

ProAdmin version 3.12 introduces interface modernizations, an age definition library and default age calculation method in Plan Definitions, improved maximum benefit calculations, and many additional features listed below.

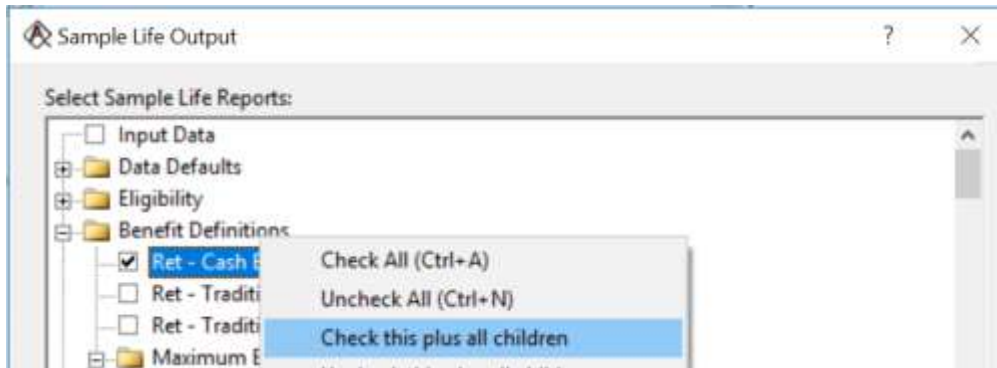
Please note that several of the features discussed below (denoted with \*) were released in 3.11 patches but are included here in case you missed them.

### Interface

- ◆ **Modern font** for better readability, letting you work faster and longer with less strain. What's more, entry names can now include accented characters (e.g., â, é, ö, ù). If you wish, you can select a different font typeface and size using File > Options > View.



- ◆ **Expandable/collapsible lists.** In places like printing Detailed Results, you can expand and collapse the list to more quickly select the desired reports. You can even right-click to select all children of a folder, for example, all Benefit Definition reports.



- ◆ **Friendlier grids** with numerous small improvements. For example, for numeric cells, copying puts the full precision into the clipboard, not just the displayed decimals. For dropdown cells, you can type the first letter of the choice you want.

- ◆ **Message Code added to library.** The User Defined Message library now has a sort column that will contain the optional Code for output.

| Type | Code | Name                                     | Modified           |
|------|------|--|--------------------|
| E    | E001 | Commencement Before ERD                  | 9/18/2018 10:57 AM |
| E    | E002 | Maximum Earnings Check                   | 9/18/2018 10:58 AM |
| W    | W001 | Check Status Dates                       | 9/18/2018 10:57 AM |
| W    | W002 | Retirement Before Normal Retirement Date | 9/18/2018 10:57 AM |
| W    | W003 | Maximum Earnings Check                   | 9/18/2018 10:58 AM |
| W    | W004 | Date of Birth Check                      | 9/18/2018 10:58 AM |

## Age Definition

- ◆ **Age Definition library.** You can now create named age calculation methods and define one as the default for the Plan Definition. All payment forms and components that require an age definition can either reference this default or use an alternative age definition. Accordingly, it is now much easier to see where age definitions vary among plan components and verify that the calculations are correct.

For more details, see [Age Definition](#) on **page 11**.

## Interest Tables

- ◆ A new button called Interest Tables on the Help | About ProAdmin | System Info... dialog box allows you to display all the CSV tables in the interest rate tables folder, where the folder is shown under the Source of Interest Rate Tables topic at the end of the System Info list. The Interest Tables list shows the table name and last modified date as well as footnotes for any tables with potential issues. This same interest table information will be displayed in ProAdmin Server when using the method "systables".

