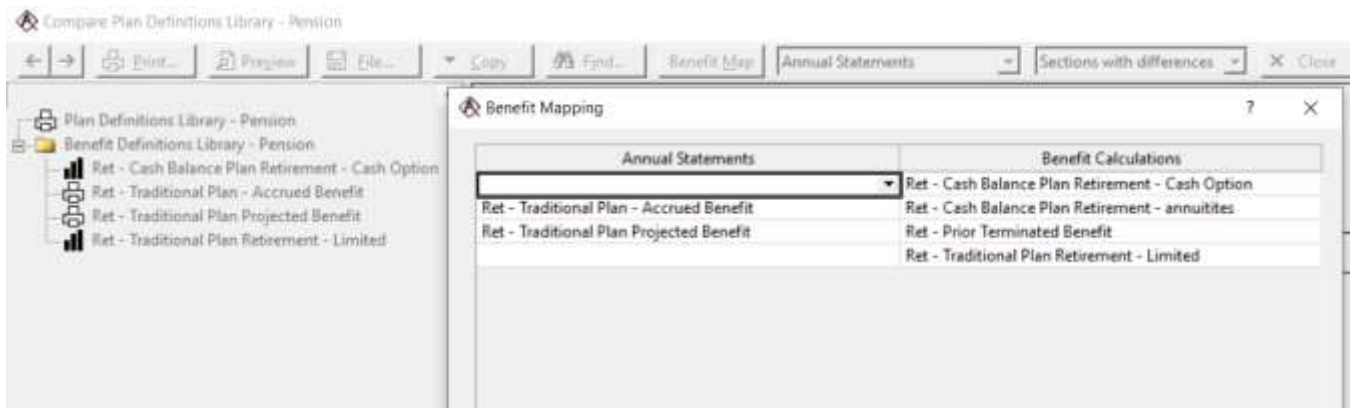


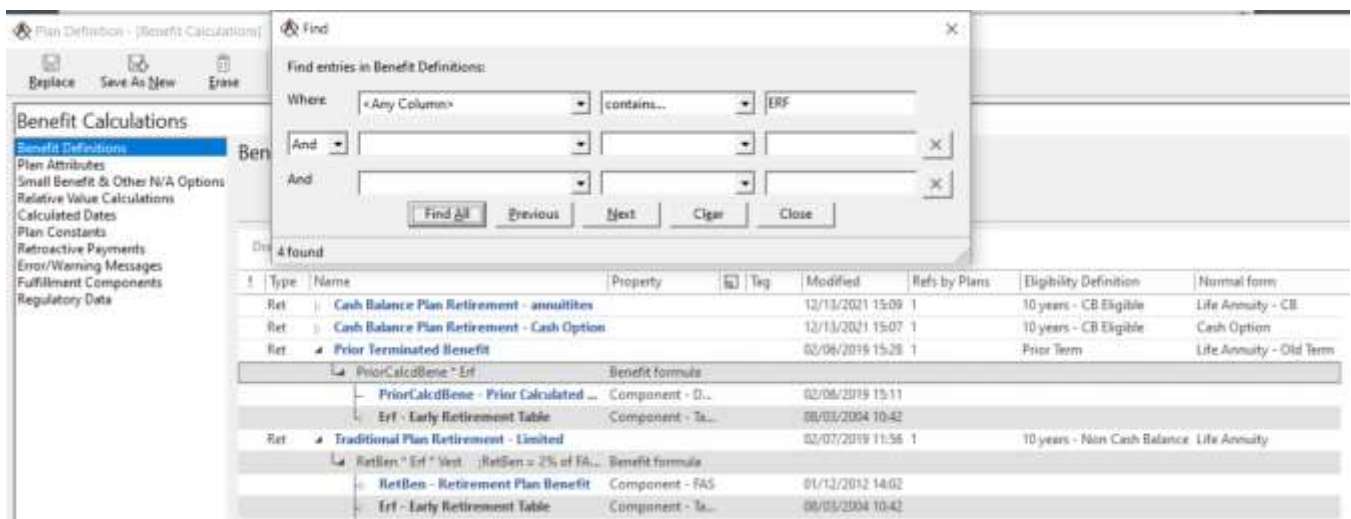
ProAdmin version 3.17 introduces deep compare of plan definitions, 415 calculation improvements, and alternative beneficiary date of birth. Full details plus many other new features are described below.

Interface

- Deep Compare of Plan Definitions.** Comparing two Plan Definitions now automatically compares the underlying benefit definitions too. This eliminates the need to leave the plan definition comparison, go to the benefit definition library, remember which benefit definitions to compare, and then compare them. ProAdmin makes an intelligent guess to match up benefits between the two plans. You can modify ProAdmin's guess by clicking the Benefit Map button.



