ProVal® by WinTech

# What's New in version 3.20   April 2024

ProVal version 3.20 introduces data scripts, an updated look and feel, assumption constants, a yield curve library, and an improved amortization interface. Full details plus many other new features are described below.

Census Data

♦ **Data scripts**. A new Data Scripts tool lets you chain together data steps and run them with the push of a button. For example, you might automate the initial data preparation with steps such as Import Data, Find Duplicates, Resolve Duplicates, Screen Data, and Data Questions. Data scripts can be especially useful to:

  o Redo data steps after correcting a mistake in the process

 o Reuse the same process every year, while still allowing for modification
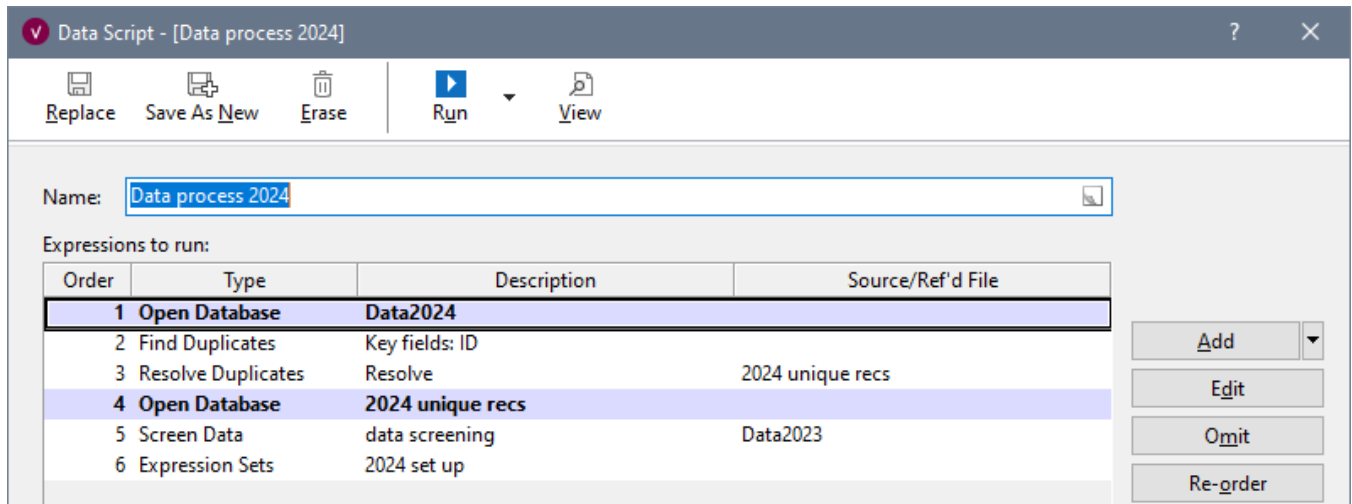
♦ **Historical data in Frequency Tables & Descriptive Statistics.** You can now generate statistics, group results, and select records using historical data (e.g., py.Salary) in Frequency Tables & Descriptive Statistics. By default, historical data settings are inherited from the data editor, or you can customize them as desired.
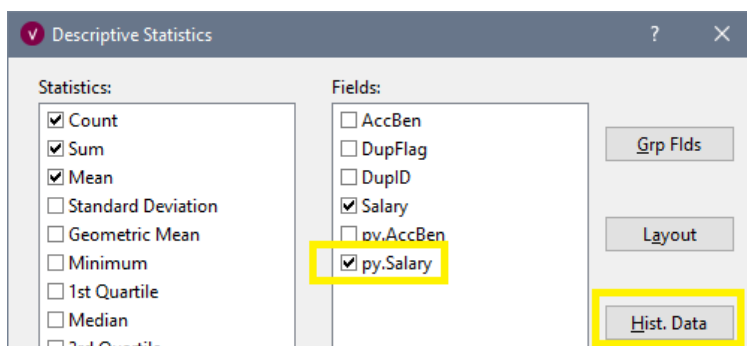
♦ **Comparing databases with large number of differences.** You can now customize the Compare Database output to see any number of differences (ProVal will start with up to 20,000). In addition:

- The comparison for large databases is much faster. In one test with 200,000+ records in each database, the comparison that previously ran in 4 minutes now runs in 20 seconds.
- The count of differences are now shown for all fields, whether or not details have been selected for the field.
- The comparison output has been updated to a user-friendly HTML format

♦ **Change history for Expression Sets**. The number of records changed for each expression in an Expression Set is now included in the Database Change History. Previously, ProVal only reported the number of records executed in the Expression Set, but now additional detail is provided for each step to make it easier to review.

