EQUINITI

In Focus

Valuing Cash Benefits

March 2019

Contents

1 Scope

1.1.1 Some schemes will pay cash benefits on retirement or death in addition to pension benefits or by commuting pension for cash amounts. This note sets out how to value these benefits in SuperVal.

1.1.2 This document is based on version 9.25 of SuperVal. Note also that those users with Client Code 3 have more flexibility in valuing cash benefits than those with Client Code 0. Set-ups are considered for both client codes in this document.

1.1.3 This document does not include specific details of how to set up/value cash benefits for PPF runs and Capped non-PPF runs. Users should refer to the Help Documents “PPF S179 (Levy) Valuations” and “Non PPF Capped Runs” for details.

2 Overview

2.1 Actives

2.1.1 Post-Retirement cash benefits for active members can be made payable on the following events:

- Normal & Early Retirement
- Ill Health Retirement
- Deferred Normal Retirement

2.1.2 The cash benefit can be provided EITHER on top of pension benefits OR through commuting the pension.

2.1.3 Added functionality for Client Code 3 users: A combination of BOTH cash on top AND cash commuted can be specified if required.

2.1.4 There is flexibility available for specifying which pension is commuted for cash. Further commutation factors can be specified for each pension increase rate.

2.1.5 Pre-Retirement cash benefits are also considered in this document.

2.2 Deferreds

2.2.1 Post-Retirement cash benefits for Deferreds can be made payable on:

- Normal & Early Retirement

2.2.2 As with actives, the retirement cash can be payable EITHER on top of pension benefits OR provided through commuting the pension.

2.2.3 Added functionality for Client Code 3 users: A combination of BOTH cash on top AND cash commuted can be specified if required.

2.2.4 There is, however, no flexibility (as yet) in determining the pension that is commuted for cash and there is only one set of cash commutation factors (CCFs) that can be used.

2.2.5 Added functionality for Client Code 3 users: There is the option of commuting main or special pensions first or applying the pro-rata method, and also defining two sets of CCFs.

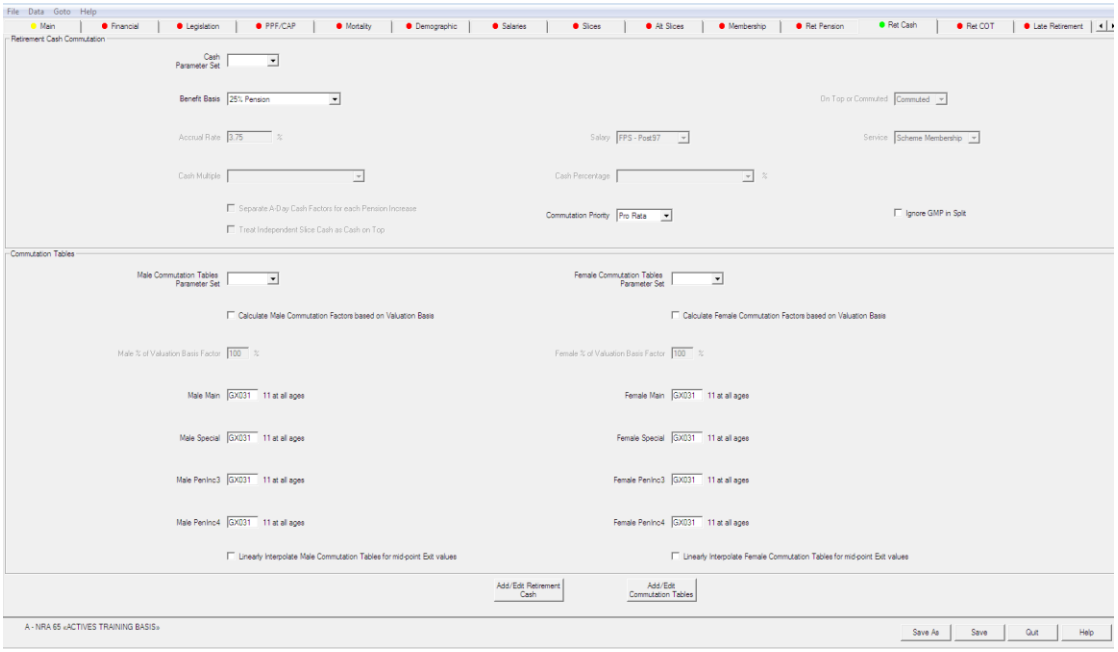
2.2.6 Pre-Retirement cash benefits are also considered in this document.