- Find.** A Find feature has been added to the Plan Definition Editor which lets you search through the benefit definitions and underlying components. For example, you could use the search to find the benefit definitions using the "ERF" component.



- ◆ **Data Review.** The Data Review dialog box for all calculation types has been improved to use scrolling instead of the tab approach for navigation. Changed or defaulted values will now be shown with a blue background, and you can navigate through the changed/defaulted fields. For more information, see [Data Review Changes](#) on page 8.

⏏ Data Review
✕

📄 Apply Defaults
⏪ Prev Change
⏩ Next Change
➔ Go To

BeneDateOfBirth:

BeneSex:

BeneType:

BenFrozen:

Effective Date	Value
01/11/1991	3,214

BenHistEffDte:

Effective Date	Value
12/31/1988	09/30/2020

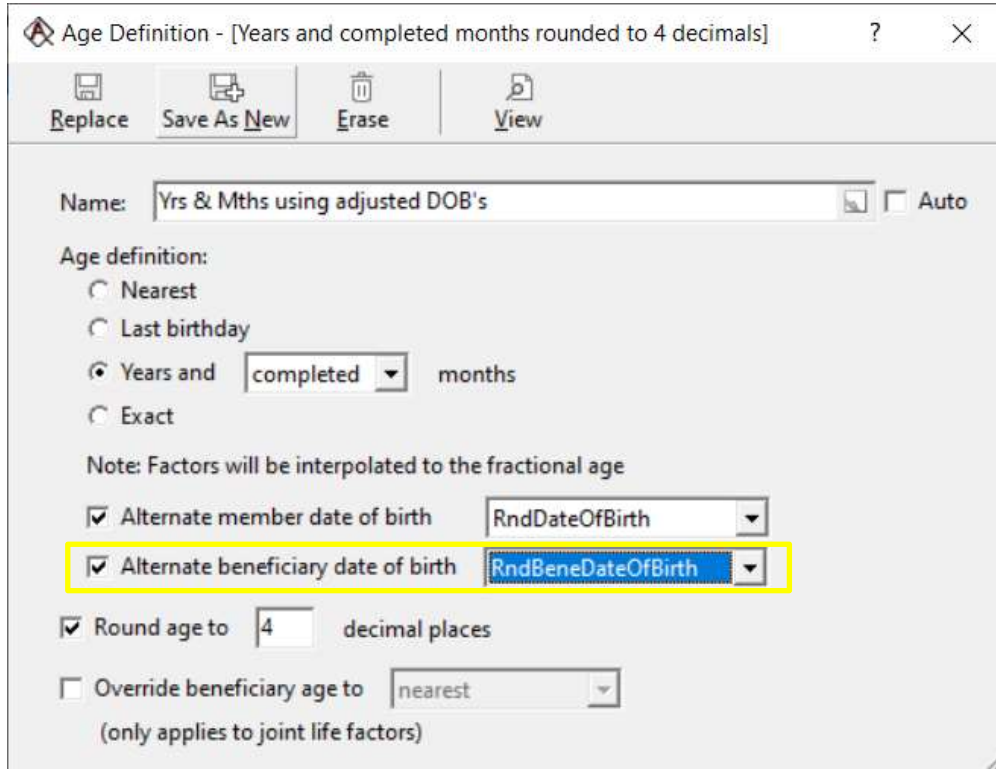
CBCConvDate:

CBGrossBegBalAtConv:

Effective Date	Value
12/31/1988	0

Age Definitions

- ◆ **Alternative beneficiary DOB.** Age Definitions now allow you to reference an alternative beneficiary date of birth field. This feature is useful for plans that calculate age in a way that does not neatly fit into one of the age calculation approaches ProAdmin handles (e.g., granting a month of age if the member is born after the 15th of the month). Now, you can modify the beneficiary date of birth in a Data Default expression and reference the modified date field to get the desired beneficiary age calculation result.



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

Replace Save As New Erase View

Name: Yrs & Mths using adjusted DOB's Auto

Age definition:

- Nearest
- Last birthday
- Years and months
- Exact

Note: Factors will be interpolated to the fractional age

Alternate member date of birth

Alternate beneficiary date of birth

Round age to decimal places

Override beneficiary age to

(only applies to joint life factors)

415 Maximum Benefit Limitations

- ◆ **Cost-of-living increases to the IRC § 415(b) dollar limitation** can now be defined to cease at decrement, benefit commencement, a fixed calendar year (which may be a Plan Constant), or the earlier of decrement and a fixed calendar year.

