

# What's New in version 3.11

ProVal version 3.11 introduces sample life go-to buttons, deep compare, post-termination retirement rates, enhanced amortization options, and many additional features listed below.

## Interface

• Sample life go-to buttons. New a buttons found in sample life reports let you open benefits, components, and assumptions read-only. This lets you easily see how you parameterized the run without having to leave the sample life.

<b>V</b>	Sample Life Output
🖝 🔿 🖨 Print 🖪 Preview 🔚 Eile	🕒 Copy 🎢 Find RecID 🔽 1
Input Data	Benefit Formula Components
	Name: NRBFT
Benefit Formula Components	Type: Accrual finition
ERF (Table)     NBBBt (Accrual Definition)	
Accrual Definition Basis Formulas	
🗄 🧰 Accrual Basis Co 🛷	Benefit Formula Component - [NRBFt]
Weighted Average F	
Valuation Salary	Description:
PV of Future Service NRBFt	1.5% FAP up to 30 YOS
PV of Future Benefits	Accentral definition
Accrual format:	
Final average	[basis x (sum of rates)]
C Career average	[sum of (basis x rates)]

 Deep compare. When you compare runs (Valuations, Valuation Sets, Core Projections, Deterministic Forecasts and Stochastic Forecasts), ProVal now also automatically compares the inputs too. For example, if you compare two Valuations and notice that they reference different funding assumptions, you can simply click on funding assumptions on the left side to see how they differ.

🎸 Compar	e Valuations - U.S. Qualified Pension
← → 🛃 Print 💁 Preview 🛃 File 🗈 Cop	y 🛱 Find FA Valuation 2015 🔹 All sections
Compare     Valuations - U.S. Qualified Pension     Inputs	Comparison key:
Census Specifications - Pension     Plan Definitions Library - Pension     Valuation Assumptions - U.S. Qualified Pension - Accounting     Valuation Assumptions - U.S. Qualified Pension - Funding	[-] FA Valuation 2015 [+] FA Valuation 2016

• Save as New and Substitute. When editing a Benefit Definition from within a Plan Definition, the 'Save As New' button is now a split button with an option to 'Save As New and Substitute'.

That is, omit the original benefit from the plan and add the new benefit, effectively exchanging the original benefit for the new benefit.

Save As <u>N</u> ew	•	
Save As New		
Save As New ar	nd S	Substitute

• If you widen a column in a library (e.g., because you have really long names), ProVal will remember the setting for the current session within the current client.

## **Census Data**

- Merge Data library. Merge Data settings can now be saved in a library for easy recall and reuse. In addition, the interface has been streamlined into a single screen instead of a multistep wizard.
- Custom Quick Access Toolbar. In the data editor, you can now add your favorite commands to the Quick Access Toolbar (that appears above the ribbon). You can also assign keyboard shortcuts to your favorite commands.



• **Easy layout modifications**. Freezing, reordering, hiding, and unhiding fields are now much easier than before.

<b>V</b>			
🚽 🖉 - 🔍 - 🕲 =			
File <u>H</u> ome <u>V</u> iew	creen <u>R</u> eview		
Z↓ Sort Record	; Hide/Unh	i <u>d</u> e <u>Z</u> oom 100% ▼ elds	
Records Records in in Rows Columns	Freeze F <u>i</u> elds		St <u>y</u> le <u>C</u> lear Library Settings
Records	Fields	Zoom	Settings

• For Freeze Fields, you now simply check which fields to freeze. Alternatively, you can select fields in the data editor and right-click to freeze them.



 For Reorder Fields (formerly Arrange Fields), you can now move up, move down, move to top, move to bottom, or drag and drop selected fields. You can move a single field at a time or many fields at once.

Ŵ	Reorder Fields	? ×
Displayed Name ID Sex Status DOB DOH Salary AccBen Form SpDOB SpSex CovgCodd	fields:	

- For Hide/Unhide Fields, you can now hide, unhide, *and* reorder fields all at once using an interface similar to Reorder Fields above. Alternatively, you can select fields in the data editor and right-click to hide them.
- In spreadsheet edit, hovering over a field name shows a tooltip with the description for that field.

## All Plans

• **Contribution schedule**. A contribution schedule is now available in all modes (not just U.S. Qualified Pension mode) for fine control over contributions in the first year.

For more, see Public Plan Enhancements on page 8.

