# What's New in version 3.12 September 2018

ProVal version 3.12 introduces interface modernizations, an easy way to drill into gain/loss sources, custom dynamic mortality tables, and many additional features listed below.

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.
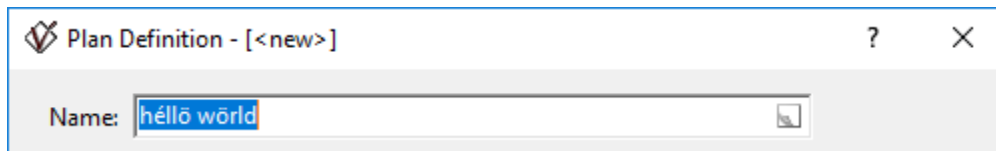
♦ **Expandable/collapsible lists**. In places like printing sample lives, you can expand and collapse the list to more quickly select the desired reports. You can even right-click to select all children of a folder, for example, all Benefit Definition reports.
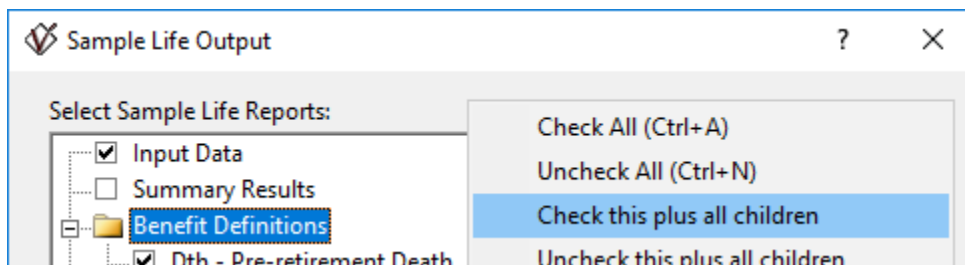
♦ **Friendlier grids** with numerous small improvements. For example, for numeric cells, copying puts the full precision into the clipboard, not just the displayed decimals. For dropdown cells, you can type the first letter of the choice you want.

Gain/Loss Analysis

♦ **Links to individual results.** You can now click on any gain/loss amount, including unreconciled, to see the records that go with that bucket, sorted with the "biggest offenders" on top (i.e., descending absolute value). You can filter the records as well as see subtotals (using Descriptive Statistics). This makes it faster to investigate the cause of each gain/loss source.

- The gain/loss sample life summary report now contains links to easily jump to supporting reports.

- A new option lets you assume that new vested terminated participants did not receive benefit payments during the gain/loss period. Previously, if terminated participants were expected to receive benefits (e.g., lump sum) but didn't (e.g., deferred annuity), this led to offsetting benefit payment gains and unreconciled losses. The new option sets expected benefit payments to zero to avoid the offsetting gains and losses.
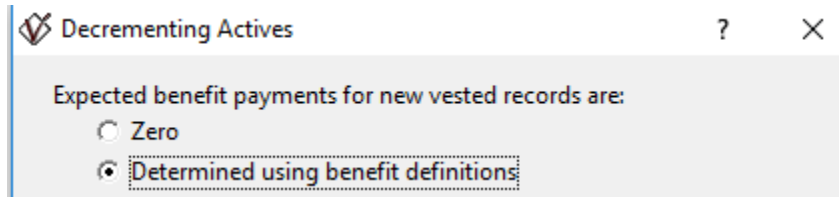
Mortality Tables

- **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.
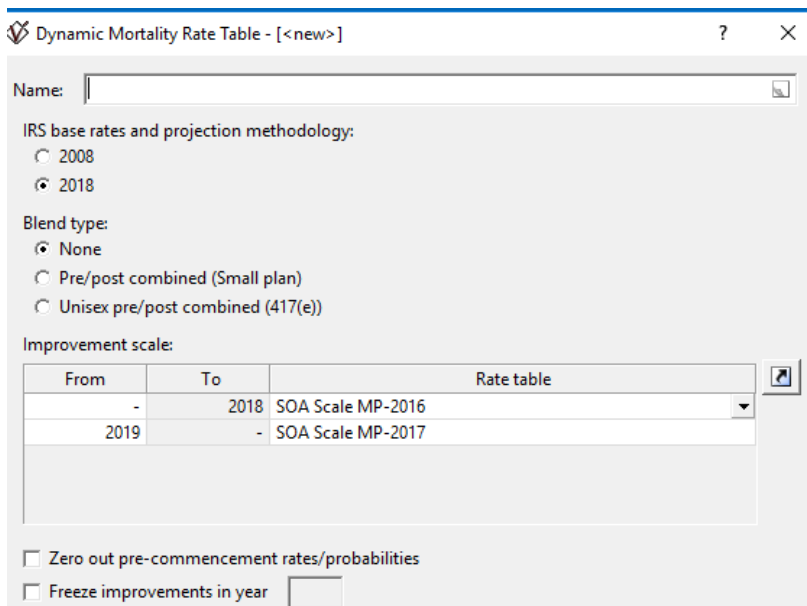
- For mortality improvement scales which are Age by Year (such as SOA Scale MP-2017), a new option allows the improvement to be interpolated based on the valuation month. When doing monthly or quarterly valuations, this prevents liability jumps at each Jan 1 valuation date because of an additional year of mortality improvement. With this option selected, mortality improvement will effectively be reflected month by month.