| Table Name                              | Last Modified         |
|---|-----------------------|
| 1_Year_TBill_Rates.csv                  | ( 2/11/2013 8:29 AM)  |
| 1_Year_TBill_RatesEx.csv                | (10/25/2011 10:48 AM) |
| 10_Year_CB_Treas_Rate_Training.csv      | ( 4/03/2012 10:45 AM) |
| 10_Year_Treas_Const_Maturities_Rate.csv | ( 1/27/2015 9:48 AM)  |
| 120_FMT (EEC Rates).csv                 | ( 2/08/2013 2:45 PM)  |
| 120_fmtr.csv                            | ( 2/24/2017 5:59 PM)  |
| 20_Year_Treas_Const_Maturities_Rate.csv | ( 1/13/2015 11:47 AM) |
| 3%_Rate.csv                             | ( 6/29/2011 2:29 PM)  |
| 3_Month_TBill_Rates.csv                 | (10/17/2013 9:14 AM)  |
| 3_Month_Treas_Rate_5_Year_Avg.csv       | ( 1/13/2015 11:45 AM) |
| 3_Year_CB_Treas_Rate.csv                | (12/11/2012 9:10 AM)  |
| 30_Avg_Year_Treas_Rate_IMS.csv          | ( 3/19/2015 12:51 PM) |

| Historical Interest Rate Tables (131 tables)        |                       |       |
|---|-----------------------|-------|
| Unblended_seg_rates_spot (2).csv                    | ( 8/15/2014 12:46 PM) | (1 2) |
| unblended_seg_rates_spot.csv                        | ( 3/19/2015 12:52 PM) |       |
| WEC_Historical_Int_4% Min.csv                       | ( 1/22/2015 1:22 PM)  |       |
| YPHoldings_PPA_with_25pc_PhaseIn_2012-2012_SPOT.csv | ( 1/16/2014 3:11 PM)  |       |
| YPHoldings_PPA_with_25pc_PhaseIn_2012-2013_SPOT.csv | ( 1/16/2014 3:11 PM)  |       |
| YPHoldings_PPA_with_25pc_PhaseIn_2012-2014_SPOT.csv | ( 1/16/2014 3:11 PM)  |       |
| YPHoldings_PPA_with_25pc_PhaseIn_2012-2015_SPOT.csv | ( 1/16/2014 3:11 PM)  |       |
| YPHoldings_PPA_with_25pc_PhaseIn_2013-2014_SPOT.csv | ( 1/16/2014 3:11 PM)  |       |
| YPHoldings_PPA_with_25pc_PhaseIn_2013-2015_SPOT.csv | ( 1/06/2014 9:07 PM)  |       |
| YPHoldings_PPA_with_25pc_PhaseIn_2014-2015_SPOT.csv | ( 1/16/2014 3:11 PM)  |       |
| YPHoldings_PPA_with_25pc_PhaseIn_Ann_SPOT.csv       | ( 3/25/2014 1:43 PM)  |       |
| YPHoldings_PPA_with_25pc_PhaseIn_Qrtly_SPOT.csv     | ( 3/16/2015 9:38 AM)  |       |
| YPHoldings_PPA_with_25pc_PhaseIn_SPOT.csv           | ( 1/03/2014 3:15 PM)  |       |

Notes:

- 1=Each row must contain a Year, Month, and a Rate.
- 2=Note that the phrase "\_spot" must be at the end of the table name to indicate a spot rate table.
- 3=The YEAR column should only contain integers from 1900 to 2200.
- 4=The MONTH column should only contain integers from 1 to 12.

- ◆ Line feeds are now acceptable in interest rate tables. Previously a hard return indicating the end of line was expected.

## Maximum Benefits Improvements

- ◆ **Limitation year.** You can now specify whether the limitation year for maximum benefit purposes is the plan year or the calendar year. This applies for both the U.S. 415 maximum and the Canadian ITA maximum.

U.S. 415(b) Maximum Benefit Limit

Dollar limitation

Interest rate before age 62:

Interest rate after age 65:

Mortality table:

Use the current applicable mortality for 417(e)

Apply mortality discount in actuarial reductions & increases

Apply actuarial increases Interest rate after age 65

Do not reduce for death or disability benefits before age 62

Do not reduce before age 62 if 15 years of participation service

Payment frequency for actuarial reduction & increase factors:

Annual (beginning of year)

Plan's benefit payment frequency and timing

Participation service based on Service Definition Set:

Limitation year

- ◆ **Dynamic mortality.** Previously ProAdmin calculated 415 limit statutory adjustments based on the dynamic mortality in the year of decrement (issuing a warning to that effect). Now it honors the dynamic mortality table chosen, including the "use the current 417(e) rates" checkbox, for all years after 2007. Since dynamic mortality didn't apply for years before 2008, the 2008 mortality is used for those years (and denoted by a footnote in the detailed results.)
- ◆ **Normal form of payment.** Benefit Definition automatic maximum pension limits now reflect the deferral age or period, if any, of the normal form of payment. Previously the maximum limit as of the calculation age was always returned. If the deferral age/period is not integral, the nearest age/ period is used and a warning is issued. Note that this enhancement applies to both the U.S. 415(b) and Canadian ITA maximums.
- ◆ **Plan Factors.** If specified within the Benefit Definition, reflect plan factors in 415 maximum benefit calculations. This feature was inadvertently broken in version 3.11.

Maximum pension

Limit:  None  U.S. 415(b)  Canadian ITA

Plan reduction factors:

Table:

Service:

## Expressions

- ◆ **#MPMUL.** A new operator #MPMUL is now available for Data Defaults and Service and Salary Definitions transformation expressions. #MPMUL operator accumulates values within measurement periods by multiplying those values. \*

For example, suppose there are 4 values for a field called IntRate:

03/31/2015 1.03  
 06/30/2015 1.05  
 09/30/2015 1.07  
 12/31/2015 1.09

If you used "2 #MPMUL IntRate", the values in the 2015 calendar year measurement period would be:

03/31/2015 1.03  
 06/30/2015 1.0815 = 1.03 \* 1.05  
 09/30/2015 1.157205 = 1.03 \* 1.05 \* 1.07  
 12/31/2015 1.26135345 = 1.03 \* 1.05 \* 1.07 \* 1.09

- ◆ **Comment/Uncomment.** Formula dialog boxes now allow comment and uncomment when you right click selected text.

## Benefit Formula Components

- ◆ **Cash Balance Interest on current period accruals.** For plans that credit interest on current period accruals, have an active rate change, and credit interest for partial crediting periods, a new option allows the active rate change rate to be prorated for the partial crediting period. This might be useful, for example, for a plan with eligibility of 21 & 1 where the member should only get interest credit for their period of eligibility. Now if the main interest is set to 0%, the active rate change interest is set to the plan crediting rate, interest is credited to all of the current period accrual and the new "Reflect active rate change prorated per partial crediting period" box is checked, a new participant will get interest credit only for their period of participation in their first year of eligibility. When the new box is not checked, the full active rate change rate is applied to the accrual.

Interest Crediting

Structure | Adjustments | Active Rate Change | Projection | Accruals | Miscellaneous

The crediting period accrual basis is determined by \*

- Parsing the accrual basis formula to the change between
  - Interest crediting periods
  - Recognized accruals in the current plan year
  - Using the accrual basis formula directly

\* Note: This selection works in tandem with the #SALARY custom operator cash balance crediting parsing parameter.

Discount current plan year accruals from end of crediting period

Credit interest to 1/2 of current period accrual

Reflect active rate change prorated per partial crediting period

Do not credit interest on accruals or balance when service earned in the crediting period is zero

Based on Service Definition Set:

- ◆ **Deferred to SSNRA.** Annuity factor components now have the option to be deferred or temporary to Social Security Normal Retirement Age.

Payment / Calculation Period

Certain:

- none
- to age
- for years

Deferral:

- none
- to age 65
- for years
- to NRD
- to SSNRA

Temporary:

- none
- to age
- for years
- to NRD
- to SSNRA

- ◆ **Age based on fixed prior date field.** Annuity factor components now have the ability to be determined using current interest rates for an age at a fixed prior date.