 Amortizations. For Normal Cost + Supplemental Cost contribution policies (common for U.S. Public plans), you now have a lot more flexibility in handling amortizations such as handling open and closed amortizations simultaneously, allowing different recognition periods when the plan is unfunded or in surplus, and specifying custom recognition periods.

For more, see Public Plan Enhancements on page 8.

Contribution constraints. Contribution constraints options have been expanded so that they
can be based on a percentage of total payroll, a percentage of valuation payroll, or a dollar
amount, and be applied as a minimum and/or maximum.

V Contribution Policy			?	×
Actuarial Cost Method: Projected Unit Credit (PUC)	•			
Contribution Policy: Normal Cost	•	<u>A</u> dd'l Params		
Apply lag period     Parameters				
Hpp1y constraints based on:  % of total payroll       ▼         ▼ Minimum: 5       % of pay				
🔽 Maximum: 15 % of pay				

• Effective interest rates are now calculated after reflecting scaling factors. This will improve results in Valuation Sets and forecasts, particularly when multiple underlying runs are aggregated and there are large differences in the scaling factors amongst those underlying runs.

In addition, there are small improvements to other calculations related to how scaling factors are reflected when deriving a benefit payment stream for determining:

- Liabilities in forecasts where the shape of the interest rate curve changes ("full yield curve" forecasts) in which projected benefit payments are being discounted to determine forecast liabilities
- Interest/service cost under the spot rate interest cost method
- Exhibit names have been shortened to be more concise.

#### Pension Plans

• **Post-termination retirement rates.** It is now straightforward to assume that active participants commence their benefit at multiple retirement ages after termination.

For more, see Post-Termination Retirement Rates on page 15.

 Active Joint & Survivor payment forms can now specify the continuation percentages using database fields.

## **US Qualified Pension Plans**

- **IRS 2018+ dynamic mortality tables** have been added to ProVal's Mortality library (this was released with a 3.10 patch, but included here in case you missed it).
- IRS 2018-2019+ (MP16-17) dynamic mortality tables have been added to ProVal's Mortality library. These were previously available in the Hybrid MP16-17 2018+ Dynamic Template available on our website. Any tables previously imported from that template client will be automatically renamed and protected to be consistent with the built-in tables.
- SOA mortality improvement scale MP-2017 has been added to ProVal's Mortality Improvement Scales library. Additionally, an MP-2017 Mortality Tables Template is available on our <u>website</u> (this was released with a 3.10 patch, but included here in case you missed it).

## **US Public Pension Plans**

 Final GASB expense. A new Valuation Set event lets you reflect year-end data to calculate year-end liabilities. Assuming you elect to include new data in the actual gain/loss, this allows a Valuation Set to calculate final GASB expense.

For more, see Public Plan Enhancements on page 8.

• **Contributions and expense by group.** For plans with many funding groups, such as a state pension system with member municipalities, Valuation Sets (and Deterministic Forecasts) can now be processed by group. This eliminates the need to have separate Valuations (or Core Projections) and Asset & Funding Policies for each group.

For more, see Public Plan Enhancements on page 8.

#### **German Pension Plans**

- Change in vesting & first funding age. The new rules for vesting eligibility (21 & 3) and first funding age (23) are now automatically reflected for participants with benefit promise dates on or after 1/1/2018.
- Indexation of vested benefits. The "in deferral" COLA will now apply to Vested members during the deferral period. This lets you index terminated participants' vested benefits for inflation, per the provisions of the EU Mobility Directive for domestic plans to go into effect 1/1/2018.
- Last allocation options. For contribution-related DB plans, the last allocation in the (partial) year of decrement can now be zero, a partial amount (the only option previously available), or the full year amount.
- Age based accrual options. The age used for age based accrual rates can now be calculated as age nearest birthday, age last birthday, age in years and months, or year minus year of

birth. This is useful for the most common type of contribution-related DB plan: a career average plan with age based accruals.

- Individual results for benefit at actuarial retirement age. Two new individual result fields available in Valuations return the retirement benefit at actuarial retirement age for annuities and lump sums.
- PVVB for actives under FFA. When an active record is younger than the first funding age, but has a vested right to benefits, the Teilwert is now set equal to the present value of vested benefits (i.e., assuming 100% immediate termination).