Active Decrements

- **Decrement scaling factors.** In Termination, Disability, and Retirement rate tables, you can now scale rates by a database field. This is useful, for example, for public pension systems that use a single table of base rates but scale it differently by municipal group.

- ♦ **Retirement rates by benefit.** In valuation and projection assumptions, retirement rates can now vary by benefit. For example, you might use this to apply different retirement rates to early and normal retirement benefits. Unlike other decrements that vary by benefit, retirement rates turn on and off based on the associated benefit's eligibility conditions and exceptions. This feature was inspired by US Public Pension plans but is available in all modes except German Pension.

- ♦ **Replacement Ratio retirement rates.** In retirement rate tables, a new "replacement ratio" table type lets you define rates based on the ratio of the retirement benefit / (salary – employee contributions) at decrement age. The relevant Salary Definition can be specified in Valuation Assumptions > Decrements > Params. This feature was inspired by US Public Pension plans but is available in all pension modes except German Pension.

Forecasting

- ♦ **Deterministic segment rates calculator.** For deterministic assumptions under PPA law (in US Qualified Pension mode), a new tool lets you calculate future segment rates based on the latest known rates. The history of known rates will be refreshed as part of periodic ProVal updates. This feature is also available in ProVal PS.

- ♦ **Enhanced forecasting metrics.**
  - o In stochastic forecast and CMS output, new percentile selections include the 1st, 2nd, 98th, and 99th.
  - o The Expected Tail Loss (ETL) metric is now available in stochastic output. ETL, aka Conditional value-at-risk (CVaR), is the loss expected in a tail event. Mathematically, ETL is the expected value (arithmetic mean) of the worst x% of cases in the tail of the distribution. The ETL confidence level (x%) is specified in Stochastic Forecasts > Custom Output.
  - o Forecasts now calculate a liability return, excess return, and compound annualized excess return based on a Benchmark liability set in the Asset & Funding Policy.
- ♦ In US Qualified Pension & Universal Pension modes, a new option lets you ignore expenses when determining if there is a settlement under ASC 715.
- ♦ The calculation of the effective interest rates in a forecast for short duration plans has been improved by considering the payment timing factor.

Output & Reporting

- ♦ **Valuation projected benefit payment layout.** In Valuation output, a new layout option lets you show projected benefit payments for various bases (e.g., UC, PUC, etc.) side-by-side in a single table for each valuation. Additionally, the number of years displayed can be set to a fixed number rather than cutting off after the last payment, facilitating the setup of spreadsheets based on this output.

Valuation Output [Output Style: <undefined>]

Print...   Preview   File...   Copy   Gr

Projected Benefit Payments for Valuation 2018 valuation

Year	EBO	PBO	PBO Annuity Substitution	ABO
2018	428,396.19	428,396.19	428,396.19	428,396.19
2019	419,600.35	419,600.35	419,600.35	419,600.35
2020	409,921.58	409,921.58	409,921.58	409,921.58
2021	399,520.53	399,520.53	399,520.53	399,520.53
2022	388,562.71	388,562.71	388,562.71	388,562.71

- ♦ In US Qualified Pension mode, projected benefit payments are now available for the multiemployer vested and RPA liabilities for multiemployer runs.

All Plans

- ♦ **Power editing of more assumptions.** You can now set post-decrement probabilities and COLA overrides for multiple benefits at once in valuation and projection assumptions.
- ♦ A new benefit formula operator, #NoAttrib *component*, returns the value of a component without any attribution applied under PUC and UC methods. For example, this is useful to compare whether a projected value of a cash balance component is greater than a minimum benefit, all without any attribution.
- ♦ Interest calculations in leap years (next one is 2020) have been revised when the discount period is greater than 1 year. Now when calculating the partial year fraction beyond 1 year,

ProVal will use the actual number of days in the year (either 365 or 366), rather than always treating February as having 29 days. This affects US Qualified mode discounting contribution receivables back to the valuation date and the accounting expected return on assets. Additionally, rolling forward liabilities from the valuation date to the measurement date now accurately reflects leap year. Previously, we assumed that all years were leap years for this calculation.