♦ **Data editor shortcuts** have been added that let you:

- Filter by a selected cell's value by right-clicking on a cell, for example, to select all Actives:
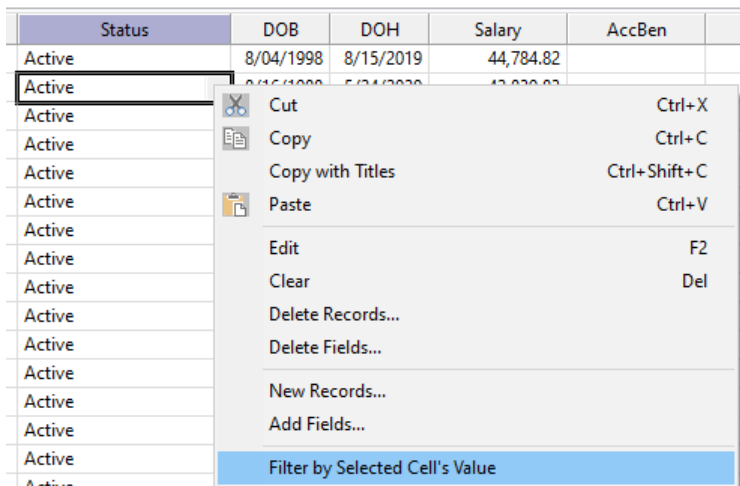
- Close a database (Esc)
- Hide/Unhide columns (ctrl+0 or ctrl+shift+0)

♦ **Database Notes** are now more easily accessible, promoting note keeping and review within ProVal. Simply right-click on a database and choose Notes. In addition, a database's Change History can now also be accessed by right-clicking on a database.

♦ **Coded field's modified date** in the data dictionary will no longer change when the only revision is to the sort order of codes and labels. This avoids it appearing as a substantive change to be reviewed.

♦ **Speed.** Significantly improved performance when applying a selection expression to a large database with logged errors.

Interface

♦ **Updated look and feel.** ProVal windows now have a more modern look with a flatter appearance, more whitespace, and other effects for an improved user experience.
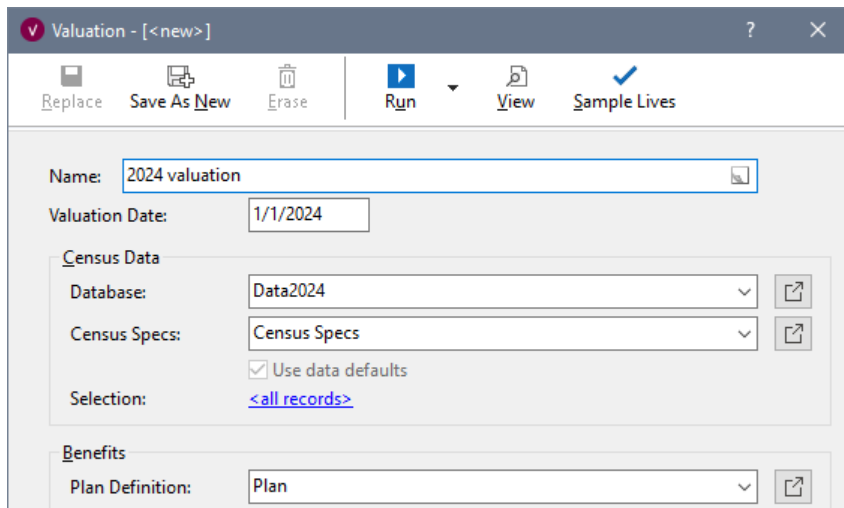
- ♦ **Type ahead** is now offered in all drop-down lists, not just those that contain field names. You can stop typing when you get to the entry that you want; ProVal autocompletes the entry name with the first match as you type.
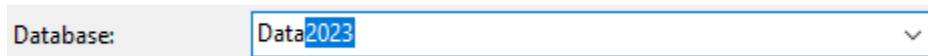
- ♦ **Multi-edit is now easier to discover** simply by looking at the button – anywhere you see the pencil with a blue star – without having to try it to find out.
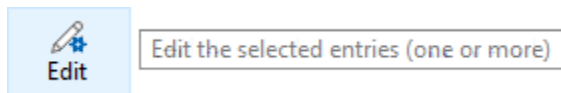