Youngest/Oldest Recognized Ages:

Use age  annuity value for all ages up to age 55

Spot rate method:

Apply oldest recognized age using:

Age   Age at date field

Use age x annuity values for all ages after age x

- ◆ **Override beneficiary age to {nearest/last birthday}.** Consistent with age and interpolation parameters for payment forms, benefit formula and accrual basis component tables now have the option to use integral age for the beneficiary with interpolated member age.
- ◆ **If age difference is fractional: {interpolate/truncate/nearest/round up}.** Consistent with age and interpolation parameters for payment forms, benefit formula and accrual basis component tables now have expanded rounding options when using age difference tables.
- ◆ **Exact age.** Consistent with age and interpolation parameters for other table types, age by month benefit formula and accrual basis component tables now have the option to use exact age with optional decimal age rounding.
- ◆ **Nearest age.** Consistent with age and interpolation parameters for payment forms, late retirement benefit formula components now include the option to calculate factors using nearest age.

## Custom Operators

- ◆ **#SALARY and #FAS starting and freezing points.** A scalar date Data Dictionary field is now allowed as the Starting and Freezing Point for #SALARY and #FAS operators.

| Starting Point  |         |        |      | Freezing Point   |         |        |      |
|---|---------|--------|------|--|---------|--------|------|
| Age/Svc/Points/Date at least:                                   |         |        |      | Age/Svc/Points/Date no more than:                          |         |        |      |
| Age   | Service | Points | Date | Age  | Service | Points | Date |
|   |         |        |      |  |         |        |      |
|   |         |        |      |  |         |        |      |
|   |         |        |      |  |         |        |      |
|   |         |        |      |  |         |        |      |
| or earlier date: <input type="text" value="DateOfAcquisition"/> |         |        |      | or earlier date: <input type="text" value="&lt;none&gt;"/> |         |        |      |

## Payment Forms

- ◆ **Minimum/Maximum Lump Sum.** A scalar numeric Data Dictionary field is now allowed as the minimum and maximum values for lump sum payment forms.

Apply minimum lump sum value

Amount:

Field:

Apply maximum lump sum value

Amount:

Field:

- ◆ **Age difference table parameters.** The screen to define age and interpolation parameters when using age difference tables has been simplified for ease of use. In addition, age and interpolation parameters for age difference tables now have the options to (1) use integral age for the beneficiary with interpolated member age and (2) round interpolated ages to a specified number of decimals.

- ◆ **Exact age.** Consistent with age and interpolation parameters for payment forms that do not use age by month tables, age by month tables now have the option to use exact age with optional decimal age rounding.

## Mortality Tables

- ◆ Allow the 'Use the current applicable mortality for 417(e)' checkbox on Actuarial Equivalence library entries, Annuity Factor formula components, and Plan Definition | Regulatory Data | U.S. 415(b) Maximum Benefit Limit when 417(e) tables with zero pre-commencement rates are selected. \*
- ◆ **Custom dynamic mortality.** You can now create your own dynamic mortality tables using any improvement scale, even changing or freezing improvements by year. When new SOA improvement scales are published this Fall, you'll be able to immediately reflect the new scale in dynamic tables, barring a change to the underlying base rates. WinTech will still make

improvement scales and dynamic tables available for download shortly after tables are published, but you no longer need to wait for these if time pressures are extreme.

Dynamic Mortality Rate Table - [<new>]

Name:

IRS base rates and projection methodology:

2008

2018

Blend type:

None

Pre/post combined (Small plan)

Unisex pre/post combined (417(e))

Improvement scale:

| From | To   | Rate table        |
|------|------|-------------------|
| -    | 2018 | SOA Scale MP-2016 |
| 2019 | -    | SOA Scale MP-2017 |

Zero out pre-commencement rates/probabilities

Freeze improvements in year

### Service/Salary Projections

- ◆ Improved the calculation of projected values for Salary Definitions and hours/service Service Definitions, when the underlying data is reported weekly or biweekly and the measurement period is less frequent.



## Output

- ◆ **Benefit Definition results at more dates.** Include all dates in the Benefit Definition detailed result report in a table after the table which only displays Commencement Date(s).