U.S. 415(b) Maximum Benefit Limit

Dollar limitation

Interest rate before age 62: 0.05

Interest rate after age 65: 0.05

Mortality table:
IRS 2008+ Applicable Mortality Table for 417(e) (dynamic)

Use the current applicable mortality for 417(e)
 Apply mortality discount in actuarial reductions & increases
 Apply actuarial increases 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:
<Base Service Set>

Limitation year: plan year

Cost-of-living increases cease at: decrement

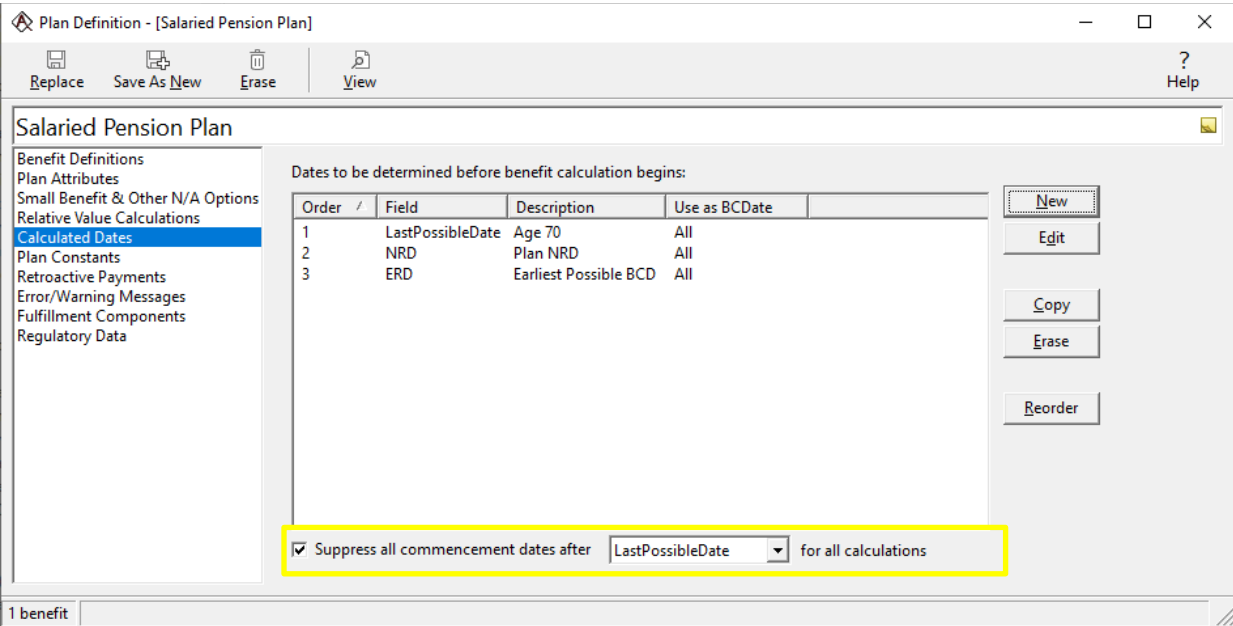
Applicable interest rate for lump sum conversion: 417(e)(3) 2 mo lookback from January

dropdown options: decrement, commencement, decrement, calendar year, earlier of decrement and calendar year

- ◆ **Lump sum payment forms** can now be directly limited by the appropriate 415 maximum benefit limitation rather than being converted from a limited annuity benefit.
- ◆ For more information, see [415 Calculation Improvements](#) on page 9.

