as follows:

**Basic Life** salary base is derived by rounding the Annual Salary Total up to the next whole 1,000. If the result is greater than the maximum as stored in the system table, then the result is replaced with the maximum amount.

**Supplemental Life** salary base is derived by rounding the Annual Salary Total up to the next whole 1,000.

**Supplemental Disability** salary base is derived by dividing the Annual Salary Total by 12 and rounding up to the next whole number if a remainder exits.
Programs

PPEM106 - Calculates Salary Base for Basic Life Insurance

This program will be rewritten. During Distribution selection, the program will be changed to require that the Distribution End Date is greater than or equal to the first day of the current month. Previously it had to be greater than that date. The formula used in calculating the annual distribution pay amount for each selected distribution will be replaced. It is now the same as that used for the Supplemental Salary Base, which also had modifications (PPEI720 below). The application of the distribution percents will be also changed. Instead of multiplying by the percent for each distribution, the percents are accumulated by category and applied to the HIGHEST amount calculated for that category (Regular and Differential).

PPEI720 - Calculates Salary Bases for Supplemental Life Insurance and Supplemental Disability Insurance

Note that the two above use the same formula for calculating each distribution amount. Any changes made to Supplemental Life also change the Supplemental Disability.

The formula used in the salary base calculation routine will be modified, adding the following to the calculation routine.

For each distribution selected, the distribution amount calculated will also be multiplied by the DOS Gross Indicator and/or the DOS Factor depending upon the value found in the DOS Calc Process code for the DOS specified by the distribution.

- For Calc Process 01 and 03, the DOS Gross Indicator is applied
- For Calc Process 02, the DOS Gross Indicator and the DOS Factor are applied
- For Calc Process 04, neither of the above

There will be no modifications to the employee selection criteria or the distribution selection criteria.

NOTE: These modifications must be coordinated with those required by SR 80191 Medical Premium Contribution Base.

PPP570 - (Annual Process) Calculates Salary Bases for Basic Life Insurance, Supplemental Life insurance, Supplemental Disability Insurance and Executive Life Insurance

The modification to this program will be a combination of all the changes made to PPPEM106 and PPEI720 for Basic and Supplemental. As with PPEI720, changes affecting the Supplemental Life also affect the Supplemental Disability. There will be no changes to Executive Life, which is calculated by a called program, PPEXECLF.

NOTE: These modifications must be coordinated with those required by SR 80191 Medical Premium Contribution Base.