What's New!

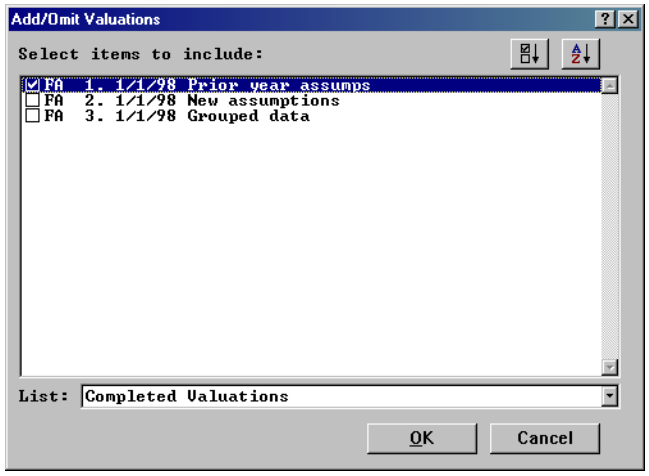
ProVal

ProVal version 2.17 **June 2001**

ProVal version 2.17 introduces several new features including an administrative factors tool and the ability to save Exhibits directly to Word™ You'll find details about these and other enhancements to ProVal below.

General

- A merge client command has been added as a companion to the client to client copy command, to let you merge all elements from Client B into Client A. Thus, for example, two people can work on two different plans and then merge the two plans into one client.
- A new license server (an alternative to the NetSentinel server) provides a more reliable and versatile way to manage network licenses. You will need a new key to access this license server, so please call WinTech if you want to try it.
- The interface for adding and omitting (e.g., adding valuations to a valuation set) has been simplified. Just check or uncheck the items you wish to add or omit and click OK.



COLAs

- ProVal can now handle many Cost of Living Adjustment (COLA) features (see article on page 11), including:
  - Simple and compound interest
  - Age– and/or duration–dependent
  - Variations by division or location
  - Annual caps
  - Ultimate caps
  - COLAs on selected benefits

Custom Operators

#PIA:

- A new option lets you calculate PIA at decrement age if later than the specified computation age.
- When specifying a frozen law year, ProVal now projects zero or level salaries from law year to decrement consistent with the "salaries after decrement" option.

#CVCP:

- A new option lets you limit (projected) wage bases to the 401(a)(17) compensation limit.
- A new option lets you shift covered compensation back by 1 year (to avoid a decrease in the accrued benefit).

#FAS:

- A new option lets you exclude or include salaries prior to a specified starting point.

Page

OPEB Mode

- Liabilities can be calculated with a + 1%/-1% trend sensitivity when executing a valuation (see article on page 6).
- Two options have been added for the attribution of APBO: linear proration to decrement and linear proration to benefit eligibility.
- You can now view the total of gross and cost sharing benefits for valuations and core projections under the Output menu.

Sample Lives

- ProVal now remembers the reports (e.g., Input Data, Summary Results) you last selected when viewing sample lives, including such details as the age(s) for which PIA calculations should be displayed.

Valuation Sets

- GASB 25/27 parameters are now available to specify the ARC contribution policy, any existing NPO, and the aggregate method NPO amortization approach. See the article on page 8 for complete details.
- A general export to Microsoft Word for valuation set exhibits has been added to facilitate more automated valuation report writing (see article on page 10).
- ProVal now remembers the exhibits you last selected when viewing valuation set and deterministic forecast exhibits.
- To facilitate batch execution, you can now set up valuation sets that reference valuations that have not been run.
- Valuation sets (and deterministic and stochastic forecasts) now let you override the PBGC variable premium liability with the results from alternative valuations (or core projections).

Individual Results

- When choosing individual results, you can now filter out results by benefit. This makes the list significantly shorter and more manageable when benefit detail isn't needed.
- When benefit detail is needed, the default names for accounting fields have been changed to eliminate duplications with names of funding fields.
- In OPEB mode, you can now select average and total future service as individual results.

Core Projections

- Average payroll and average payroll increase rates are now displayed with other demographic information from the view button under Execute | Core Projections. These are important diagnostics when checking a core projection for reasonableness.

Stochastic Forecasts

- A library of custom variables can now be created for use in stochastic forecasts. These custom variables can be as simple as the PBGC premium or a more complex expression.

Tools

- An Administration Factors tool has been added to calculate annuity factors, conversion factors, and commutation functions (see article on page 3).
- The Experience Studies tool now gives you an option to weight headcounts by a database field (e.g., age, service or salary).

Batch Execution

- Gain/Loss Analysis can now be run from Batch Execution.
- Valuations and their dependent valuation sets can now be run in a single batch execution. The same is true for core projections and their dependent deterministic and/or stochastic forecasts, and valuations and their dependent gain/loss analyses.

Database

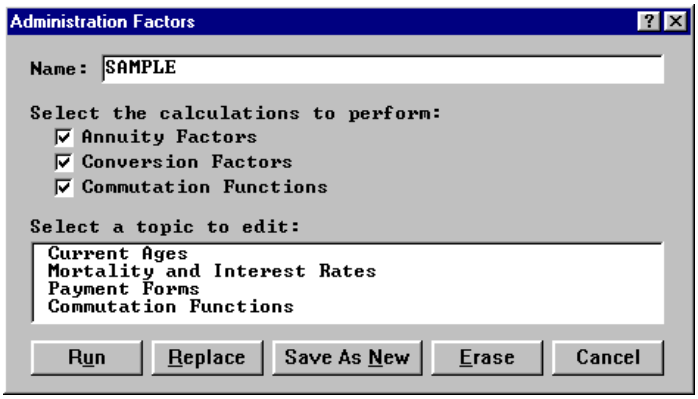
- Inserting, deleting, and shifting fields around in a Record Layout is now a cinch. Simply click the reorder button and change the field order or width.

Changes Log

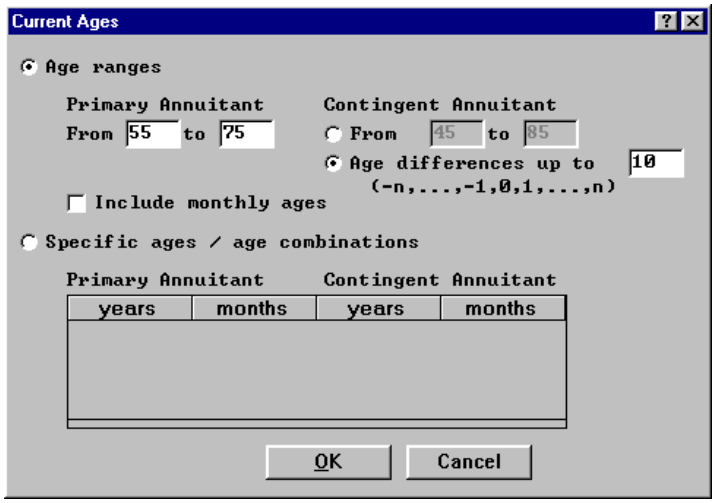
- Be sure to read the changes log (see What's New in Help or the CHANGES.LOG file in the ProVal directory) about updates to certain calculations that change results.