- ♦ In expressions, a slight delay was added to the "tip" that displays when hovering over a blue field name or operator. Previously, it appeared instantly, potentially making it difficult to read the expression beneath.

- ♦ A cut shortcut (Ctrl+X) was added to grids to let you cut information to be pasted elsewhere.

All Plans

- ♦ **Assumption Constants.** In valuation assumptions, you can now specify assumption constants (e.g., "@rate") in place of numbers (e.g., 0.05) for many economic assumptions. This is useful when there are many items that are linked to one general economic assumption or fact. For example:

  - o COLAs equal to increases in CPI

  - o Cash balance components with one market rate of return

  - o Cash balance components with a guaranteed rate of return

  Rather than setting them each individually to the same number, you can now set them all to the same assumption constant and then set the numeric value once. This is especially useful for updating large, complex assumptions from year to year. It can also make those assumptions easier to review.
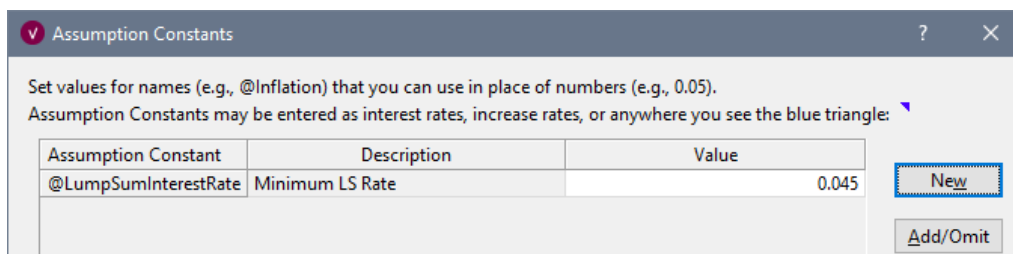
Assumption Constants may be referenced by:

- o   Interest rates
- o   COLAs
- o   Increase and crediting rates
- o   Salary inflation

♦   **Yield Curve Library**. A new Yield Curve library lets you store yield curves and use them in the Interest Rates topic of Valuation Assumptions. This makes it easier to verify that multiple sets of assumptions are using the same yield curve. For US Qualified plans, a lookup button lets you easily get the PPA Yield Curve for any given month – and the source is noted at the bottom of screen.
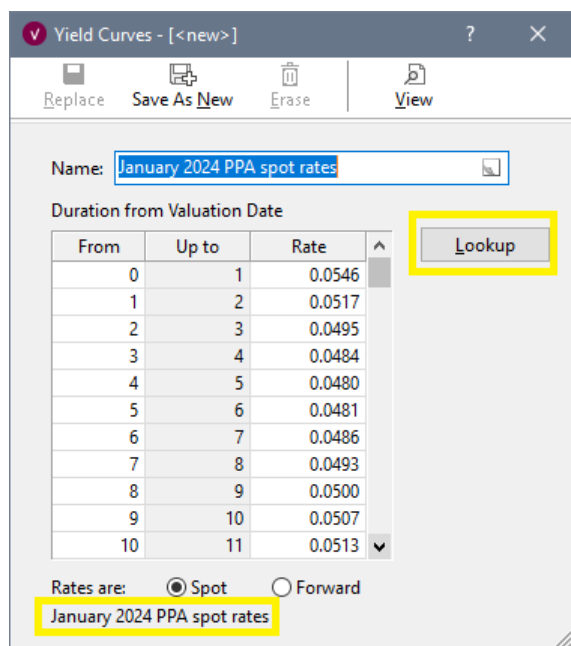
♦   **More flexible optional payment form conversions.** The following payment forms are now allowed as normal and optional forms when using a table for the conversion:

- o   Payment forms with a deferral, temporary, or certain period defined by a table
- o   Joint life forms with J&S fractions defined by database field
- o   Payment forms with a deferral, temporary, or certain period defined by a table or database field (previously only allowed as a normal form)
- o   Life insurance (previously only allowed as a normal form)
- o   Modified cash refund annuity (previously only allowed as a normal form)

♦   **Updating Asset & Funding Policies**

- o   **Roll forward**. It's now easier to update an Asset & Funding Policy to the next valuation year. ProVal's roll forward (Update button > Roll Forward) now automatically:
  - ▪   Increments the Valuation & Measurement Dates by one year
  - ▪   Blanks out asset values at the Valuation Date
  - ▪   Shifts smoothed asset gains/losses by one year so you just have to enter the most recent asset experience base

- o   **Amortization bases** are now entered in an easy-to-use spreadsheet format. This lets you see all the bases at once as well as copy and paste information to/from Excel.

Amortization Bases

Schedule date: 1/1/2024

Description	Type	Date Established*	Initial Amount*	Amortization Period*	Outstanding Balance	Remaining Amortization Period	Amortization Amount*
2020 Plan Change	Prior Service Cost	1/01/2020			1,511,549	7.6	198,888
2023 Plan Change	Prior Service Cost	1/01/2023			2,675,333	10.4	257,244

♦ **Benefit Component Tables** have been enhanced to:

  o Support the Age by Year of Birth table type. This is useful for tables based on actuarial equivalence (e.g., those used for benefit conversions) where the underlying mortality rates vary by year of birth. These tables can be used in a variety of places, including optional payment form conversions, adjustment factors in life insurance payment forms, early retirement and J&S factors in post-decrement death benefits, and more.

  o Improve the interface for calculating annuity factors. Now you can select whether you are calculating annuity factors or conversion factors. If calculating conversion factors, you can parameterize both the numerator and denominator. In addition, the resulting table values will be disabled so that they cannot be accidentally modified.

US Qualified Pension Plans

♦ **CAS liabilities**. A new "PPA and CAS" law type has been added to Valuation Assumptions that lets you calculate liabilities required under the Cost Accounting Standard for government contractors, along with calculating the PPA liabilities all in a single Valuation. Additional topics in Valuation Assumptions facilitate the calculations of the CAS Actuarial Accrued Liability and Minimum Actuarial Liability.

- ♦ **Government Forms Extract** has been tailored to use the format and tags specific to your government forms software – either FT Williams or Relius – to make the extract more seamless to use.

- ♦ **Pre-Map 21 MRC.** An option has been added to Asset & Funding Policies > At-Risk Status to let you determine whether the at-risk assumptions apply to the Pre-Map 21 minimum required contribution based on either the minimum funding or max tax basis. Previously the determination always used the max tax basis. Choosing "Funding" lets you only apply at-risk assumptions to the Pre-MAP-21 MRC when the plan is at-risk for "standard" MRC purposes, per the option in Field Assistance Bulletin 2013-01, Q17.

US Multiemployer Pension Plans

- ♦ **Asset & Funding Policies** have been updated and streamlined for multiemployer plans.

  - o The default corridors for ERISA asset valuation method have been updated to 80%/120%

  - o A new "Calculate ASC 960 values only" option under the Accounting Methodology topic lets you skip unnecessary parameters in Accounting Methodology, Prior Year Values, and Forecast Analysis topics (and avoid filling in dummy numbers just to get your Valuation Set or Forecast to run).

- ♦ **13th check plan amendments**. Valuation Sets have a new "Plan Change -13th Check" event type. These events are handled as plan amendments that are amortized immediately for minimum funding contributions.

- ♦ **Normal cost exhibit for hourly plans.** When an Hours field is parameterized in the active tab of Census Specifications, the normal cost exhibit will now display the normal cost as an hourly rate (previously normal cost was only displayed as a percent of salary).