#### **Canadian Registered Pension Plans**

- CIA mortality improvement scale MI-2017 has been added to ProVal's Mortality Improvement Scales library.
- Letters of credit. Letters of credit can now increase by a schedule that varies by year. In addition, an upper plan sponsor limit can now be specified on letters of credit.

V Letters of Credit ?	×						
Total letters of credit on the Valuation Date 1,000,000							
✓ Increase letters of credit by: C Total amount of solvency payments							
• Amounts that vary by year Params							
Limits on total amount of letters of credit includable in asset Apply a statutory limit X of: X	.S						
☐ Hilow increases above the statutory limit Apply a plan sponsor limit Params							
Interest is <not applicable=""></not>							
<u>O</u> K Cancel	11						

## **OPEB** Plans

 HRA balances. Lifetime maximums can now increase with both annual credits and interest. Additionally, the annual credit can now change at Medicare age without resetting the balance. This is useful for Health Reimbursement Account (HRA) plans in which retirees do not use 100% of their annual employer HRA contribution, thus leaving rollover balances that grow with both annual credits and interest.

🕉 Life	etime or Annual Limit - [lifetin	ne max 2] ? ×					
Name: lifetime max							
Applies to © Actives — C Inac	tives						
Туре ⓒ Lifetime maximum	C Annual cap						
Limit	Initial limit	☐ Renew at Medicare age ──── Renewed limit ───					
Constant							
🔿 Benefit formula	Edit	Edit					
Future payments (to ap) © Gross benefit © Net benefit (gros	ply against limit) s benefit - participant c	ontribution)					
🔽 Increase limit		🔽 Change at Medicare age					
Annually	12,000	6,000					
	Apply increase rates to outstanding balance						
O When hitting limi	t   tes to limit	1					
nppiy increase ra	000 00 11010						
<u> </u>	ace Save As <u>N</u> ew	<u>E</u> rase Cancel					

• The sample life report for reversionary annuity payment forms has been revised for clarity, presenting the calculation as the difference between a spouse annuity and joint annuity.

## Forecasting

 Hours. A new input in Census Specifications allow hours to be specified. These hours can be transformed into service accruals by selecting <Hours> in the field dropdown menu in a Service Definition. Additionally, a new option in the Active Population Growth topic of the Projection Assumptions will scale the hours at hire for new entrants so that total hours worked grows identically to population growth. The hours worked output can be obtained through the output pane for total actives (initial actives plus new entrants) and new entrants.

Service Definition - [re	?	$\times$							
Name: Hours									
Current service (or service date*):									
DOH		-							
Service accruals (forward and backward from current service)									
Field:	<hours></hours>				•				
© Field:	<hours> ▼ Transform</hours>	data (e.g.,	hours) to se	ervice	•				
ি Field:	<hours> Transform From</hours>	data (e.g., To	hours) to so Service	ervice	•				
© Field:	<pre><hours> </hours></pre> Iransform  From  0	data (e.g., To 500	hours) to se Service 0.0	ervice	•				
ি Field:	<pre>Hours&gt; From From 0 500</pre>	data (e.g., To 500 1800	hours) to so Service 0.0 0.5	ervice	•				
ি Field:	<b>Hours&gt;</b> ✓ Transform From 0 500 1800	data (e.g., To 500 1800 -	hours) to so Service 0.0 0.5 1.0	ervice	•				

• **Core Individual Results.** Individual results output is now available for Core Projections for the baseline results in a specified projection year. Liability results are available separately for continuing actives and emerging inactives.

# **Gain/Loss Analysis**

 The gain/loss summary results contains additional information. A "percent of liability, end of period" column displays the gain/loss as a percentage of the end of year liability and "Underlying Source Value" columns display actual, expected, and actual/expected values.

# **Capital Market Simulations**

• In a Capital Market Simulation, the prior year inflation can now be input as a negative number.

# System

 When ProVal is installed in a "Program Files (x86)" folder, user settings (e.g., proval.ini) are now saved in the user's appdata folder. This avoids issues with ProVal obtaining write access to the "Program Files (x86)" folder, or alternatively relying on the presence of a compatibility (VirtualStore) folder. By default, if ProVal is installed to "Program Files (x86)\WinTech\ProVal", then the user settings can be found in "C:\Users\USERNAME\AppData\Roaming\Wintech\ProVal". Please see the ProVal Installation

Guide (readme.doc) for more information.