Using the Administration Factors Tool

ProVal's new Administration Factors Tool can be used to generate annuity factors, conversion factors and commutation functions.



To develop administration factors, choose **Administration Factors** from the **Tools** menu. Each of the Administration Factors topics is discussed below. Depending on what calculations you choose to run, some of these topics may not be necessary and will not appear.



Current Ages

The Current Ages topic is where you specify the primary and contingent annuitant ages for which factors are to be calculated. You may choose between specifying **age ranges** or **specific ages/age combinations**.

When generating factors for **age ranges**, you may specify the contingent annuitant's ages as either a static range or a dynamically floating range based on a fixed set of age differences that you provide.

You may also generate factors for fractional ages by selecting **include monthly ages**.

Contingent annuitant age differences allow you to generate a smaller table of factors for age combinations that are most likely to occur. For example, to generate factors for primary annuitants with ages from 55 to 75, a comprehensive table might include contingent annuitants with ages from 45 to 85. This table would be comprehensive in the sense that it would include factors for all age combinations. But, in practice, it may contain a lot of unlikely age combinations (such as 55/85 or 75/45, etc.) and consequently it may be unnecessarily large. In practice you may need only factors for age differences anywhere from 10 years younger to 10 years older. By specifying **age differences up to** 10, you can generate a table that is smaller and easier to work with.

Be careful about selecting age ranges, specifically with monthly ages; it may produce scores or even hundreds of pages of output. For example, selecting monthly ages produces 12 times as many single-life factors and it produces 144 times as many joint-life factors.

If you select **specific ages**, you provide age values in the form of years and months. The factors for the fractional ages are calculated by interpolating (linearly) from the whole age factors.

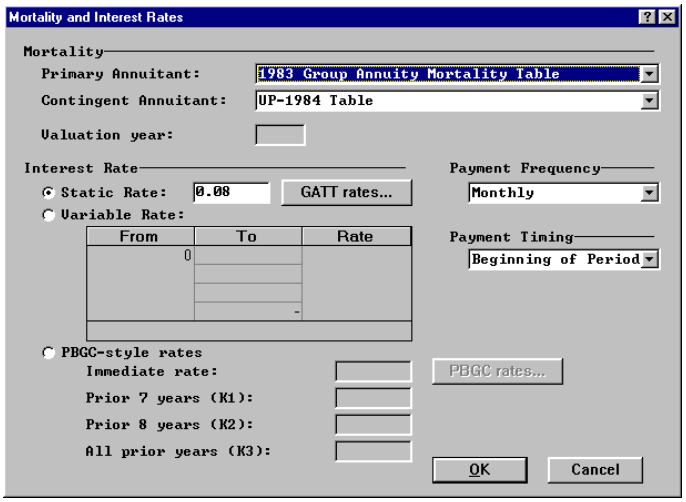
Mortality and Interest Rates

The Mortality and Interest Rates topic allows you to specify separate mortality tables for primary and contingent annuitants, and to choose between several interest rate styles.

The selected mortality table(s) may be unisex or sex distinct, and the output will be displayed differently accordingly. Mortality tables may also be generational (i.e, include a projection scale) as long as commutation functions are not being calculated. The projection scale is applied on a fully generational basis relative to the valuation year you provide.

When specifying the interest rate, you have the ability to specify a static rate, a variable (i.e.,

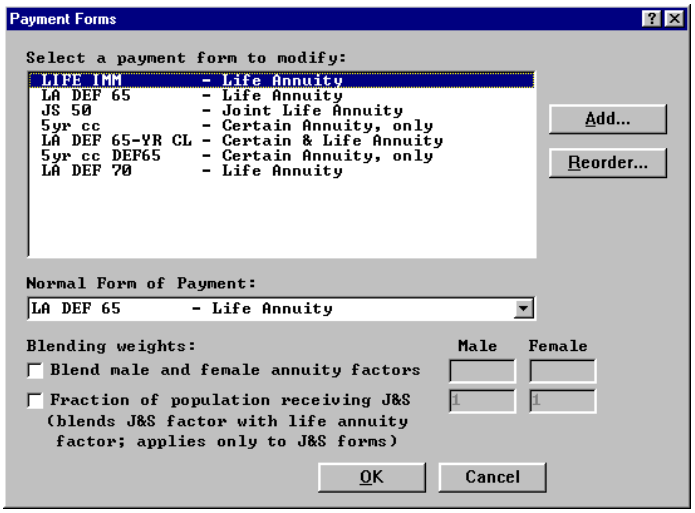
duration–dependent) interest rate, or a PBGC–style interest rate. Buttons are provided to look up historical GATT or PBGC rates.



The Mortality and Interest Rates topic also controls the payment frequency (annual, semi-annual, quarterly, monthly or continuous) and the timing of payments (beginning/end of period). Similar to ProVal's pension modes, these settings default to "monthly" and "beginning of period." The administrative factors tool also employs the same methodology used in pension modes for calculating the present value of "mthly" payments.

Payment Forms

The Payment Forms topic is similar to that found in Census Specifications.



You will need to complete the payment forms topic if you are calculating either annuity factors or conversion factors. You may define an unlimited number of life annuities, joint life, certain and life, certain only and life insurance payment forms, each of which may be either immediate or deferred, and may contain COLA rates if desired.

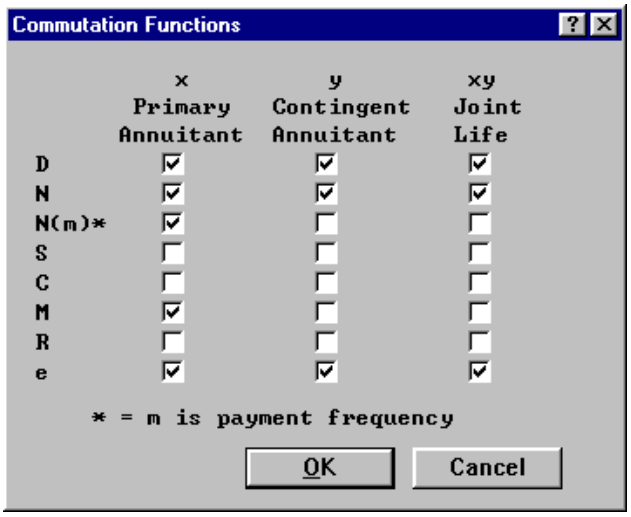
If you are calculating conversion factors you must select one payment form as the "normal form of payment." A separate table will be produced for each payment form, showing the conversion factors necessary to convert the "normal form" to that specific form.

The Payment Forms topic also allows you to generate blended factors. This produces unisex factors that are based on blending the sex distinct factors in accordance with the complementary weights you provide for the male and female factors. This feature does not generate factors based on blended mortality. To do that, simply provide ProVal a unisex mortality table under the Mortality and Interest Rates topic.

You may also blend joint life factors with life annuity factors by indicating the **fraction of population receiving J&S**, which may be separately specified for males and females.