Pension Plans

♦ **Grow-in for vested liabilities.** When calculating vested liabilities, a new option lets you select if age for eligibility purposes is determined at decrement age (with grow-in) or current age (without grow-in). Previously, current age was always used to determine if benefit eligibility was met for vested liabilities.

♦ Lump sum factors can now reference a payment form that references a database field for the deferred age, temporary age, and/or certain period. This reduces the number of lump sum factors you need to utilize when any of these vary by group.

US Public Pension Plans

♦ **Funding rollforwards.** Funding liabilities can now be rolled forward if funding assets are measured at a subsequent date. The rollforward is triggered by entering a liability calculation date earlier than the funding asset valuation date in your Asset & Funding Policy.

♦ For Asset & Funding Policies that vary by group, the actuarial asset valuation method to blend book and market value of assets can now vary by group.

OPEB Plans

♦ **Full eligibility by coded field**. You can now assign a different full eligibility to different groups within the same plan, eliminating the need to set up separate Plan Definitions and then run and combine several Valuations or Core Projections. In addition, it enables Core Projections with new entrants that go into one specific group (e.g., the current tier), whereas population growth is determined across all groups (e.g., new entrants replacing decrements from all tiers).

♦ **Long Term Disability options**

  o A checkbox lets you force all rates to zero during the elimination period. This allows you to value disabled participants who are known to have met the requirements as of the current date, even if they were still within the elimination period as of the valuation date.

  o The Canadian CIA 2004-2008 LTD Study mortality tables are now available for use.

  o When using the U.S. 2012 NAIC GLTD tables, the margin adjustment factors built into tables 1D and 1R can now be removed or modified.

♦ **Additional HRA support.** The annual credit for a spending account can now be indexed in future years. This is useful, for example, to reflect an annual HRA credit that is indexed with some inflationary measure. In addition, the Lifetime and Annual Limits library has been renamed to Limits and Spending Accounts and the interface reorganized to make parameterizing spending accounts much simpler.

♦ **GASB EAN funding span.** In accounting valuation assumptions that calculate entry age normal liabilities (for GASB), a new option was added to determine the end of the EAN funding span. Now you can end the funding span at the last age with any future benefit, rather than the last age before 100% retirement. This is useful for plans where the 100% retirement age occurs after the age at which benefits are no longer payable, such as an OPEB plan with only pre-Medicare benefits and 100% retirement at age 70. While inspired by OPEB plans, this option is also available in US Public Pension mode.

Canadian Pension Plans

♦ **Stronger, Fairer Ontario Act**. To apply these provisions, simply check the box in your Asset & Funding Policy > Minimum Funding Amortization Bases > Params.
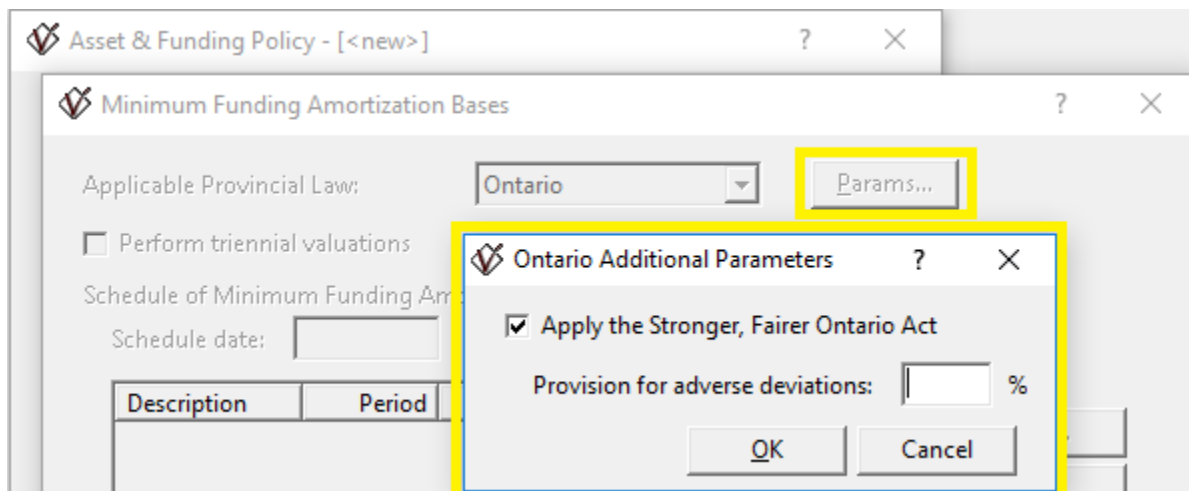
- ♦ In valuation and projection assumptions, lump sum mortality can now be set to use the mortality defined in the Decrements topic. This makes it easy to change your decrement mortality and have it automatically flow through to the lump sum assumptions.