3 Actives

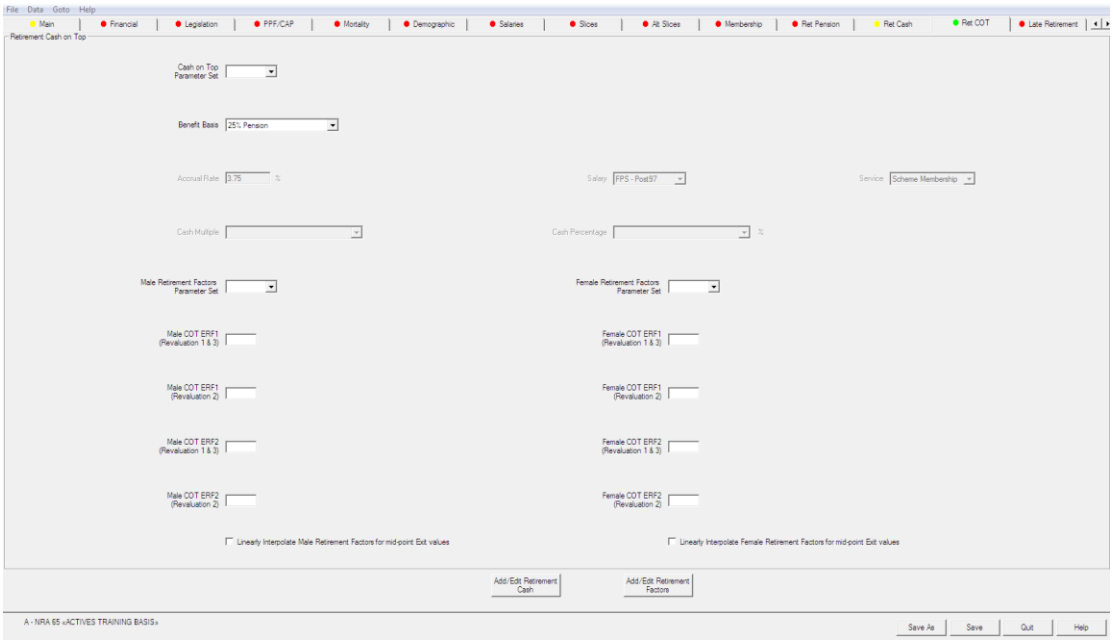
3.1 (Normal/Early/Deferred) Retirement Cash

The Retirement Cash parameters can be specified on the Ret Cash and Ret COT tabs:

3.1.1 Ret Cash



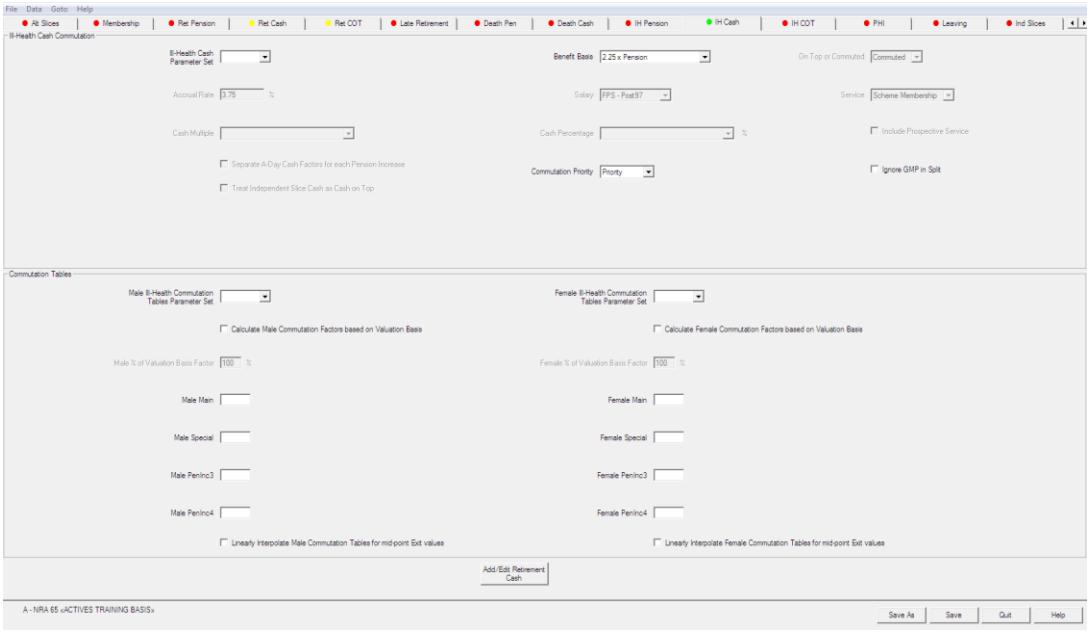
3.1.2 Ret COT



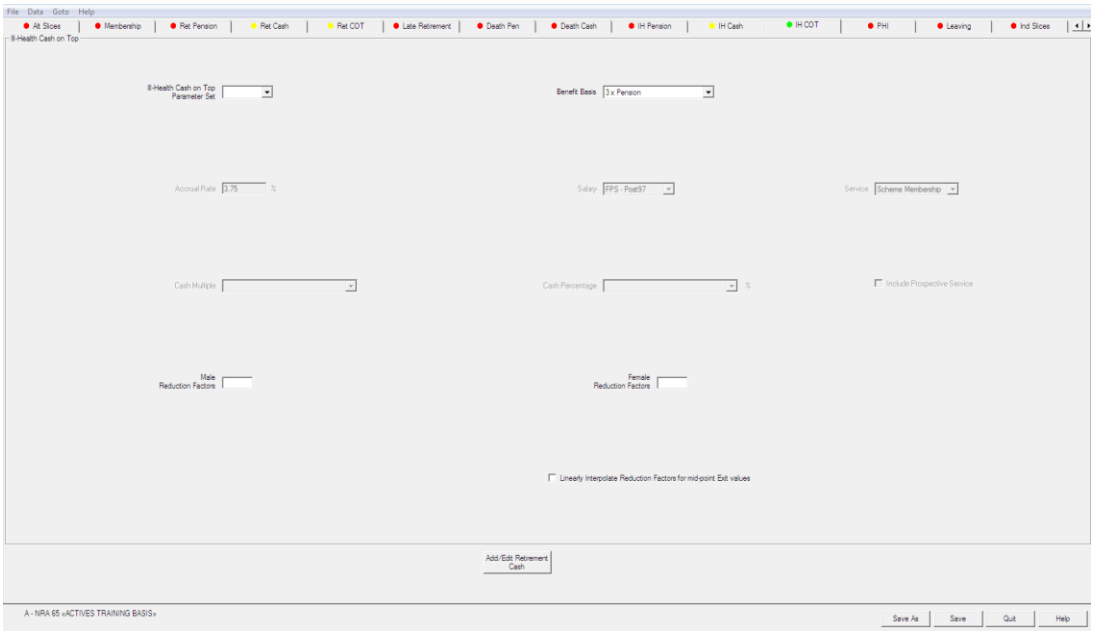
3.2 Ill Health Retirement Cash

These parameters are specified on the IH Cash tab. The IH Cash tab is very similar to the Ret Cash tab (the fields are the same except for the additional fields “Include Prospective Service?” and “Male/Female Reduction Factors”):

3.2.1 IH Cash



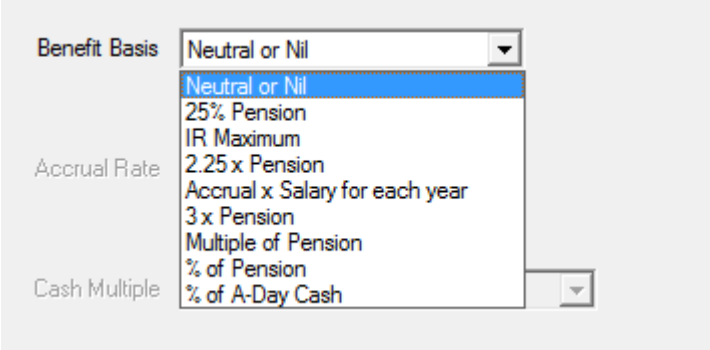
3.2.2 IH COT



3.3 Parameters

Options

There are 8 cash benefit “Options” or “Types” for active members:



3.3.1 Where “1 - Neutral or Nil” is selected, no retirement cash benefit will be valued.

3.3.2 25% Pension, 2.25 x Pension and 3 x Pension can still be used, but have effectively been superseded by Multiple of Pension and % of Pension (which are more flexible). The set-ups for these two options are described below.

3.3.3 IR Maximum can also still be selected, but is rarely chosen by SuperVal users.

3.3.4 Accrual x Salary for each year unlocks 3 fields:

- Accrual Rate

  Type in require accrual rate e.g. 3/80ths = 3.75%

- Salary

  Select one of the salary projections (1 to 9) specified on the “Salary” tab to be used for retirement cash calculation.