Commutation Functions

The Administrative Factors Tool will also calculate the following commutation functions: **D**, **N**, $\mathbf{N^{(m)}}$, **S**, **C**, **M**, **R** and **e** (curtate life expectancy). Commutation functions can be calculated for the primary annuitant (x), the contingent annuitant (y) or the joint life (xy).



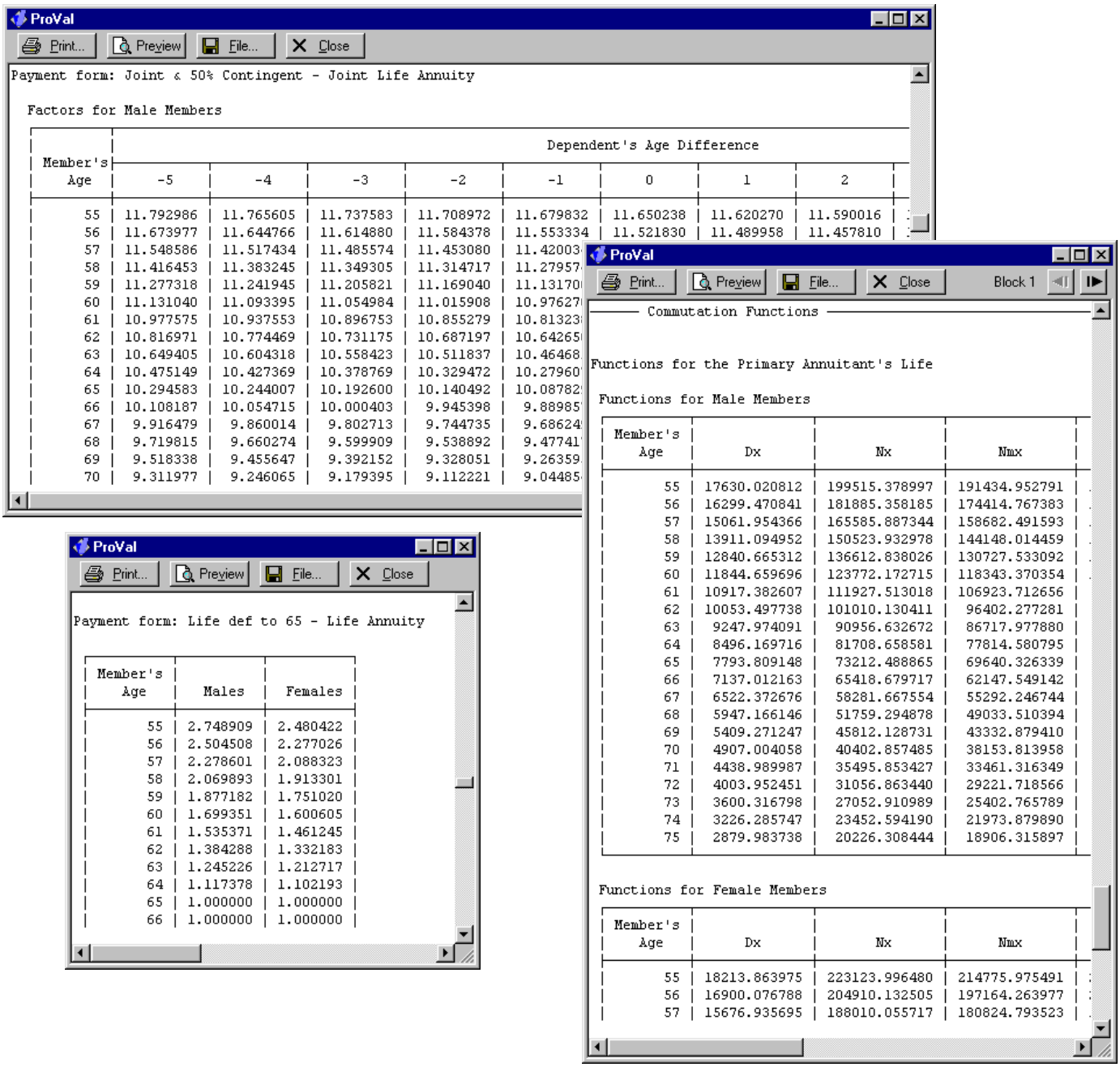
In the calculation of $\mathbf{N}^{(m)}$, (m) is controlled by the payment frequency specified under the Mortality and Interest rates topic. The payment timing parameter has no meaning here.

The curtate life expectancy, **e**, counts only full years that a person is expected to live. This is in contrast to the complete life expectancy which, assuming uniform rates of death, is approximated by adding $^1/_2$ to this curtate value.

There are several situations for which commutation functions may not be run: when specifying either "specific" or "monthly ages," when using either variable or PBGC interest rates or, as mentioned earlier, when using a mortality table with a projection scale.

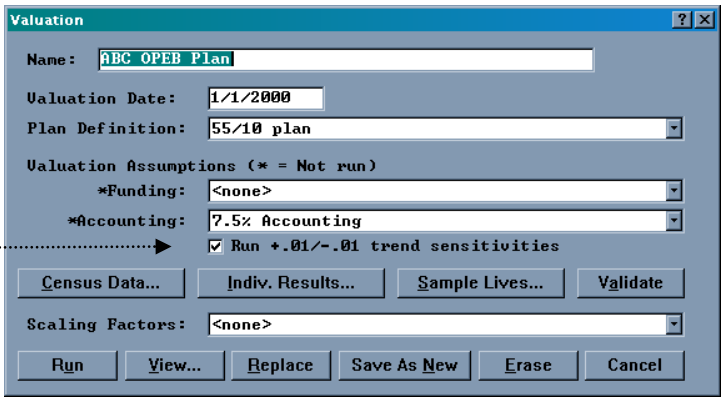
Output

The Administration Factors Tool will produce tables of annuity factors and/or conversion factors for each payment form definition. Tables will also be produced for any selected commutation functions. If the factors/functions are based on sex distinct mortality, then separate results will be generated for males and females unless, when generating annuity factors, the option to blend factors is selected.



+ 1%/-1% Trend Sensitivities

ProVal now gives you the option of running + 1%/-1% trend sensitivities automatically as part of an OPEB mode valuation. You simply check the **Run + .01/-.01 trend sensitivities** box on the Execute | Valuation screen, and the system will run two extra accounting valuations with adjusted trend rates.