- Grid platform speedups. For Valuations and Core Projections, the time spent on aggregation of results that previously might have continued after distributed processing was complete has been drastically reduced. The maximum benefit is obtained when utilizing a large number of grid agents for runs with large output (e.g., lots of benefits, years, etc.) and/or many small loops (e.g., lots of years and small number of new entrant records). In one test run, the total run time was decreased from 54 minutes to 22 minutes (of which around 5 minutes was spent in the distributed processing phase).
- Sped up the "rename" functionality for Data Dictionary field names, Benefit Formula Components and Database names. This will impact large clients with lots of library entries (in particular, the situation where a large audit trail library is involved). In one test case, a database "rename" went from taking a couple of hours to just taking seconds.
- There is a new "Edit INI File" button in the Help/About ProVal command.

# ProVal API

 The ProVal API now lets you get the ID# of a component using the QueryLibrary function call. This enables changing assumptions that reference other libraries, such as mortality rates. See "ProVal API users guide.pdf" in the ProVal installation folder for more details.

# **Output & Reporting**

- The average benefit timing factor for total liabilities is now available as an output item (not just for actives and inactives separately).
- In Public mode, the Present Value of Future Salaries has been added to accounting individual results.

# **Changes Log**

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

# **Public Plan Enhancements**

ProVal 3.11 contains several enhancements for public plans including:

- Contribution Schedule
- GASB Gain or Loss Valuation Set Event
- Enhanced Amortization options
- Contributions & Expense by Group

Below are more details on each of these enhancements.

#### **Contribution Schedule**

GASB requires the actual asset (gain)/loss to be reflected in expense. Previously, ProVal assumed all contributions were contributed at a single time specified as a fraction of year in the Asset & Funding Policy when calculating the expected return on assets. Now, ProVal can accurately reflect multiple dates of contributions when calculating the expected return on assets by specifying a contribution schedule.

flect contributi	ion schedule	Cont. Schedule		
				_
bution Schedule		?	×	
le date: 12/1/	2016			
ie date: 12/1/	2010			
Plan Yeaw cont	wibutions and Cur	want Dian Vaaw		
I IGHI IGHI GONG	r thactons and sa	rrent rian iear		
butions through	h the Schedule d:	rrent flan fear		
butions through	h the Schedule da	ate:		
Date	h the Schedule da	Apply to		
Date 4/01/2016	h the Schedule da Amount 500,000	Apply to		
Date         4/01/2016           8/01/2016         8/01/2016	Amount 500,000 500,000	current plan year	_	
Date         4/01/2016           8/01/2016         8/01/2016	Amount 500,000 500,000	current plan year current plan year current plan year current plan year		
Date         4/01/2016           8/01/2016         8/01/2016	Amount 500,000 500,000	Apply to current plan year current plan year current plan year		
Date         4/01/2016           8/01/2016	Amount 500,000 500,000	current plan year current plan year current plan year current plan year		
Date         4/01/2016           8/01/2016         8/01/2016	Amount 500,000 500,000	Apply to current plan year current plan year current plan year		

If selected, the schedule will override the contribution ProVal calculates based on the contribution policy for the first year. ProVal will use the later of the contribution schedule date or the contribution timing parameter if an amount is entered in the additional contribution parameter. If necessary, ProVal will add a contribution to ensure that assets do not fall below zero. The contribution schedule will be used in the determination of the expected return on assets.

Note that GASB also requires actual benefit payments and expenses to be reflected in expense. These values can already be overridden in an Asset & Funding Policy.

## **GASB Gain or Loss Valuation Set Event**

GASB requires gains and losses to be calculated at the end of the measurement period. These gains and losses may reflect assumed census data as of the last day of the measurement period or updated census data. Prior to version 3.11, total expense under GASB was calculated using a Deterministic Forecast and always reflected assumed census data as of the last day of the measurement period. A second method for calculating GASB gains and losses has been added to ProVal. This new method also calculates gains and losses at the end of the measurement period,

but allows plans to reflect updated census data on the first day of the year. Either of the two approaches may be used.

#### Valuation Set Event Method (new in 3.11)

A new event type has been added to Valuation Sets called GASB Gain or Loss. If you select this event type, you will be required to input the Valuation(s) containing the actual end of year liability (these Valuations are expected to be 1 year after Valuation Date of the beginning of year Valuations). You will also be required to input the actual end of year asset value.