### Benefit Definitions


#### Benefit: Ret - Cash Balance Plan Retirement - proposed

PersonID: 111-11-1111

| Date       | Age    | Eligible? | Salary     | CBBENEFIT_PROPOSED Component | Formula Benefit | Maximum Benefit | Projected Benefit |
|------------|--------|-----------|------------|------------------------------|-----------------|-----------------|-------------------|
| 12/31/2019 | 56y 3m | Yes       | 207,532.51 | 16,405,822.21                | 16,405,822.21   |                 | 16,405,822.21     |
| 3/31/2020  | 56y 6m | Yes       | 52,914.10  | 16,687,714.60                | 16,687,714.60   |                 | 16,687,714.60     |
| 4/01/2020  | 56y 6m | Yes       | 52,914.10  | 16,687,714.60                | 16,687,714.60   |                 | 16,687,714.60     |
| 10/01/2028 | 65y 0m | Yes       | 0.00       | 25,503,703.81                | 25,503,703.81   |                 | 25,503,703.81     |

Benefit formula = CBBENEFIT\_PROPOSED

Eligibility: Immediate 


using Svc Def Set: <Base Service Set> 


#### <All calculation dates>

| Date       | Age    | Eligible? | Salary    | CBBENEFIT_PROPOSED Component | Formula Benefit | Maximum Benefit | Projected Benefit |
|------------|--------|-----------|-----------|------------------------------|-----------------|-----------------|-------------------|
| 12/31/1987 | 24y 3m | Yes       | 0.00      | 0.00                         | 0.00            |                 | 0.00              |
| 12/31/1988 | 25y 3m | Yes       | 0.00      | 0.00                         | 0.00            |                 | 0.00              |
| 12/31/1989 | 26y 3m | Yes       | 9,975.37  | 0.00                         | 0.00            |                 | 0.00              |
| 12/31/1990 | 27y 3m | Yes       | 22,283.22 | 0.00                         | 0.00            |                 | 0.00              |
| 12/31/1991 | 28y 3m | Yes       | 23,183.72 | 0.00                         | 0.00            |                 | 0.00              |
| 12/31/1992 | 29y 3m | Yes       | 24,120.61 | 0.00                         | 0.00            |                 | 0.00              |
| 12/31/1993 | 30y 3m | Yes       | 53,304.36 | 0.00                         | 0.00            |                 | 0.00              |
| 12/31/1994 | 31y 3m | Yes       | 26,109.50 | 0.00                         | 0.00            |                 | 0.00              |
| 12/31/1995 | 32y 3m | Yes       | 29,875.01 | 0.00                         | 0.00            |                 | 0.00              |

- ◆ **Payment form detailed results.** Improve the detailed results for payment forms that reference age difference tables for conversion to include more useful information.
- ◆ **Added and improved hyperlinks.** Added several additional properties hyperlinks to improve the Detailed Results exhibits. In general, also Split Eligibility Definitions and their referenced Service Definition Sets into two pieces and put a button on each. If <Base Service Set> is referenced, use that terminology but have the properties go to the Base Service Set.

Benefit formula = CBBENEFIT\_PROPOSED

Eligibility: Immediate 

using Svc Def Set: <Base Service Set> 

- ◆ **Message Code.** Added a new column, "Code", to the tabular view of output definition results. This column is associated with the optional code for User Defined Messages before they are extracted to MDB or XML.

Processing messages:

| DOT       | Error Source | Code | Message                                  |
|-----------|--------------|------|--|
| 3/31/2020 | U            | 1    | Participant is not eligible for cashout. |

## System

- ◆ Added additional error trapping and messages when validating the XSD within XML Linkages. Previously a generic error "Problem validating the selected schema. Please select another file." Was returned. \*
- ◆ Reduce the memory (by as much as a 1/2) used by the Repository File when loaded by ProAdmin Desktop (calculator tester) and ProAdmin Server. \*
- ◆ Speed up processing time by compiling formulas when a system plan is loaded to the repository.
- ◆ [www.winklevoss.com](http://www.winklevoss.com) is now available in French, German, and Spanish.

## Changes Log

- ◆ Be sure to read the changes log (see the "changes log (ProAdmin).doc" file in the ProAdmin directory) about updates to certain calculations that may change results.