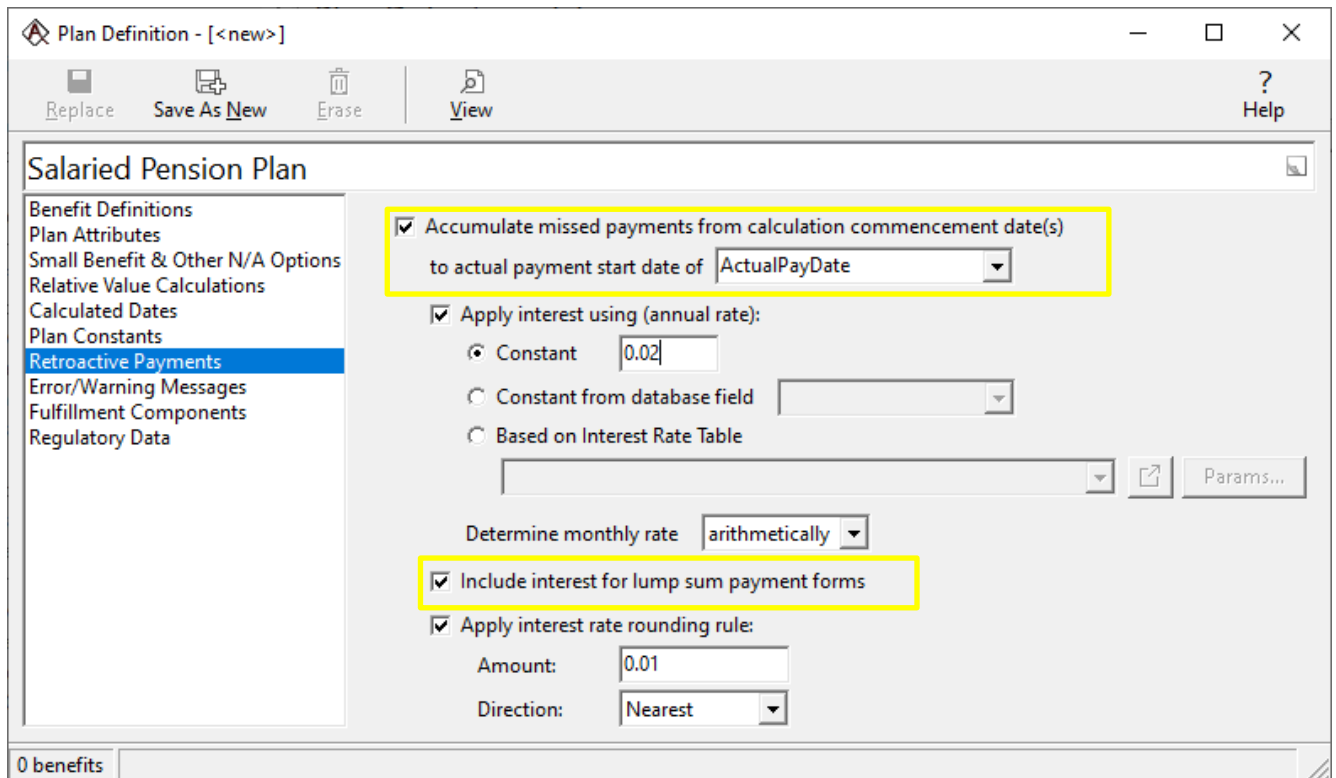
Calculated Dates

- ◆ All Commencement dates after a selected calculated commencement date will now be suppressed. During the calculation, once the calculated commencement date is determined, all requested commencement dates after that date are suppressed. Modifications to Calculated Dates were made to implement this feature and identified as a changes log issue.



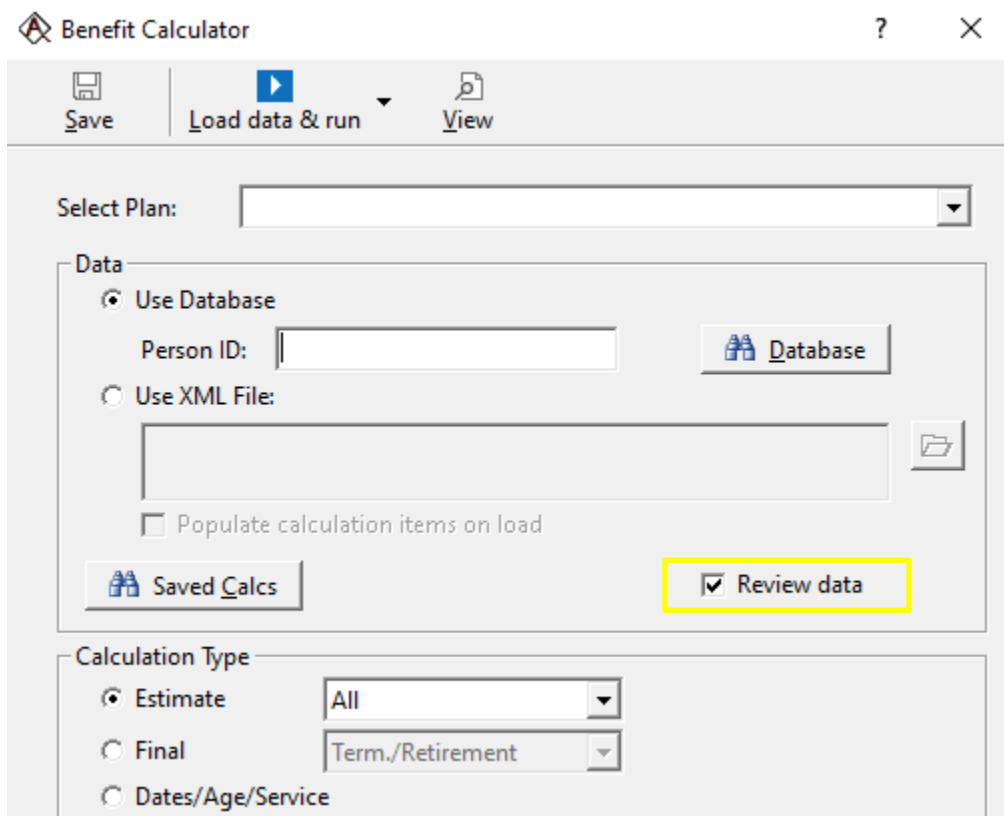
Retroactive Payments

- ◆ The dialog box text for retroactive payments has been improved to better describe how ProAdmin determines the retroactive payments.