🎸 Valuation Set - [GASB 67/68 - with GASB Event]	? ×
Name: GASB 67/68 - with GASB Event Ualuations Included in Baseline Gain or Loss Event: Name / SUal Date Modified Si F A Public Valuation 2016 1/01/2016 11/03/2017 11:12 AM 54	<u>A</u> dd/Omit
Additional Events: (click to edit) GASB Gain or Loss - GASB Asset & Funding Policy: GAS 8, lag no int 2016 • Apply Scaling Factors	Gain or Loss Assumption Change Plan Change Funding Method Change Funding Asset Valuation Method Change Accounting Expected Return on Assets Change.
Assumption Sensitivity: Funding Baseline Accounting Baseline Accounting Accounting Accounting Accounting Accounting Accounting Acc	GASB Gain or Loss

The liability gain or loss subtracts the expected end of year liability (based on the beginning of year Valuation(s)) from the actual liability (from the end of year Valuation(s)). The asset gain or loss is the expected less actual asset values at the end of the year.

#### Deterministic Forecast Method

Under this approach, total expense under GASB is calculated using a Deterministic Forecast and ProVal assumes census data is updated on the last day of the measurement period.

The liability gain or loss equals actual end of year liability less expected end of year liability. Under this method, the beginning of year liability is calculated as the sum of: the balance sheet liability; the net deferred inflows and outflows; and the plan fiduciary net position. The beginning of year liability is then rolled forward to the end of the year to get an expected end of year liability value. The actual end of year liability is the liability from year 1 of the forecast.

The asset gain or loss is equal to the expected return on assets less the actual return on assets. The actual end of year assets is entered on the Investment Return, Inflation, Lump Sum & Asset Benchmarks topic of the Deterministic Assumptions.

#### Comparison of the two methods

The key difference in results between the two methods is driven by when new census data is reflected. There is no difference in the determination of asset gain or loss for the year, there is only a difference in the calculation of liability gain or loss. See below for an example comparing the results of the two methods for the same plan.

#### Deterministic Forecast Method

Calculation of Asset Gain or Loss





- (h) Expected pension liability, end of current year: (a)+(b)-(c)+(d)+(e)+(f)-(g)
- (i) Actual pension liability, end of current year
- (j) Liability (gain)/loss: (i)-(h)

## **Supplemental Cost Amortizations**

Normal Cost + Supplemental Cost contribution policies, common for U.S. Public plans, now have a lot more flexibility in handling amortizations.

80,274,174

78,333,179

(\$1,940,995)

#### Existing bases

In prior ProVal versions, only the outstanding balance and scalar remaining period were entered for existing bases. Now, to make the exhibits report ready, a description is required, and the date established and initial amount are optional entries.

From the end of

year Valuation.

Ex	isting bases: Schedule date 1/1/2	2017				
	Description	Date Established*	Initial Amount*	Outstanding Balance	Remaining Amortization Period	Edit Deried
	2016 Assumption Change	1/01/2016	500,000	450,000	9	

A new Valuation Set exhibit is automatically displayed if viewing the Employer Contribution (Normal Cost + Supplemental Cost) report that details closed amortization bases.

#### Supplemental Cost Closed Amortization Bases

	Initial Amount	Date of First Charge or Credit	Remaining Period (years)	Outstanding Balance (beg. of year)	Amortization Charge or Credit
<ol> <li>Amortization Charges         <ul> <li>(a) 2016 Assumption Change</li> </ul> </li> </ol>	\$500,000		9.00	\$450,000	\$58,967
Total				\$450,000	\$58,967

Additionally, there is new flexibility regarding the Remaining amortization period. In the example above, the assumption change will be amortized over 9 remaining years. However, the remaining period can now be entered as a vector, for example 9, 7, 5, to indicate to amortize the remaining balance over 9 years in 2017, 7 years in 2018, and then resume a normal 5 year amortization in 2019.

#### Future bases

Future bases are now specified by the source of change in unfunded. For each source, you can select whether the type is open or closed. If closed, they can have different recognition periods when the plan is unfunded or in surplus.