You may ask, "How does ProVal know what my trend assumptions are?" This is a good question because there is no specific "trend" parameter. Rather, ProVal allows you to specify increase rates for specific benefit formula and accrual basis components. Typically all OPEB mode increase rates will be trend, but not necessarily. For example, a benefit component may increase by inflation. To avoid the system making an assumption as to what is and is not trend, the increase rates topic under ProVal's OPEB mode accounting valuation assumptions has been modified to allow you to indicate whether or not the rates should be treated as trend (i.e., whether the + .01/-.01% sensitivity is applicable). *Since most increase rates represent trend, the default assumption for updating existing client files and for new valuation assumptions is a checked box.*

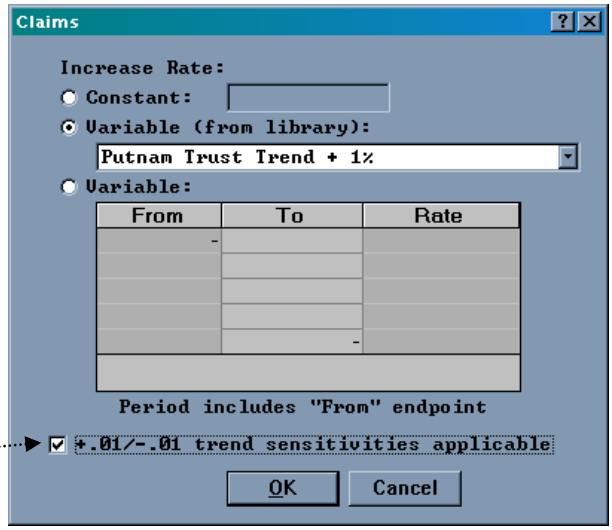
Several different types of trend sensitivity output are available when you run Valuations and Valuation Sets that include this new feature:

1) When you press the **View** button under Execute | Valuation, the output presented includes + 1% and –1% trend results for APBO, fully eligible APBO, APBO Normal Cost, EPBO and expected nominal payments. This same information may also be selected under the Valuation Output menu (where the output liability variables are now split between funding and accounting).

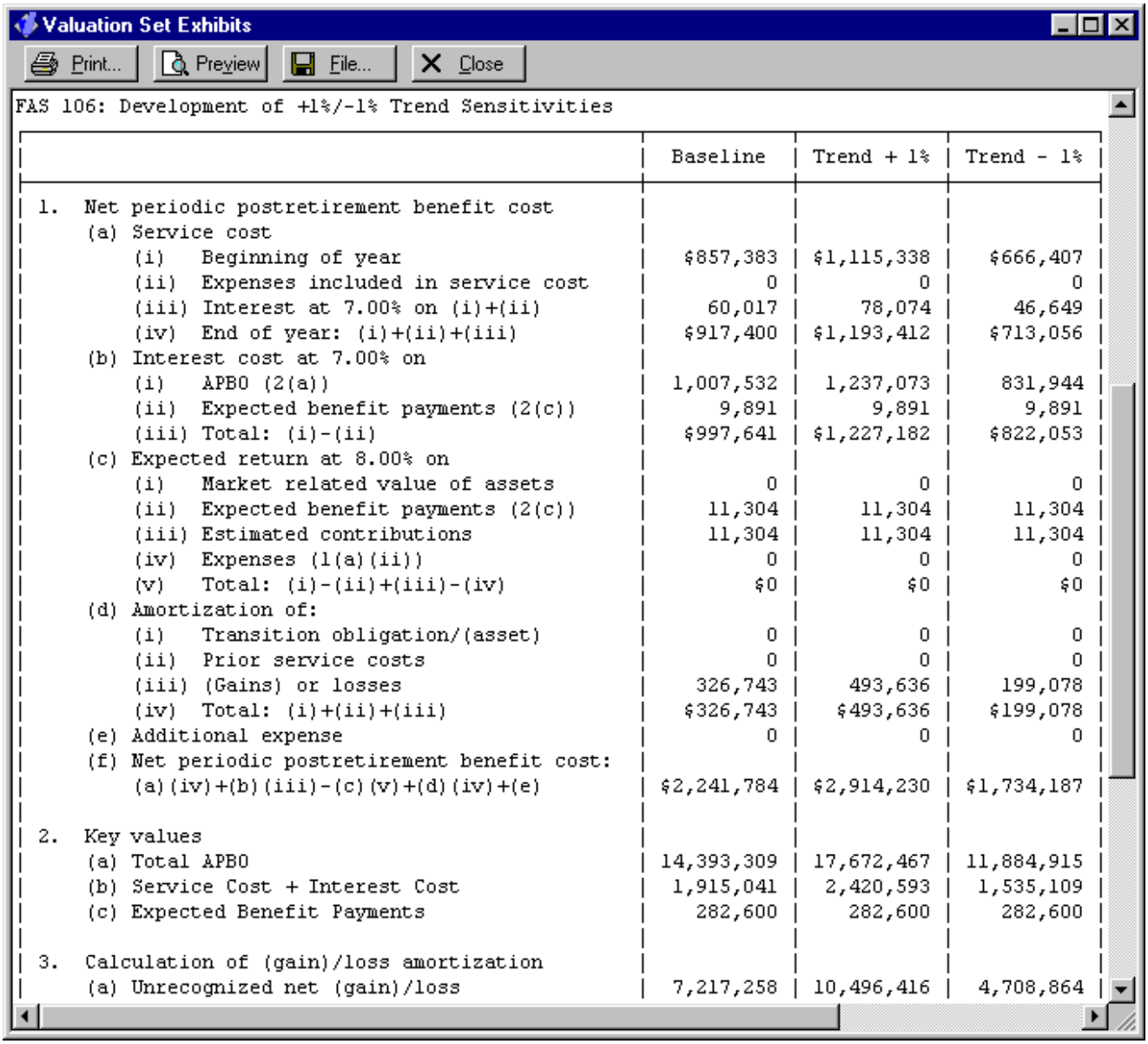
2) When you run a Valuation Set, + 1% and –1% trend results are available for the APBO, Service Cost, Interest Cost and Expected Benefit Payments under the **View** button.

3) A new variable topic entitled "Accounting Trend Sensitivities" has been added to the Ouput | Valuation Sets Variable menu. In addition to the APBO, etc., you can view the total expense and the sum of the interest cost and service cost from this menu.

4) Finally, a new Valuation Set Exhibit has been added that develops the + 1% and –1% trend sensitivities.



One thing you may note about the trend sensitivities is that, while expected benefit payments are shown on all bases (baseline, + 1% and –1% trend), they never vary. This is because ProVal does not currently apply increase rates to formula components until the second year of the valuation. *In other words, the trend assumption has no impact on the current year claims.* We continue to show expected benefit payments on all bases because we anticipate adding options in this regard in the future.