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# Age Definition

You can now create named age calculation methods and define one as the default for the Plan Definition. All objects that require an age definition can either reference this default or use an alternative age definition. The added benefits of using age definitions include:

- ◆ For plans that define a single age calculation method, it will only be defined once as the default age definition and automatically flow through to all other places that require a definition for calculating age (i.e., payment forms, relative value, annuity factors, late retirement and table components) and are set to use the default age definition.
- ◆ It is easier to change the default age calculation method by changing it one place (i.e., the plan attributes) and all objects referencing the default age definition will automatically use the new age calculation method.
- ◆ It is easier to modify the age calculation method by editing it directly in the library and all objects referencing that age definition will automatically use the modified version.
- ◆ Age and interpolation parameters are consistent and available in all places that require an age calculation method. Future age parameter enhancements will apply to all objects that use age definitions.
- ◆ It is easier to compare the age calculation method between objects for reviewing purposes.
- ◆ It streamlines the age and interpolation screens making them easier to read and understand.

For example, if a plan defines the calculation of age as:

- Years and completed months rounded to four (4) decimal places for calculating the present value of payment forms,
- Last birthday for calculating relative value,
- Age nearest year for all other factors (benefit formula components).

In the past, you would have been required to set the age calculation method separately for each payment form, benefit formula component, accrual basis component and relative value. Now you can define these three (3) different methods once and reference them accordingly:

- 1) Create the three age calculation methods and save them in the Age Definition Library:
  - a. Age nearest:

Age Definition - [Nearest years]

Name:

Age definition:

Nearest

Last birthday

Years and  months

Exact

Note: Factors will be determined at the integral age

Round age to  decimal places

Override beneficiary age to

(only applies to joint life factors)

b. Years and completed months rounded to 4 decimals:

Age Definition - [Years and completed months rounded to 4 de...]

Name:

Age definition:

Nearest

Last birthday

Years and  months

Exact

Note: Factors will be interpolated to the fractional age

Round age to  decimal places

Override beneficiary age to

(only applies to joint life factors)

c. Last birthday:

Age Definition - [Last birthday]

Name:

Age definition:

Nearest

Last birthday

Years and  months

Exact

Note: Factors will be determined at the integral age

Round age to  decimal places

Override beneficiary age to

(only applies to joint life factors)

2) Then in the plan definition under Plan Attributes, reference the age definition for nearest years as the Default Age Definition:

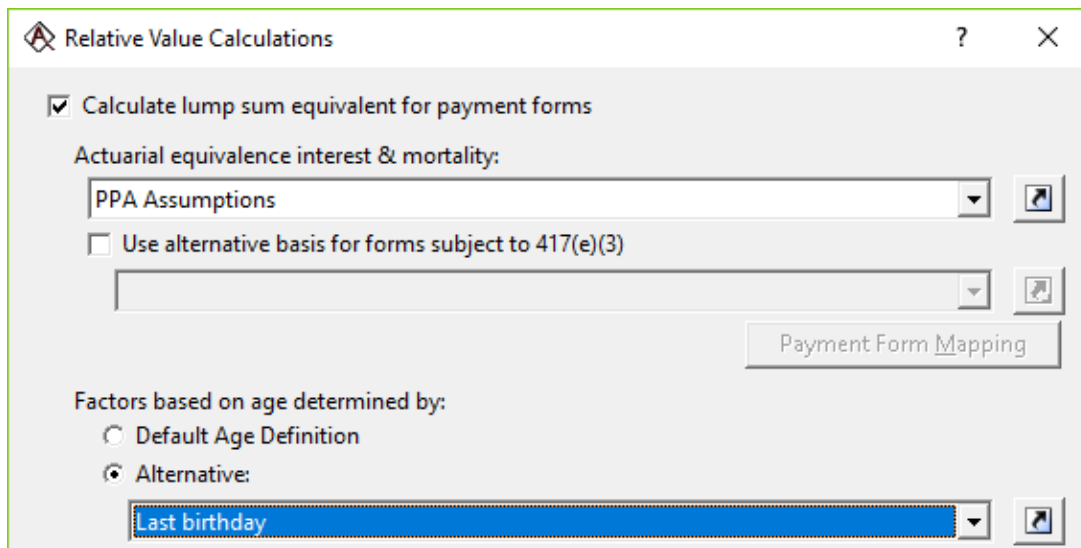
Plan Attributes

Plan Year begins:

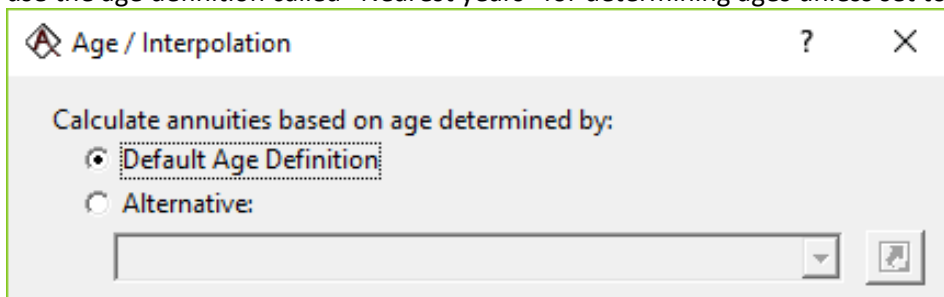
Plan's actuarial equivalence:

Default Age Definition (for payment forms & components):

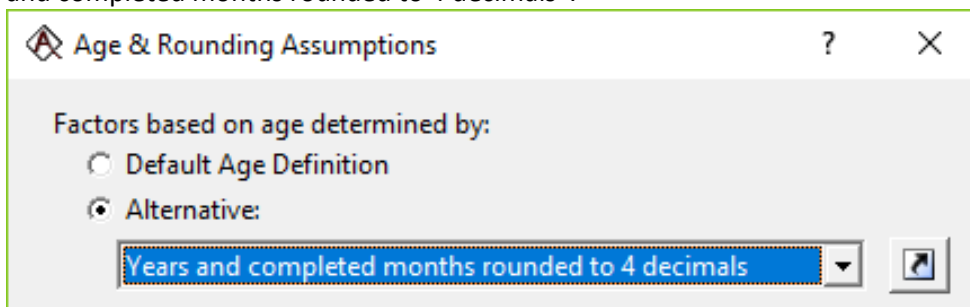
- 3) Next in the plan definition under Relative Value Calculations, change the factors to be based on age determined by to use an Alternative age definition and select the age definition called “Last birthday”:



- 4) All new components will automatically get set to use the Default Age Definition – meaning that they will use the age definition called “Nearest years” for determining ages unless set to alternative:



- 5) Change payment forms that use an Alternative age definition and select the age definition called “Years and completed months rounded to 4 decimals”:



The update to ProAdmin version 3.12 will do the following to existing ProAdmin clients:

- ◆ Create the Age Definition Library
- ◆ Create age definitions by:
  - Looping through all payment forms, plan definitions (relative value), benefit formula components and accrual basis components.
  - Reading the age and interpolation parameters for each object.
  - Translating those parameters into age definition library parameters.
  - Saving only the unique age definitions.
  - Saving the reference to the appropriate age definition for each object as an Alternative age definition.

- ◆ Set the Default Age Definition in the plan definition plan attributes to be the age definition referenced in the most payment forms. In the case that there is more than one age definition referenced the most, select the first entry that is most referenced.
- ◆ If applicable, change the relative value to use the default age definition.
- ◆ Loop back through payment forms and change applicable forms from using an alternative age definition to using the default age definition in the following simple cases:
  - There is only one plan definition, or
  - All plan definitions use the same default age definition, or
  - Plan definitions contain unique payment forms (no overlapping payment forms).
- ◆ Loop back through benefit formula and accrual basis components and change applicable ones from using an alternative age definition to using the default age definition in the following simple cases:
  - There is only one plan definition, or
  - All plan definitions use the same default age definition.
- ◆ Note that the names of the age definition library entries are created by the description of the underlying parameters selected, just like in the example outlined above. This makes it easy to know how the underlying parameters are defined without having to open the library entry when modifying or reviewing objects. This is how we recommend naming all objects within ProAdmin.

New objects created after updating to version 3.12 will default to use the default age definition unless modified to use an alternative age definition.