#### Future bases:

	Туре	Amortization Years if Unfunded	Amortization Years if Surplus
Assumption change	Closed	15; 2020:10	15; 2020:10
Gain or loss	Open	10	10
Active benefit change	Closed	10	10
Inactive benefit change	Closed	10	10
Funding method change	Closed	10	10

In the example above, gains or losses are amortized as open and all other types are set up as closed bases. And, there is increased flexibility in specifying the period over which new bases are amortized. In the example above, any new assumption change bases will be amortized over 15 years through 2019. Beginning in 2020, new assumption change bases will be amortized over 10 years. You can also enter a 0 to skip an amortization payment due in a year (in this case, the outstanding balance will grow with interest until there is a non-zero amortization period).

The Employer Contribution (Normal Cost + Supplemental Cost) exhibit details how each base, identified by its description, changes over time. For the first time, each base stays in its own row:

2.	Amorti	zation bases		
	(a) 201	6 Assumption Change		
	(i)	Outstanding balance	450,000	421,496
	(ii)	Years remaining	9	7
	(iii)	Amortization amount	57,911	67,275
	(b) 201	7 (Gain)/Loss		
	(i)	Outstanding balance	60,253,271	59,216,269
	(ii)	Years remaining	15	14
	(iii)	Amortization amount	5,168,370	5,349,263

## Contributions & Expense by Group

For plans with many funding groups, such as a state pension system with member municipalities, Valuation Sets (and Deterministic Forecasts) can now be processed by group. This eliminates the need to have separate Valuations (or Core Projections) and Asset & Funding Policies for each group. To use, first run a Valuation (or Core Projection) with a subtotal field. Next, create a corresponding Asset & Funding Policy that varies by that same subtotal field.

🎸 Asset & Funding Policy - [TOTAL SYSTEM]	? ×
Name: 2017 by location	
Select a topic to edit:	
Initial Asset Values Funding Asset Valuation Method Funding Amortization Bases Contribution Policy GASB Accounting Administrative Expenses Benefits and Rounding Prior Year Values Forecast Analysis	Update
▼ Uary by group PlanCode ▼	
View         Replace         Save As New         Erase	Cancel

If varying by group, entries that must be entered by group will be ghosted and display the total of all groups.

🞸 Initial Asset Values		?	×
Funding Assets: Market Value	Valuation Date e (inc. receivable)	<b>7/1/2015</b> 13,796,411,000	
Accounting Assets: Cont	Measurement Date Market Value ribution Receivable	7/1/2015 13,796,411,000	
	<u>OK</u> Cancel	j	

Click the spreadsheet icon to enter the group's values. Note that all spreadsheets have been designed to enable values to be pasted from an outside source.

🞸 Initial Asse	et Values		? ×
Group	Funding Market Value (inc. receivable) Sum: 13,796,411,000	Accounting Market Value Sum: 13,796,411,000	Accounting Contribution Receivable Sum: 0
Loc A	171,358,000	171,358,000	0
Loc B	56,938,000	56,938,000	0
Loc C	170,152,000	170,152,000	0
Loc D	5,853,811,000	5,853,811,000	0
Loc E	2,046,000	2,046,000	0
Loc F	607,339,000	607,339,000	0
Loc G	131,678,000	131,678,000	0
Loc H	6,803,089,000	6,803,089,000	0
		<u>0</u> K	Cancel

When running the Valuation Set or Deterministic Forecast, you can elect to run all groups or just selected ones.

🔽 Apply Scaling Factors			
Deterministic Assumptions:	Sample 7.5% returns 3.0% infl	•	
Asset & Funding Policy:	TOTAL SYSTEM	•	☑ <u>Groups</u>
Forecast Years:	1 <u>C</u> ustom Vars		

Note that Deterministic Forecasts by group are currently restricted to the baseline valuation and experience assumptions.

# **Post-Termination Retirement Rates**

This enhancement simplifies the process for assuming multiple commencement ages for active participants expected to terminate. Prior to version 3.11, termination benefits always commenced at a single age. To model multiple commencement ages, an optional form had to be set up for each possible retirement age. Version 3.11 introduces a new payment form option that can handle multiple ages. This option is available in US Qualified, US Public, Universal and Canadian modes.

#### **Coding Post-termination Retirement Rates**

<u>Payment Form Definitions</u>: Create a Payment Form Definition and select that the benefit commences "at post-termination retirement age".

Benefit commences (and temporary period begins):	
🔿 at member age defined by field	-
🔿 after number of years	
$\bigcirc$ after number of years specified by table	
	-
It post-termination retirement age	

<u>Benefit Definitions</u>: Select the new Payment Form as the normal payment form for a termination Benefit Definition. This will allow you to access the new post-termination retirement parameters button.