FAS 106: Development of +1%/-1% Trend Sensitivities

	Baseline	Trend + 1%	Trend - 1%
1. Net periodic postretirement benefit cost			
(a) Service cost			
(i) Beginning of year	$857,383	$1,115,338	$666,407
(ii) Expenses included in service cost	0	0	0
(iii) Interest at 7.00% on (i)+(ii)	60,017	78,074	46,649
(iv) End of year: (i)+(ii)+(iii)	$917,400	$1,193,412	$713,056
(b) Interest cost at 7.00% on			
(i) APBO (2(a))	1,007,532	1,237,073	831,944
(ii) Expected benefit payments (2(c))	9,891	9,891	9,891
(iii) Total: (i)-(ii)	$997,641	$1,227,182	$822,053
(c) Expected return at 8.00% on			
(i) Market related value of assets	0	0	0
(ii) Expected benefit payments (2(c))	11,304	11,304	11,304
(iii) Estimated contributions	11,304	11,304	11,304
(iv) Expenses (1(a)(ii))	0	0	0
(v) Total: (i)-(ii)+(iii)-(iv)	$0	$0	$0
(d) Amortization of:			
(i) Transition obligation/(asset)	0	0	0
(ii) Prior service costs	0	0	0
(iii) (Gains) or losses	326,743	493,636	199,078
(iv) Total: (i)+(ii)+(iii)	$326,743	$493,636	$199,078
(e) Additional expense	0	0	0
(f) Net periodic postretirement benefit cost:			
(a)(iv)+(b)(iii)-(c)(v)+(d)(iv)+(e)	$2,241,784	$2,914,230	$1,734,187
2. Key values			
(a) Total APBO	14,393,309	17,672,467	11,884,915
(b) Service Cost + Interest Cost	1,915,041	2,420,593	1,535,109
(c) Expected Benefit Payments	282,600	282,600	282,600
3. Calculation of (gain)/loss amortization			
(a) Unrecognized net (gain)/loss	7,217,258	10,496,416	4,708,864

The ProVal Team is Growing!

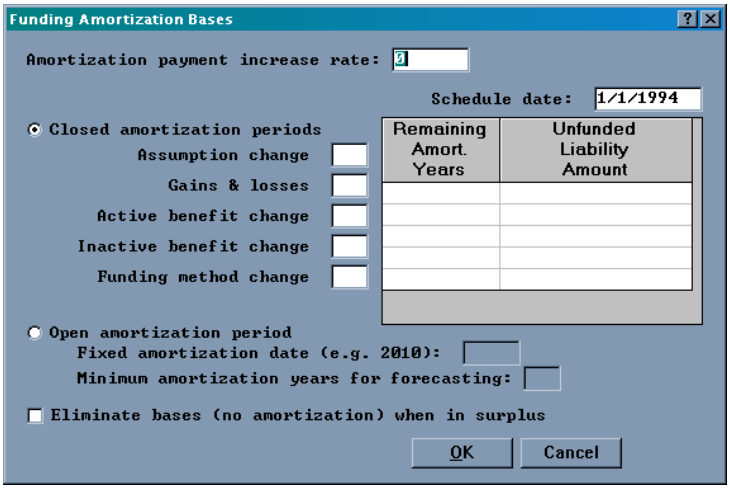
Mark Ruloff and **Marty Krone** have joined our WinTech team in the past few months. They will be key players in developing our Administration software.

Joe Courtney and **Robert Berk** have also recently joined our team. Joe and Robert will primarily be involved with the ongoing enhancements to ProVal. Joe will also be helping us improve our Web presence.

GASB 25/27

Parameters to model the GASB 25 Annual Required Contributions and GASB 27 Annual Pension Cost are now available in ProVal's Public mode. These calculations are controlled by two Asset & Funding Policy topics: *Funding Amortization Bases* and *GASB Accounting*.

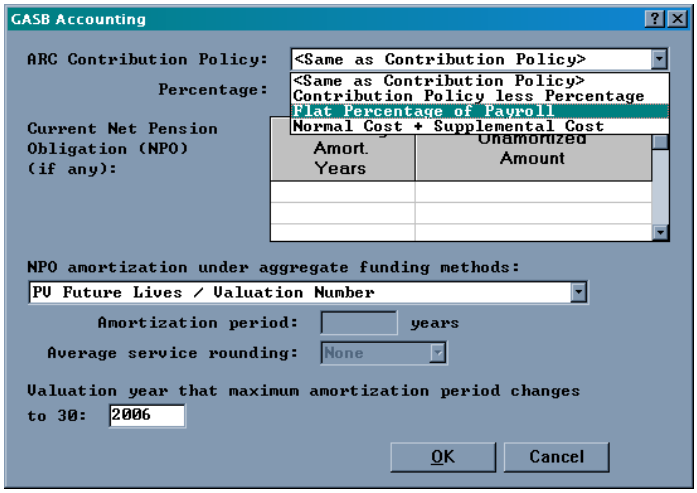
All public mode Asset & Funding Policies now require that funding amortization parameters be set regardless of the Contribution Policy. (Previously they were only required for "Normal Cost + Supplemental Cost" contribution policies.) The amortization information is necessary to calculate an appropriate Annual Required Contribution (ARC) and Annual Pension Cost.



Amortization policies can specify either *open* or *closed* amortization periods, which may have level dollar or level percentage payments. Regardless of the settings, ProVal will ensure that the ARC meets the minimum and maximum amortization requirements. Thus, for example, if the *Eliminate bases (no amortization) when in surplus* box is checked, the ARC will differ from the employer contribution when the plan is in surplus.

To help identify cases where the plan is near to running afoul of the maximum amortization period requirements, ProVal now always calculates and provides as output the "funding period", which is the number of years needed to pay off the current unfunded liability based on the plan's normal cost and contribution policy.

Information about any existing Net Pension Obligation (NPO), as well as NPO amortization under aggregate funding methods, is specified under the new *GASB Accounting* topic. If a non-zero NPO exists, it is entered on this screen along with the remaining amortization period(s).



Any changes to the NPO will be controlled by the difference, if any, between the ARC Contribution Policy and the plan sponsor's Contribution Policy, where four (4) options are currently available for the ARC Contribution Policy. Thus, for example, if additional contributions are being used to pay off the NPO, these can be specified under the *Contribution Policy* topic while the ARC Contribution Policy can be specified as "Normal cost + Supplemental Cost".

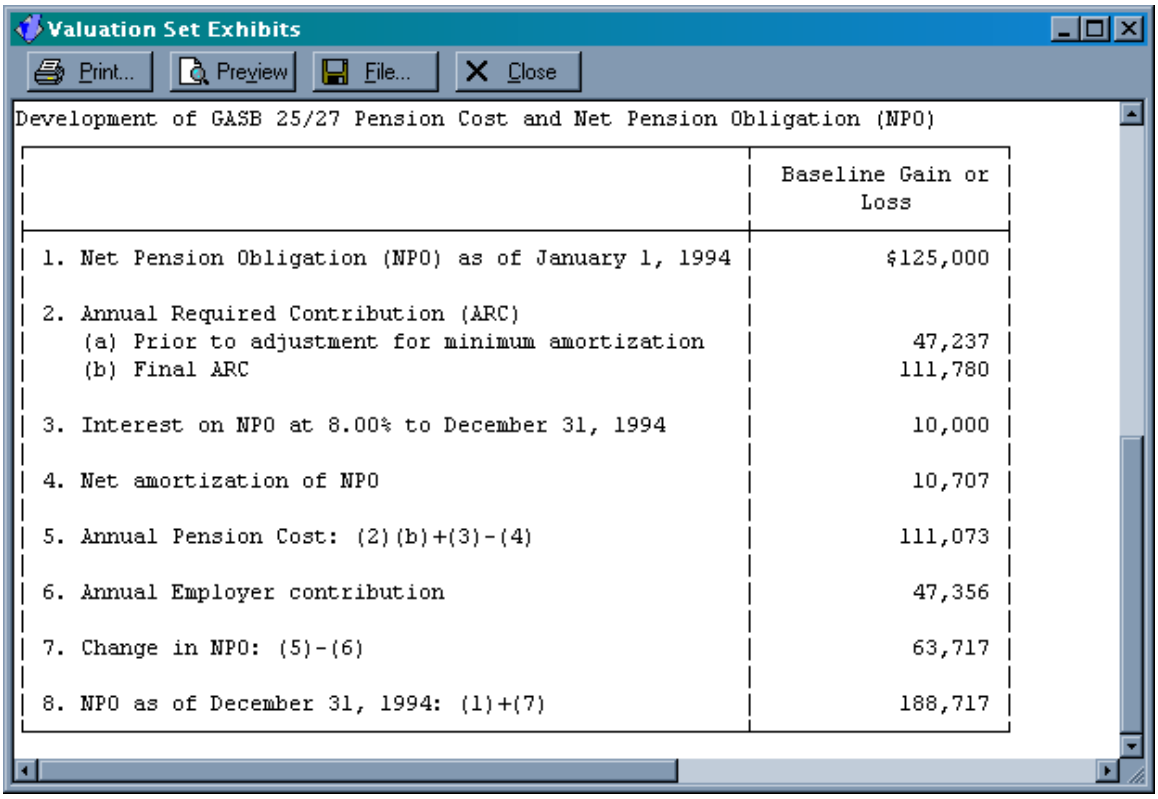
The *GASB Accounting* dialog also controls the NPO amortization if an aggregate actuarial cost method is used. (Both the actuarial cost method and the plan sponsor's contribution policy are specified under the *Contribution Policy* topic.) Based on discussions with our users, three (3) alternative amortization approaches are currently supported:

1) The ratio of the present value of future lives to the number of valuation actives (with no interest adjustment), which produces the same effective amortization as the FIL level dollar method.

2) An annuity factor for a period equal to the FASB definition of expected average service to retirement. (An "accounting" valuation is required to calculate this amortization period, and rounding options are provided.)

3) An annuity factor with a user-specified amortization period.

Finally, a new Valuation Set and Deterministic Forecast Exhibit has been added that details the development of the NPO, including any adjustments required to meet the GASB minimum amortization requirements.



Development of GASB 25/27 Pension Cost and Net Pension Obligation (NPO)

	Baseline Gain or Loss
1. Net Pension Obligation (NPO) as of January 1, 1994	$125,000
2. Annual Required Contribution (ARC)	
(a) Prior to adjustment for minimum amortization	47,237
(b) Final ARC	111,780
3. Interest on NPO at 8.00% to December 31, 1994	10,000
4. Net amortization of NPO	10,707
5. Annual Pension Cost: (2)(b)+(3)-(4)	111,073
6. Annual Employer contribution	47,356
7. Change in NPO: (5)-(6)	63,717
8. NPO as of December 31, 1994: (1)+(7)	188,717

We have changed our phone numbers to improve our service to you.

ProVal support now has its own direct number:
ProVal Support: (203) 861-5540
Email: support@winklevoss.com

WinTech main number: (203) 861-5530
Fax: (203) 861-5531

Saving Exhibits to Word

You can save ProVal's valuation set exhibits directly to a Microsoft Word document. The exhibits will appear as tables in Word. To do this:

1) On the **Output** menu, click **Valuation Set Exhibits**.

2) Select the valuation set and associated exhibits you want to save.

   You may also want to turn off the display by valuation events and select a rounding amount.

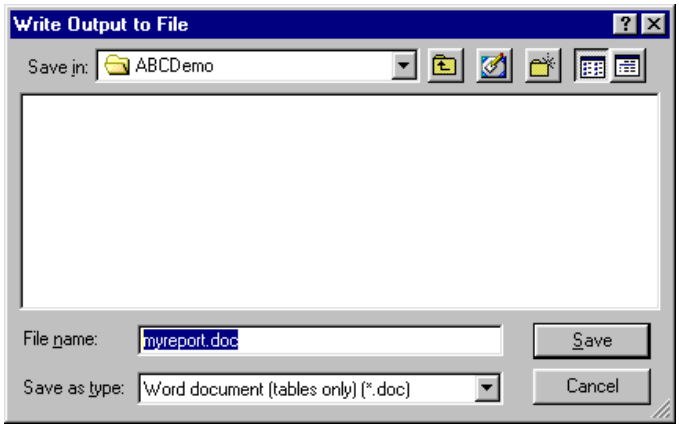
   Click **View.**

3) After reviewing the exhibits, click **File…**

   In the **Save as type** box, click **Word document (tables only) (*.doc)**.

   In the **File name** box, type a new or existing name for the document.

   Click **Save.**



   ProVal will find existing tables (if any) in the document and update their contents while preserving all other formatting. For exhibits that are longer or shorter than before (such as a schedule of amortization bases), ProVal will add or delete rows (or columns) as needed. If it does not find an existing table, it will add a new table to the end of the Word document along with a title. The title is not considered part of the table; feel free to edit or delete the title, as it will not change the next time you save exhibits from ProVal.

4) Open the document with Microsoft Word. When working with the Word document, you can:

   - move the tables to different locations in the document or even copy and paste them into other documents,
   - apply formatting to the tables (column widths, bold, font, font size, borders, shading, alignment, etc.), and
   - add other information to the document, such as a management summary, summary of plan provisions, summary of actuarial assumptions, headers and footers, etc.

but you <u>should not</u>:

- change any of the text of the tables, merge any cells together, or add any rows or columns as these changes will be lost the next time you save exhibits from ProVal.

As a starting point, you may wish to use the document "sample report.doc" that is installed with ProVal (for a local installation, you'll typically find this document in the folder c:\proval).

ProVal marks the location of tables in the Word document using bookmarks. If you follow the steps above, ProVal should maintain these bookmarks for you without any intervention on your part. However, you can manually mark the location of tables if you wish. To do so:

- **Highlight** a table in Word
- On the **Insert** menu (in Word), click **Bookmark…**
- In the **Bookmark name** box, type the name of the bookmark (see the list of ProVal's bookmarks in help).
- Click **Add.**

COLAs

ProVal's latest COLA enhancements include:

1) A new "Cost-of-Living Adjustments (COLAs)" topic in **Valuation Assumptions** for specifying COLAs (moving the existing COLA parameters out of the "Interest & Salary" topic)

2) A new library of **COLA rate tables** that can vary by age, duration, and/or sex.