- Service

  There are two options to choose from:

  M – Scheme Membership

  S – Company Service

Where option “M” is selected SuperVal will calculate service using standard date data item “DJF – DoJ Scheme”. Therefore please ensure that “DJF” is specified in your data format & in your data for this option.

Where option “S” is selected SuperVal will calculate service using standard data date item “DJS – DoJ Company”. Therefore please ensure that “DJS” is specified in your data format & in your data for this option.

NB: If there is no Slice 1 then there will be no future service cash calculated.

Maximum Service

Note that the setting for the service “Maximum” on the “Retirement” tab will apply to the “Service” calculation for the 3n80ths cash benefit.

Added Years

Added years will not be included in the service calculation for the “Accrual x Salary for each year” option unless the data items “DJF” or “DJS” are backdated as appropriate.

3.3.5 Multiple of Pension or % of Pension

If the User has selected Retirement Cash "Multiple of Pension", enter the multiple that applies.

If the User has selected Retirement Cash "% of Pension", enter the % that applies.

Users can also specify member-specific multiples/percentages (within the CSV file) and select the relevant data item for the “Cash Multiple” or “Cash Percentage” field.

3.3.6 % of A Day Cash is covered in detail in the Infocus document: “A Day Cash”.

Include Prospective Cash?

3.3.7 This field appears for *Ill Health Retirement Cash* benefits only.

3.3.8 By answering “Yes” the prospective (exit to NRD) service multiplied by the "Future Service Fraction" will be included in the cash calculation.

Reduction Factors (Male & Female)?

3.3.9 These fields appear for *Ill Health Retirement Cash* benefits only.

On Top or Commuted?

3.3.10 Specify whether the cash benefit is “Cash On Top” payable on top of your pension benefits or “Commutation” payable through commutation of the retirement pension.

3.3.11 The commutation of the pension for the cash benefit is determined by the settings for the fields “Priority” and “Commutation Tables”.

[Added functionality for Client Code 3 users: A combination of BOTH cash on top AND cash commuted can be specified, so this field is not included in CC3.]

Priority

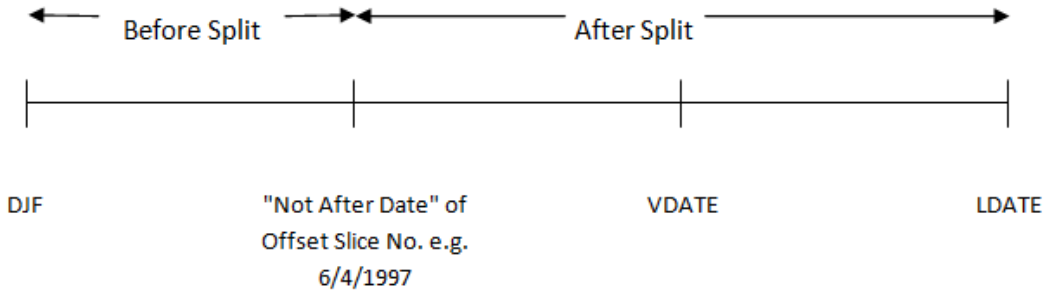
3.3.12 This is used where the pension is commuted for cash. The user can specify a priority order for commuting pension for cash.

3.3.13 The options are:

- A – After Split
- B – Before Split
- N – No Priority
- P – Pro Rata

3.3.14 The “Split” in options "A" and "B" refer to the Slice "Not After Date" for the “Offset Slice No.” specified on the "Financial" tab.

3.3.15 Typically an active member will have a service timeline as shown in the following diagram:



After Split

3.3.16 In the above timeline priority option “A – After Split” would mean that the pension accruing post 6/4/1997 will be commuted for cash first.

Before Split

3.3.17 In the above timeline priority option “B – Before Split” would mean that the pension accruing pre 6/4/1997 will be commuted for cash first.

Note that for either of the time periods “After Split” or “Before Split” one or more of the pension increase rates in payment Main, Special, PenInc3 or PenInc4 may apply. (The pension increase rates Main, Special, PenInc3 and PenInc4 are indicated on the Slices.)

Within the “After Split” or “Before Split” time period the cash commutation order of the pension is:

- Special
- Main
- PenInc3
- PenInc4

No Priority

3.3.18 If priority option “N – None” is selected then the cash commutation order is simply by the pension increase rate order ignoring time period. In other words:

- Special
- Main
- PenInc3
- PenInc4

This is regardless of when these pensions have accrued.