Benefit Calculator Mode

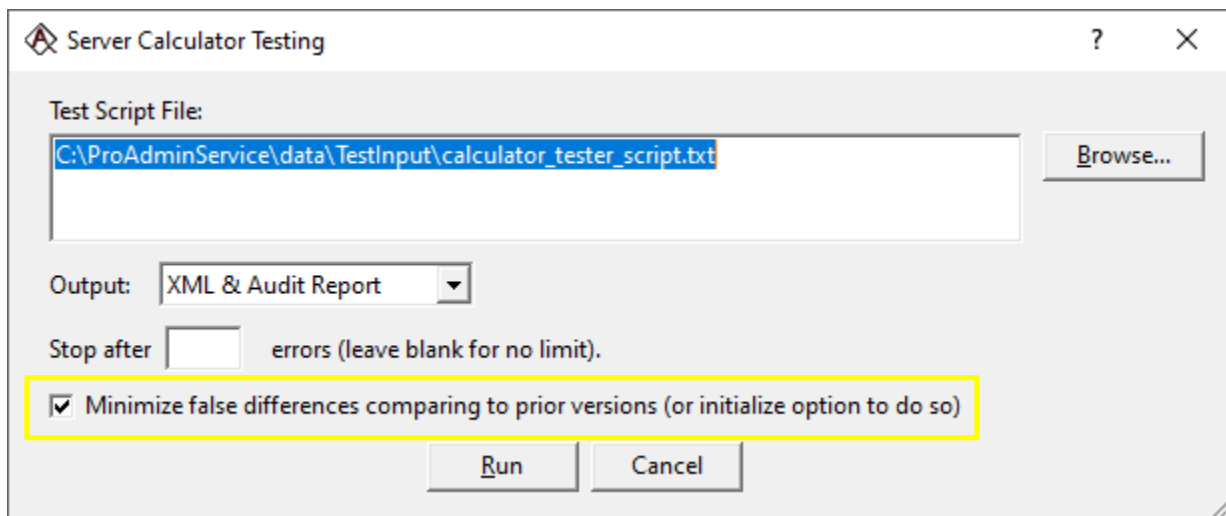
- ◆ **Review data.** The Review data check box for Benefit Calculator users is now the default setting.



The screenshot shows the 'Benefit Calculator' application window. The title bar includes a question mark and a close button. The menu bar contains 'Save', 'Load data & run', and 'View'. Below the menu bar is a 'Select Plan:' dropdown menu. The 'Data' section has two radio buttons: 'Use Database' (selected) and 'Use XML File'. The 'Use Database' section includes a 'Person ID:' text box and a 'Database' button. The 'Use XML File' section includes a text box and a file icon button. There is a checkbox for 'Populate calculation items on load'. At the bottom of the 'Data' section are 'Saved Calcs' and 'Review data' buttons, with the 'Review data' button highlighted by a yellow box. The 'Calculation Type' section has three radio buttons: 'Estimate' (selected), 'Final', and 'Dates/Age/Service'. The 'Estimate' section has a dropdown menu set to 'All'. The 'Final' section has a dropdown menu set to 'Term./Retirement'.

Server Tools

- ◆ **Reduce false differences.** A new Calculator Tester option has been added to reduce the number of false differences when comparing old and new _AUDIT.txt and _OUT.xml files. This feature does add time and disk space to the calculator tester feature, but, because it regenerates formatted output from previous results, it eliminates false differences in the comparison due to new labels, new columns, additional information, etc.



The screenshot shows the 'Server Calculator Testing' application window. The title bar includes a question mark and a close button. The 'Test Script File:' section has a text box containing 'C:\ProAdminService\data\TestInput\calculator_tester_script.txt' and a 'Browse...' button. The 'Output:' section has a dropdown menu set to 'XML & Audit Report'. The 'Stop after' section has a text box and the text 'errors (leave blank for no limit)'. At the bottom of the window is a checkbox for 'Minimize false differences comparing to prior versions (or initialize option to do so)', which is highlighted by a yellow box. Below the checkbox are 'Run' and 'Cancel' buttons.

- ◆ **XML Linkage.** When adding or replacing a System Plan in the repository, if the XML Database Linkage and/or XML Output Linkage is different than those in the repository, you are now given the opportunity to compare entities and the option to replace or keep the linkage(s) in the repository.