US Defined Contribution Plans

♦ In the HCE/NHCE Determination tool, if determining HCEs using the Top Paid Election option, a new option lets you exclude employees with a date of termination in the prior year and no compensation.
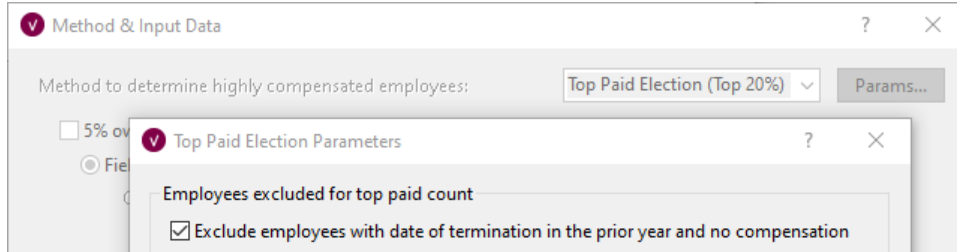
OPEB Plans

♦ **Contributions and expense by group**. For OPEB plans with many groups, such as a public system with member municipalities, you can now run Valuation Sets (and Deterministic Forecasts) by group when the Accounting Methodology specified in the Asset & Funding Policy is GASB 74/75. This eliminates the need to have separate Valuations (or Core Projections) and Asset & Funding Policies for each group. To use, simply run the Valuation (or Core Projection) with subtotals and then select "Vary by group" and specify the same subtotal field in your Asset & Funding Policy.
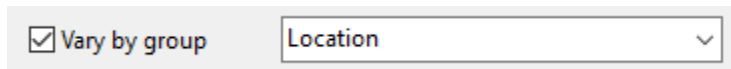
♦ **Contribution lag period**. You can now lag the application of the contribution policy one or two years for OPEB plans when the Accounting Methodology specified in the Asset & Funding Policy is GASB 74/75.
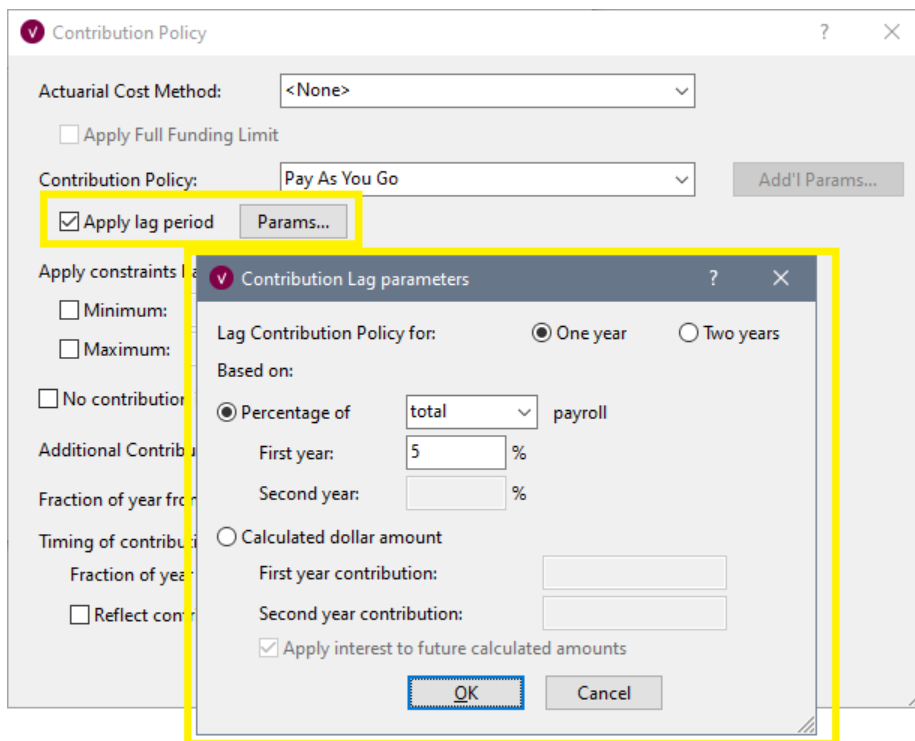
Canadian Registered Pension Plans

♦ **YAMPE**. Two new accrual basis operators were added:

  o #YAMPE – yearly additional maximum pensionable earnings

- o #AVGYAMPE n – the n-year average of the YAMPE

YAMPE can now also be referenced as a Salary Limit in a Salary Definition or under the Salary Parameters of a Custom Operator.