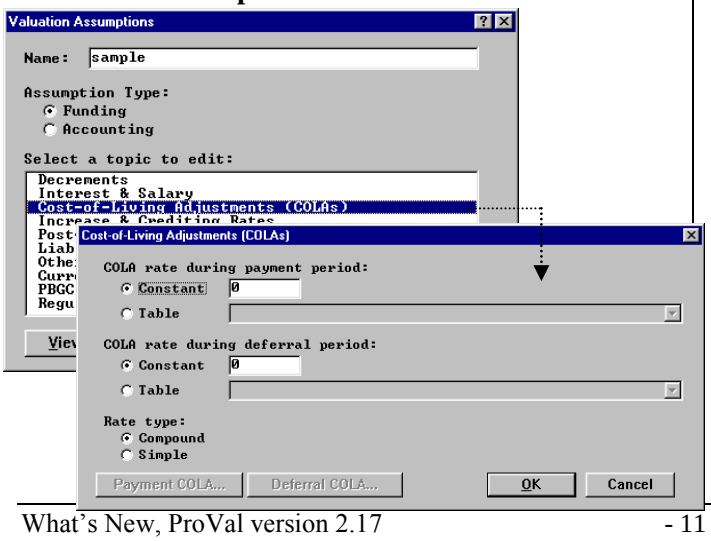
3) The ability to identify which benefits are subject to COLAs, apply annual caps, and apply ultimate caps (this applies equally to active **Benefit Definitions** and inactive benefits in **Census Specifications**).

With these enhancements, ProVal can value:

- Simple and compound interest COLAs
- Age-dependent COLAs
- Duration-dependent COLAs (e.g., start after 5 years, stop after 30 years)
- Calendar-year dependent COLAs
- COLAs that vary by division or location
- Annual COLA caps
- Ultimate COLA caps (e.g., x times original benefit, 415 limit)
- COLAs on selected benefits

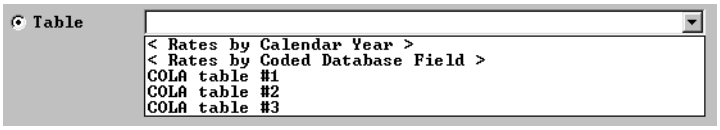
These enhancements apply to the specification of valuation COLAs. The method for handling adhoc COLAs during a deterministic or stochastic forecast remains unchanged.

Valuation Assumptions

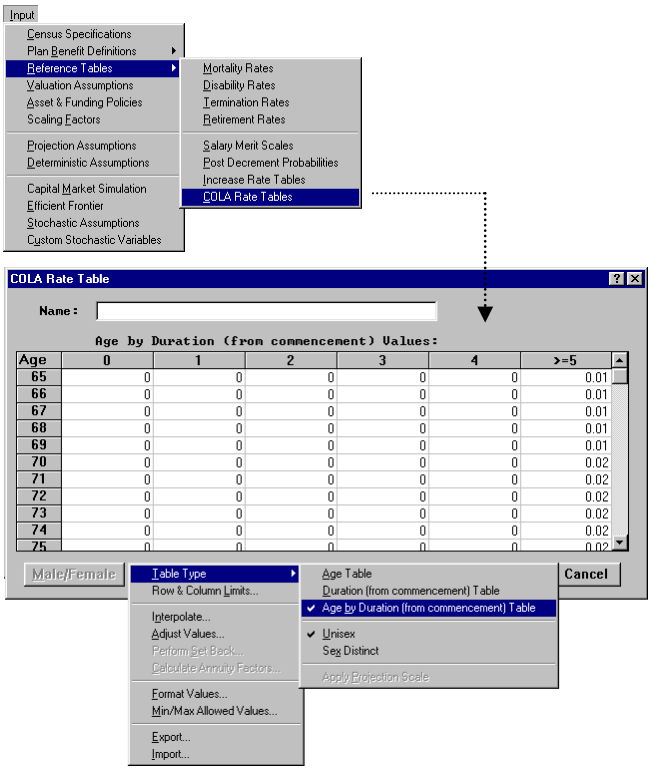


The option to reference a **COLA Rate Table** is new. So is the **rate type.**

Note that the **Table** drop down lists contain the familiar **< Rates by Calendar Year>** and **< Rates by Coded Database Field>** options. If either of these options is selected, the **Payment COLA…** or **Deferral COLA…** button will become accessible, allowing you to specify a table for each calendar year or database code.

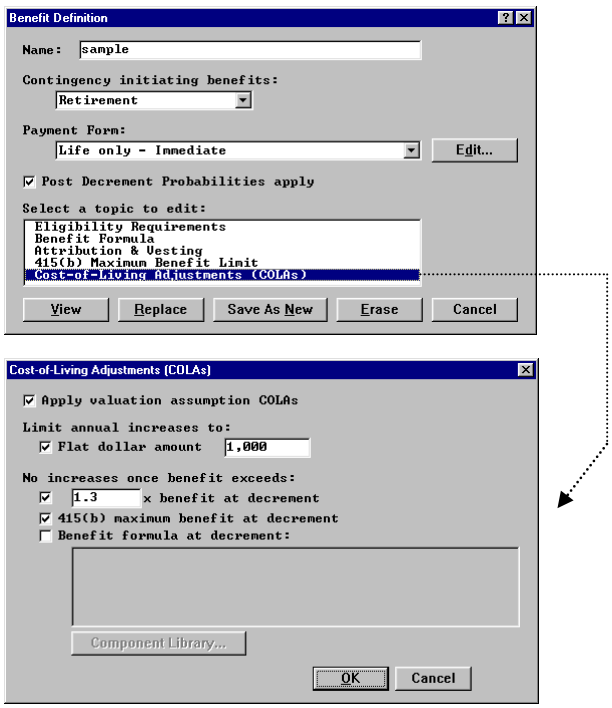


COLA Rate Tables Library



The new **COLA Rate Tables** work exactly the same as other reference tables, except the "service" dimension is labeled "duration". Here, duration is defined as time since benefit commencement. Note that duration-dependent tables cannot be used to specify COLAs during the deferral period since time since commencement would be negative.

Benefit Definitions

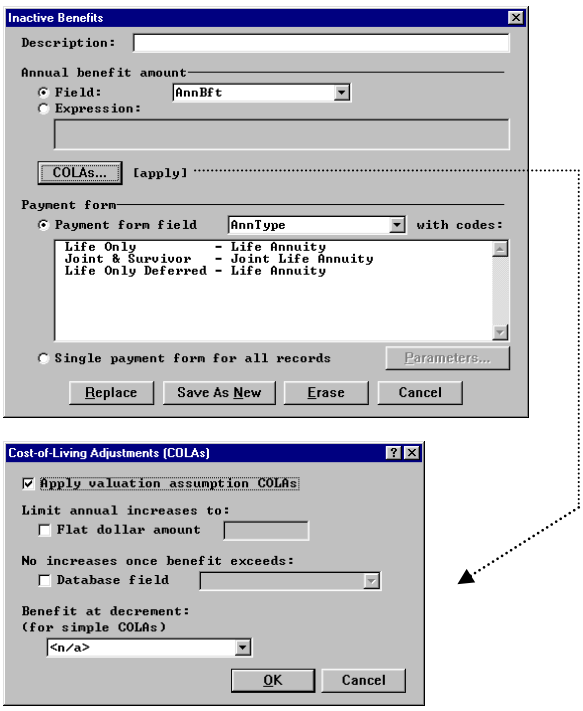


A **checkbox** lets you to identify which active benefits are subject to COLAs. However, COLAs will not apply to life insurance or lump sum payment forms, regardless of whether this box is checked or not.