- ♦ In valuation and projection assumptions, a new option lets you assume zero pre-commencement mortality for inactives and actives after decrement. When using custom mortality tables that vary by group, this makes it easy to run your liabilities with and without pre-commencement mortality without having to maintain two sets of tables.

German Pension Plans

- ♦ **Cantelli promises.** A new payment form type lets you value Cantelli promises for surviving spouses.
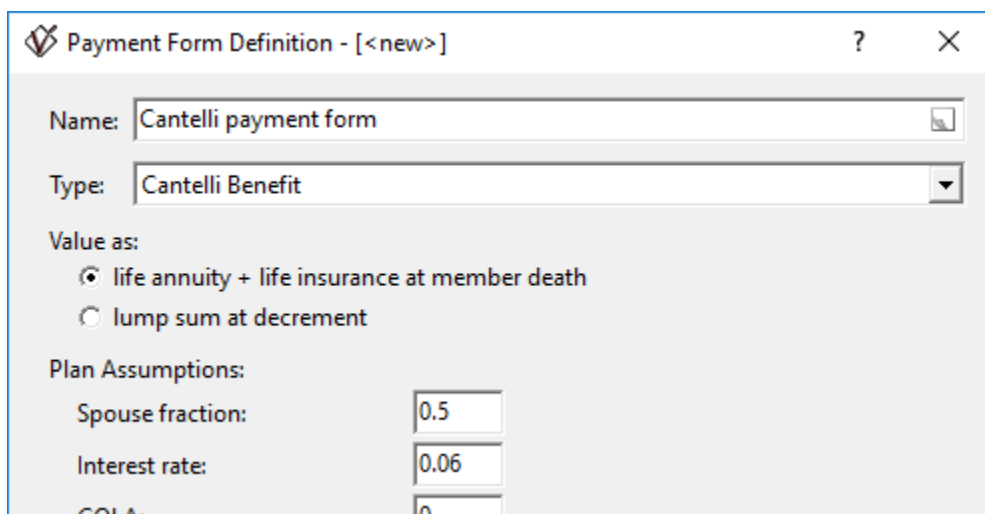
- ♦ **Stopping increases at termination**

  o In Constant, Database Field, and Table benefit formula components, a new option lets you stop increase rates at termination, rather than continuing until secondary decrement.

  o For cash balance benefit formula components, a new option lets you turn off interest credits after termination.

- ♦ **Individual results**

    - o Accounting service cost and interest cost (assuming 0 assets) are now available as individual results items in valuations and core projections. These results are also available in output.

    - o Accounting benefits at actuarial retirement age are now available as individual results items.

- ♦ **Service rounding.** In Service Definitions, a new option lets you control whether 0.50 rounds up or down.

- ♦ **Actuarial age rounding.** The rounded age calculation for end-of-month valuations in months with less than 31 days (e.g., Sep 30) has been modified for participants whose birthday is 6 months earlier (e.g., Mar 30).

Administration Factors

- ♦ **Factors for a participant.** A new Populate button lets you pull the primary and contingent annuitant (member and beneficiary) ages from a record on the database. The record's information is retained as part of the Administration Factors library entry to self-document where the ages came from. This is useful when using Administration Factors to calculate optional factors for a member's benefit calculation.

System

- ♦ **Relative paths.** When saving to an external file, and the associated filename is retained within a ProVal entry (e.g., .pvps file in a Populate ProVal PS entry, stochastic trial detail .csv file in a Stochastic Forecast), you now enter the filename relative to the client folder. For example, if you enter "myfile.csv", it will be saved to the client folder. Or, if you enter "output\myfile.csv", it will be saved to the "output" subfolder. Besides a more compact way of entering the filename, it also means you no longer need to change the file's path after copying or moving client files to another location. To see the full path where a file will be saved, click Browse.

- ♦ In the ProVal API, the RunVal function now allows you to specify the valuation date for the valuation you are running.

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.

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