Mortality Rates

- ◆ Added '**SOA Scale MP-2021**' to Mortality Improvement Scales library.

ProAdmin API

- ◆ ProAdmin now has an Application Programming Interface (API) that lets you perform select ProAdmin Desktop tasks from another application.

Initially ProAdmin API has two (2) functions, **GetMessage** and **SetMessage**, that let you find and replace (or add) text in the Message Definition Library.

For details about how to install the API and use these functions please see "ProAdmin API Users Guide.pdf" in the ProAdmin installation folder.

Help

- ◆ The FAQ section of the help has several new articles regarding how to work with events. Please visit [Help](#) and navigate to the FAQ section.

Changes Log

- ◆ Be sure to read the changes log (Click on Changes Log under the Help menu) about updates to certain calculations that may change results.

Data Review Changes

When reviewing data, you can now easily scroll through the data elements referenced by the calculation within one dialog. The new toolbar has buttons to Apply Defaults, navigate through previous or next fields that have changed, and Go To a specific field.



When you enter a manual data change, your changes will be highlighted in blue.

CBGrossBegBalAtConv:	Effective Date	Value
	12/31/1988	0

If you mouse over the manually changed field you will see the original value from data source.

BenFrozen:	Effective Date	Value
	01/01/2020	1,250

Original value: 0

Fields that are set based on Calculated Dates, or are always updated by a Data Default, will have a new indicator showing you how it is updated or used (e.g. Calculated commencement date, or Values are reset when defaults are applied).



415 Calculation Improvements

ProAdmin version 3.17 includes several enhancements to 415 maximum benefit calculations. There are two categories of enhancement:

1. New options to control when cost of living increases on the dollar limit cease
2. Ability to directly calculate the maximum limit for lump sum payment forms

Dollar Limit Cost-of-Living Increases

The default under the law is that the dollar limit increases cease at “severance”, but a plan document can have different terms. ProAdmin’s prior treatment in this area (a changes log issue) was somewhat hidden because it is typical to assume a 0% increase in the dollar limit, so, effectively, ProAdmin was typically using the dollar limit at decrement, and that is the current default. Now, however, there are options to use the dollar limit at:

- Decrement,
- Benefit Commencement,
- A specified calendar year, or
- The earlier of decrement and a specified calendar year.

U.S. 415(b) Maximum Benefit Limit

Dollar limitation

Interest rate before age 62: 0.05

Interest rate after age 65: 0.05

Mortality table: IRS 2008+ Applicable Mortality Table for 417(e) (dynamic)

Use the current applicable mortality for 417(e)

Apply mortality discount in actuarial reductions & increases

Apply actuarial increases 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: <Base Service Set>

Limitation year: plan year

Cost-of-living increases cease at: **calendar year**

Applicable interest rate for lump sum conversion: 417(e)(3) 2 mo lookback from January

The latter two options accommodate plans that have been frozen and limit the dollar limit to the level in affect at that time. The calendar year can be specified as a Plan Constant to accommodate complex plans with multiple freeze years.

Cost-of-living increases cease at: earlier of decrement and calendar year

2019

Lump Sum Payment Forms

By default, ProAdmin limits a Benefit Definition by the 415(b) Dollar Limit applicable to a life annuity or qualified joint & survivor annuity, and then that limited benefit is converted into alternative payment forms based on the payment form conversion factors specified by the user. This approach may produce inappropriate results under many circumstances but has the most potential to be wrong when a lump sum is payable. To address this potential problem, ProAdmin Benefit Definitions now allow the U.S. 415(b) limit to be adjusted for lump sum payment forms. (A future release will provide this flexibility for other payment forms.)

Maximum pension

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

Adjust limit for lump sum payment forms

Plan reduction factors:

Table: <not applicable>

Service: <Base Service Set>

When this new Benefit Definition box is checked (and lump sums are payable), ProAdmin calculates two maximum benefit limitations for each actuarial equivalence basis: one for lump sums and one for annuities. The annuity basis is the same as previously calculated. The lump sum limit is the annuity limit (prior to the \$10,000 exemption) multiplied by a straight life annuity factor calculated on the lesser of the following bases:

1. Plan actuarial equivalence
2. 5.5% interest and applicable 417(e) mortality
3. Applicable 417(e) interest and mortality, with the resultant factor multiplied by 1.05

The plan actuarial equivalence basis is as specified in the Plan Attributes. The applicable 417(e) mortality is assumed to be the mortality table specified for calculating the 415(b) dollar limitation under Regulatory Data | U.S. 415(b) Maximum Benefit Limit. New parameters on this same dialog clarify the applicable interest rates:

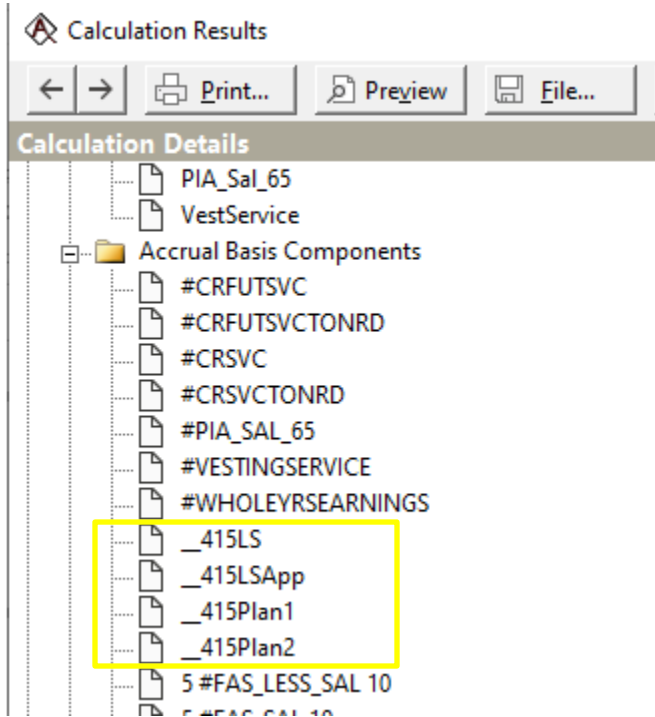
Applicable interest rate for lump sum conversion:

PPA Segment Rates

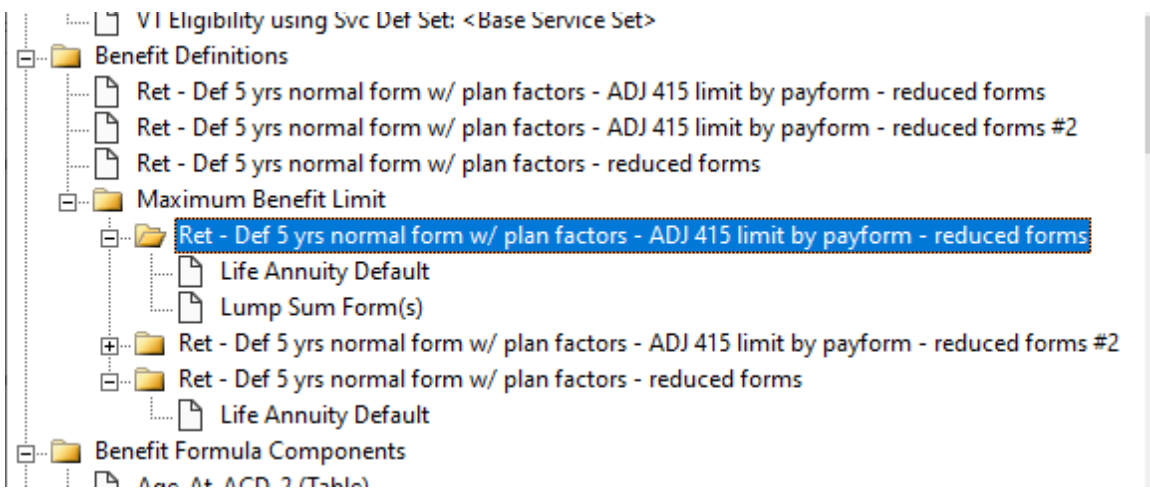
Apply PPA phase-in from this GATT Interest Rate Table:

GATT

The factor value on each basis is included in the maximum benefit detailed result, with links to the complete annuity factor calculation under the detailed results for Accrual Basis Components.



To improve usability, the maximum benefit limit tables are collected in a folder for each benefit definition, as compared to the single table for each benefit definition when this option is not selected.



Excerpt from Lump Sum Form(s) Maximum Benefit Limit detailed results:

Date	Member Age	Participation Service	Dollar Maximum	Plan Reduction Factors	Plan Factors Normalized to age 62	Statutory Adjustment Factors	Final Adjustment Factors*	F
12/31/2015	53y 6m	24.666700	185,000	0.782703	0.891223	0.566947	0.566947	
12/31/2016	54y 6m	24.666700	185,000	0.793942	0.904020	0.604661	0.604661	
12/31/2017	55y 6m	24.666700	185,000	0.805181	0.916818	0.645297	0.645297	
4/01/2018	55y 9m	24.666700	185,000	0.807991	0.920017	0.661694	0.661694	
12/31/2018	56y 6m	24.666700	185,000	0.816420	0.929615	0.694391	0.694391	
12/31/2019	57y 6m	24.666700	185,000	0.827659	0.942412	0.740433	0.740433	
12/31/2020	58y 6m	24.666700	185,000	0.838898	0.955209	0.790652	0.790652	
12/31/2021	59y 6m	24.666700	185,000	0.850137	0.968007	0.844879	0.844879	
12/31/2022	60y 6m	24.666700	185,000	0.861376	0.980804	0.903368	0.903368	
12/31/2023	61y 6m	24.666700	185,000	0.872615	0.993601	0.966975	0.966975	
7/01/2024	62y 0m	24.666700	185,000	0.878235	1.000000	1.000000	1.000000	
12/31/2024	62y 6m	24.666700	185,000			1.000000	1.000000	
12/31/2025	63y 6m	24.666700	185,000			1.000000	1.000000	
12/31/2026	64y 6m	24.666700	185,000			1.000000	1.000000	
7/01/2027	65y 0m	24.666700	185,000			1.000000	1.000000	

Life Annuity Maximum	Plan basis	5.5% lump sum basis	App. interest basis	App. interest basis x 1.05	Lump sum factor (lowest of 3)	\$10,000 Exemption (prorated)	Maximum Benefit Payable
104,885.23	12.690350	14.468899	16.877752	17.721639	12.690350	0.00	1,331,030.32
111,862.26	12.489555	14.276612	16.293083	17.107737	12.489555	0.00	1,397,109.78
119,379.99	12.281511	14.077449	17.096537	17.951364	12.281511	0.00	1,466,166.69
122,413.39	12.228562	14.303840	17.293455	18.158128	12.228562	0.00	1,496,939.66
128,462.30	12.065709	14.146434	17.075000	17.928750	12.065709	0.00	1,549,988.79
136,980.11	11.841728	13.892611	15.519993	16.295993	11.841728	0.00	1,622,081.17
146,270.54	11.609348	13.653496	17.445822	18.318113	11.609348	0.00	1,698,105.65
156,302.64	11.368593	13.414225	18.282515	19.196641	11.368593	0.00	1,776,941.16
167,123.08	11.119711	13.231283	17.954850	18.852593	11.119711	0.00	1,858,360.32
178,890.30	10.863145	13.007972	17.574418	18.453139	10.863145	0.00	1,943,311.29
185,000.00	10.733008	12.906432	17.401477	18.271551	10.733008	0.00	1,985,606.55
185,000.00	10.599560	12.779377	17.188833	18.048274	10.599560	0.00	1,960,918.52
185,000.00	10.329838	12.545686	16.798358	17.638276	10.329838	0.00	1,911,020.01
185,000.00	10.055061	12.306515	16.402482	17.222606	10.055061	0.00	1,860,186.38
185,000.00	9.916558	12.197633	16.222337	17.033454	9.916558	0.00	1,834,563.22

If the 415(b) dollar limitation is adjusted for lump sums, the payment form detailed results for lump sums show the pre-415(b) benefit, the plan lump sum after conversion, the 415(b) lump sum maximum and then the "preliminary lump sum" before any alternative actuarial equivalence bases. (If the 415(b) dollar limitation is not adjusted for lump sums, the payment form detailed results continue to show the normal form benefit and then the "preliminary lump sum" after the conversion factor is applied.)

Conversion Factor	Pre-415(b) Benefit	Plan Lump Sum	415(b) Payment Form Maximum	Preliminary Lump Sum	Min LS Conversion Factor	Minimum Lump Sum	Member Lump Sum Benefit
12.228562	1,000,000.00	12,228,562.00	1,496,939.66	1,496,939.66	18.326067	1,496,939.66	1,496,939.66
10.733008	1,000,000.00	10,733,008.00	1,985,606.55	1,985,606.55	18.039685	1,985,606.55	1,985,606.55
9.916558	1,000,000.00	9,916,558.00	1,834,563.22	1,834,563.22	16.302352	1,834,563.22	1,834,563.22
8.506924	1,000,000.00	8,506,924.00	2,275,374.57	2,275,374.57	13.517821	2,275,374.57	2,275,374.57
7.939706	1,000,000.00	7,939,706.00	2,481,973.77	2,481,973.77	12.421570	2,481,973.77	2,481,973.77

The treatment of non-lump sum payment forms is essentially unchanged with the current enhancement: the benefit definition is limited by the annuity maximum benefit and then that benefit is adjusted for each non-lump sum payment form based on the payment form conversion factors.

We hope to release an enhancement in the near future to properly adjust non-lump sum payment forms, such as qualified J&S annuities and certain and life annuities, directly for the 415(b) dollar limit. This project is delayed in part because of the complications of having to address each of ProAdmin's many payment form types. We hope and believe, however, that this enhancement for lump sum payment forms is the most needed and valuable.