♦ **Projected COLA assumptions**. There are now separate Valuation Assumption Sensitivities in Projection Assumptions for ongoing liability vs. solvency/windup liabilities. This lets you hold the long-term COLA assumption constant for ongoing but fluctuate with bond yields for solvency/windup.

♦ **Streamlined Asset & Funding Policies.** Several updates have been made to streamline Canadian Asset & Funding Policies.

- o The applicable provincial law has been moved to the main dialog from the Minimum Funding topic.

- o A checkbox has been added to the main dialog that allows you to ignore solvency and windup, regardless of the applicable provincial law.

- o The Minimum Funding Amortization topic has been divided into two topics: Ongoing Amortizations and Solvency Amortizations.

- o Valuation Sets & Forecasts are now supported when solvency is not available. Previously, an error message may have been issued when the surplus calculation could not be performed. Now when solvency is not available, the surplus calculations are performed on an ongoing basis only.

♦ **Solvency Deficiency Exhibit.** Now displays the target percentage and solvency funding target for applicable provincial law selections of Ontario, British Columbia, and Manitoba.

German Pension Plans

♦ **Gain/Loss Analysis** has been enabled in German mode to let you easily see the sources of changes in your funding or accounting liabilities, including drilling into record-by-record specifics with individual results and sample lives.

♦ **Plans with asset comparisons**. A new option to the minimum liability calculation in a Benefit Promise lets you turn off the application of the survival discount in the calculation of the minimum liability normal cost, which is often ignored in German valuations. Additionally, the minimum liability benefit formula component (usually the market balance) is now reflected in the expected and experience benefit payments.

♦ **Timing and frequency for cash balance crediting**. Parameters have been added to give you control over the timing of interest credits for cash balance components. For example, credit contributions monthly, with interest accruing from the time the contribution is made. This is independent from the "allocation date" which has to do with the timing of the accrual basis.

In addition, an interest type parameter has been added. If the interest type is "Annual percentage rate", the interest credited each month will be $(1 + i / 12)$. If the interest type is "Effective rate", the interest credited each month will be $(1 + i)^{(1 / 12)}$. This makes it so you can enter the nominal rate, e.g., 0.06, and let ProVal adjust for timing.

♦ **Premium-funded risk benefits in CRDB plans.** A new #DECSTOP operator for benefit definitions allows you to handle attribution in PUC and UC liabilities and normal costs for death and disability benefits that are partially funded through participant premiums.

For example, you might use the formula:

```
3 #DECSTOP AG_AufstEM
```

to exclude benefits funded by premiums beyond 3 years from the valuation date for actives (or beyond 3 years from the year of termination for terminated vesteds) from the PUC liability but include them in the PVFB.

♦ A **#VALTYPE operator** has been added to benefit definition formulas that returns a 1 for funding, 2 for accounting, and 3 for experience calculations. This is useful for times when the benefit to be valued for tax purposes is different than for funding purposes. For example, "`#if #valtype=2 #then benacctg #else benreg #endif`".

♦ **Age calculation for increase rates.** When Increase Rate Tables are applied to accrual definitions starting at an age, a new method, "year minus year of birth", has been added as a method of determining age.

Swiss Pension Plans (Universal mode)

♦ **Attribution based on cash balance.** A new option for Attribution Service has been added under the Liability Methods topic of Valuation Assumptions. This option calculates a notional service date used for attribution of benefits. When the new option is selected, the attribution service is calculated as the ratio of a cash balance component balance accrued at the Valuation Date to the projected balance.

Forecasting

♦ **Expanded segment rates calculator in Deterministic Assumptions.** In US Qualified mode, you may now enter segment rates for months after the last known rates stored in ProVal. This lets you further refine calculations of future segment rates as soon as new rates are published or with your own estimates.

Last known rate to reflect:

○ January 2024

● Enter rates for months after January 2024

Year	Month	Segment 1	Segment 2	Segment 3
2024	2	0.0437	0.0496	0.0495

♦ **Negative asset allocations** are now permitted when computing an efficient frontier. You can allow for them by adjusting the minimum constraints under the Efficient Frontier.

Minimum/Maximum Constraints

Asset Class	Minimum	Maximum
NRgov1	0	1
NRgov30	0	1
NRcorp1	0	1
NRcorp30	0	1
USEq	0	1
IntEq	0	1
CoreFI	0	1
LongFI	0	1
Zeros	-0.2	0

♦ **Experience benefit payments** have been added to individual results for core projections in all pension modes.