The **limit annual increases to** parameter limits annual increases to a flat dollar amount. For example, a 3% COLA that applies to the first $12,000 of benefit would be entered as 360 (that is, 12,000 * 0.03) here.

The **no increases once benefit exceeds** parameter has checkboxes for the most popular options (x times the benefit at decrement and 415 limit at decrement) plus a benefit formula for other variations (x% of final average salary at decrement, x plus benefit at decrement, flat dollar, etc.).

Census Specifications | Inactive Data | Benefits



A **checkbox** lets you identify which inactive benefits are subject to COLAs. However, COLAs will not apply to life insurance or lump sum payment forms, regardless of whether this box is checked or not.

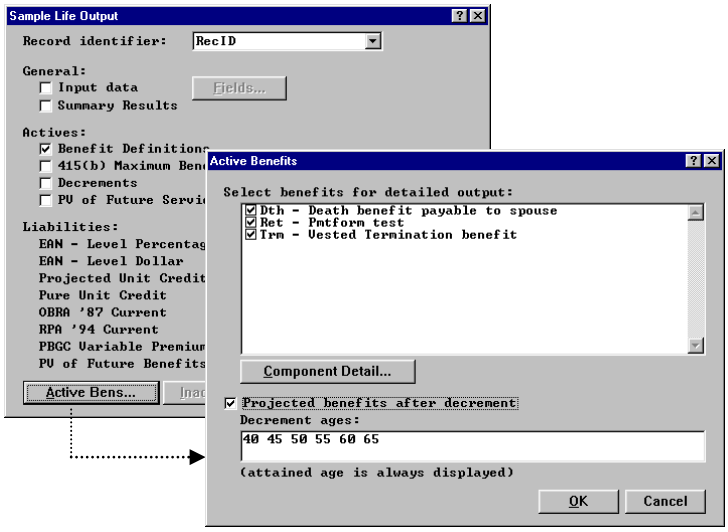
The **limit annual increases to** parameter limits annual increases to a flat dollar amount. For example, a 3% COLA that applies to the first $12,000 of benefit would be entered as 360 (that is, 12,000 * 0.03) here.

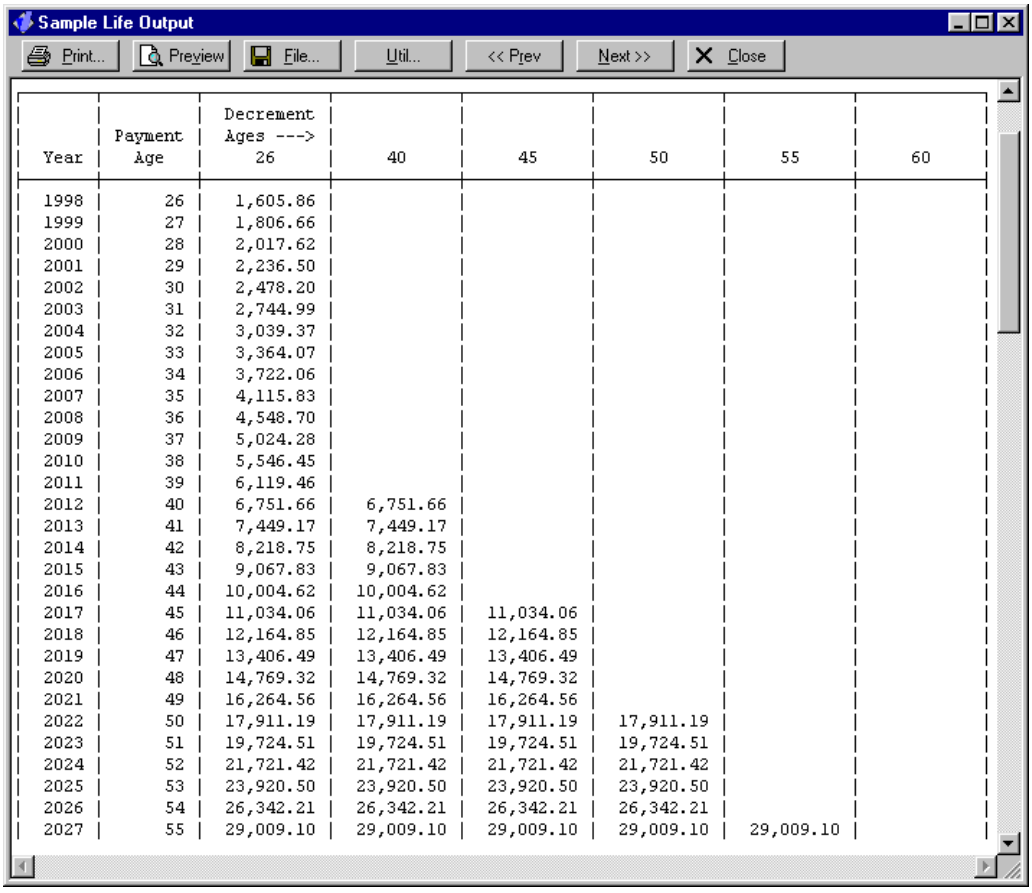
The **no increases once benefit exceeds** parameter is a database field. This could be used to limit the ultimate benefit to x times the benefit at decrement, 415 limit at decrement, x% of final average salary at decrement, $x plus benefit at decrement, flat dollar amount, etc.

The **benefit at commencement** is used if Valuation Assumptions specify a simple interest COLA. < n/a> can be selected otherwise.

Sample lives

A new sample life report for actives shows you the projected benefit after decrement, so you can check the affect of COLAs. To select this report or to adjust the decrement ages that are displayed, click the **Active Bens…** button at the bottom of the **Sample Life Output** dialog box.





Year	Payment Age	Decrement Ages ---> 26	40	45	50	55	60
1998	26	1,605.86					
1999	27	1,806.66					
2000	28	2,017.62					
2001	29	2,236.50					
2002	30	2,478.20					
2003	31	2,744.99					
2004	32	3,039.37					
2005	33	3,364.07					
2006	34	3,722.06					
2007	35	4,115.83					
2008	36	4,548.70					
2009	37	5,024.28					
2010	38	5,546.45					
2011	39	6,119.46					
2012	40	6,751.66	6,751.66				
2013	41	7,449.17	7,449.17				
2014	42	8,218.75	8,218.75				
2015	43	9,067.83	9,067.83				
2016	44	10,004.62	10,004.62				
2017	45	11,034.06	11,034.06	11,034.06			
2018	46	12,164.85	12,164.85	12,164.85			
2019	47	13,406.49	13,406.49	13,406.49			
2020	48	14,769.32	14,769.32	14,769.32			
2021	49	16,264.56	16,264.56	16,264.56			
2022	50	17,911.19	17,911.19	17,911.19	17,911.19		
2023	51	19,724.51	19,724.51	19,724.51	19,724.51		
2024	52	21,721.42	21,721.42	21,721.42	21,721.42		
2025	53	23,920.50	23,920.50	23,920.50	23,920.50		
2026	54	26,342.21	26,342.21	26,342.21	26,342.21		
2027	55	29,009.10	29,009.10	29,009.10	29,009.10	29,009.10	

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