_Status & continge	ncy initiating benefits	
Applies to:	🔽 Actives	
	🗌 Vested valued through actives	
Contingency:	Termination 🔹	
	🗌 Post-Decrement Probabilities apply	
-Payment forms		1
Normal form:	LA - post-term ret age	2
Optional forms:	Type Name / 🗖 Modified	Ne <u>w</u>
		E <u>d</u> it
		<u>A</u> dd/Omit
Post-terminatio	n retirement: <u>P</u> arams	

*Post-termination Retirement Parameters:* Fill in the post-termination retirement parameters:

• Specify the eligibility criteria that must be met in order to commence benefits. Note that these eligibility criteria are in addition to the eligibility requirements on the Benefit Definition dialog box, which specify criteria that must be met at termination to receive a benefit.

For example, assume the eligibility requirement on the Benefit Definition screen is 5 years of service with no age requirement, and the retirement eligibility is as shown in the dialog box below. Someone who terminates with fewer than 5 years of service would get no benefit, someone who terminates with between 5 and 10 years of service would have retirement rates begin applying at age 65, and someone who terminates with 10 or more years of service would have retirement rates begin applying at age 55.

- Select a Benefit Component Table to use for the early retirement factors. Benefits will be adjusted according to this table based on age at retirement and service at termination. Select <none> if benefit is unreduced at retirement.
- If your plan contains any lump sum optional forms, select the method to use for conversion.

For example, assume the benefit is \$10,000 and the early retirement factor at age 55 is 0.6. Under the first option, the lump sum optional form for retirement at age 55 would be the present value of an annuity of \$6,000 commencing at age 55. Under the second option, it would be the present value of an annuity of \$10,000 commencing at age 65.

V Post-Termination Retiren	nent Paramete	rs						? ×
Retirement eligib	ility——							
Eligibility	Conditio	ns (no less	than)	Exception	ons (no more	than)		
criteria:	Age	Service	Points	Age	Service	Points		
	55	10						
	65			-				
	or earli	er date <nor< th=""><th>ne&gt; -</th><th>or earl</th><th>ier date <no< th=""><th>one&gt; 🔻</th><th></th><th></th></no<></th></nor<>	ne> -	or earl	ier date <no< th=""><th>one&gt; 🔻</th><th></th><th></th></no<>	one> 🔻		
Eligibility	• Field:	<pre><date of<="" pre=""></date></pre>	hire>	-				
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<u>O</u> K Cancel								

<u>Valuation Assumptions</u>: Select the Retirement Rates Table to be used for post-termination retirement rates.

These retirement rates will be used for terminating actives eligible for a benefit with a payment form commencing at post-termination retirement age. They are also used as the retirement rates for any participants valued with the status "vested valued through active".

From Active Status.	From	Active	Status:	
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Retirement:	Retirement Rates	•	2	Params
Termination:	Termination Rates	-	2	Params
	□ Continues after retirement eligibility			
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Post-Termination:				
Retirement:	Post-termination Retirement Rates	•	2	Params

#### Calculations

• After termination, only mortality and post-termination retirement decrements will apply. Any termination or disability rates will not apply.

- After termination, the mortality rates for vested terminated members (or non-disabled members under PPA) will apply. This mortality will not switch to the mortality for retired members after retirement. This is consistent with the treatment of a termination benefit that commences at a single age.
- The "timing of active decrements" and "decrements to adjust for competition" parameters on the Decrements dialog box also apply to the post-termination retirement rates.
- Any post-decrement probabilities will be determined at retirement age (not termination age).
- Any optional form conversions will be done at retirement (not termination).

#### **Current Inactives**

- This feature does not apply to current inactive participants. As in versions prior to 3.11, retirement rates may be applied to current inactive participants by valuing them with the status Vested Valued through Active.
- In version 3.11, the new decrements parameter specifying the post-termination retirement rates will be used to determine the retirement rates applicable to Vested Valued through Active participants.

#### Restrictions

- Deferred COLAs will always be treated as compound, and any COLA timing parameters or COLA caps will be ignored.
- COLA caps, and simple and advanced COLAs may not be correct for in-payment COLAs.
- In a Core Projection, plan amendments may not be specified for benefits that commence at post-termination retirement age.