☑ zExperBP — Experience Benefit Payments for Actives
☑ zExperBP_inact — Experience Benefit Payments for Inactives

Sample Lives

♦ **Projected Benefit links**. You can now move more efficiently between liability reports and their corresponding benefit definitions with new Projected Benefit links added to liability reports. Not only will the link take you to the benefit definition report, but it will automatically scroll to the corresponding liability basis.
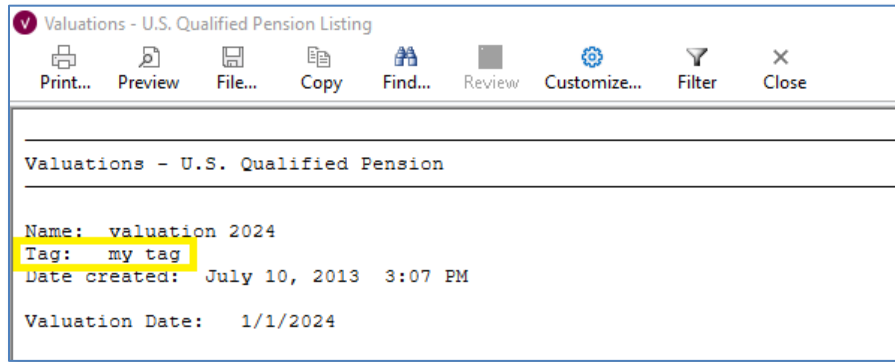
Projected Unit Credit Liability & Normal Cost
Benefit: Ret - Retirement ✎

RecID: 1

Year	Member Age	Interest Discount	Prob. of Remaining Active	Prob. of Decrement	Election Factor	Payment Form Value	Projected Benefit	Cumulative Attribution b.o.y.	Cumulative Attribution e.o.y.	Liability	Normal Cost
2024	25	1.000000	1.000000	0.000000	0.000000	14.169467	1,382.62	1,382.62	1,382.62	0.00	0.00
2025	26	0.934579	0.914575	0.000000	0.000000	14.130182	1,756.18	1,429.74	1,756.18	0.00	0.00
2026	27	0.873439	0.839387	0.000000	0.000000	14.088477	2,220.18	1,524.17	1,872.18	0.00	0.00

Gain/Loss Analysis

♦ **Present Value of Future Benefits (PVFB)** is now available as a basis upon which gain/loss may be performed.

Output & Reporting

♦ **Tags** are now displayed in Output and listings.


```
Valuations - U.S. Qualified Pension Listing

Print...   Preview   File...   Copy   Find...   Review   Customize...   Filter   Close


Valuations - U.S. Qualified Pension


Name:   valuation 2024
Tag:    my tag
Date created:   July 10, 2013   3:07 PM

Valuation Date:   1/1/2024
```

System

♦ **Temporary files after packing.** The handling of temporary ZZZ.SF files at the end of a file pack has been reworked to decrease the likelihood of having these temporary files be inadvertently leftover if there is a connectivity glitch.

♦ The **maximum concurrent session limit** for license server users has been increased from 4 to 5.

♦ License server can now collect information about ProVal usage, including number of users, number of clients, and number of license request denials. This information will be automatically stored in the LicenseDir folder.

ProVal API

♦ The ProVal API now has the following new functions:

   o **GetAFP, SetAFP,** and **GetAFPDoc**: Get and Set the Asset & Funding Policy (plus get supporting documentation)

   o **GetValInputs** and **SetValInputs:** Given the name of a Valuation, get and set all the inputs to that Valuation

   o **GetValSetInputs**, **SetValSetInputs,** and **GetValSetEventDoc:** Given the name of Valuation Set, get and set all the inputs to that Valuation Set (plus get supporting documentation)

   o **GetValSetExhibitResults:** return everything from the Valuation Set Exhibit output (same output that you would get by saving exhibits to an access database)

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.

New WinTech Team Member!

We are pleased to introduce **Marli Henderson** who recently joined our team. She is an experienced ProVal user and, among other responsibilities, will be working on future ProVal enhancements. Please say hello to Marli if you reach her at ProVal support.