Pro Rata

3.3.19 Under this option the pension will simply be commuted for cash in proportion ignoring pension increase rate and timing**. Note that SuperVal calculates the split between pension and cash by pro-rating the pension commuted.**

See Appendix for a worked example illustrating how the Pro Rata method is calculated.

Ignore GMP in Split?

3.3.20 This enables the split between Pre 97 and Post 97 benefit to be done in the correct proportions.

If "Y-Yes" is selected then SuperVal will not take off the GMP from the Pre 97 benefit before calculating the proportions.

Please note if "Y - Yes" is chosen then GMP may be commuted depending on the options chosen and the size of the GMP, but will still pay the whole of the GMP at SPA. This may overstate the liability.

See Appendix for a worked example illustrating how the entry in this field affects the calculation.

Commutation Tables

3.3.21 Specify the table codes that contain the cash commutation factors for males and females. These are typically tables with 3 decimal places i.e. “GX” type rate tables. (Note that you should use mid-year values for ages below NRA – because SuperVal assumes mid-year exits, and does NOT interpolate).

3.3.22 The factors may vary by pension increase rate. Therefore a different table can be specified for Main, Special, PenInc3 or PenInc4 pension increase rates. If the Scheme only uses one set of cash commutation factors, specify this table for **all 4** of the pension increase rates.

[Ind Slices: Added Functionality for Client Code 3 users

Cash benefits can also be defined in the Ind Slices Tab within each slice for CC3 users. By setting the start age and end age as the same (either by specifying the ages on the slice or using a member-specific data item), SuperVal will value the benefit as cash.]

3.3.23 Allowing for Maximum Pension Commencement Lump Sum (PCLS)

SuperVal does not currently give users the option to use the maximum PCLS, and so it needs to be valued via the "% of Pension" option. In the majority of cases, the proportion will vary by member, and so you will need to calculate it outside of SuperVal and then use the cash multiple field to define it as a member-specific item.

VARPRINT

3.3.24 The VARPRINT shows the calculation of the Normal & Early Retirement Cash and it is shown in section 1400. Where the Retirement Pension is commuted for Cash, the post commutation pension is shown in section 1600. For Leaving Service Cash this is shown in section 2510.

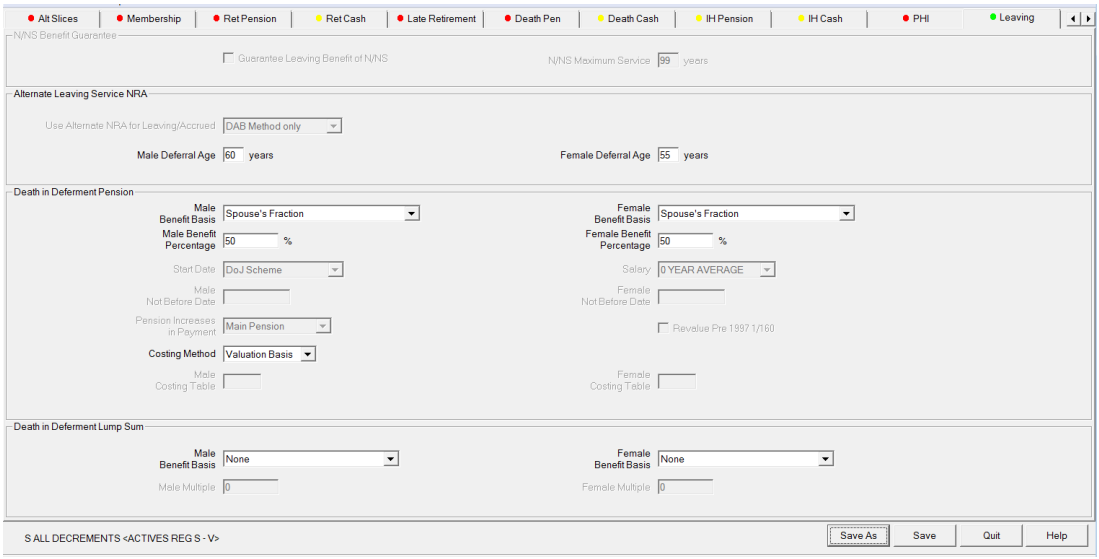
Pre-Retirement Cash Benefits

3.3.25 Cash benefits payable on the death of a member prior to retirement (either on death-in-service (DIS) or death-in-deferment (DID)) can be valued in SuperVal.

For details of valuing DIS cash benefits, please refer to the In Focus document: "Valuing DIS Benefits in SuperVal".

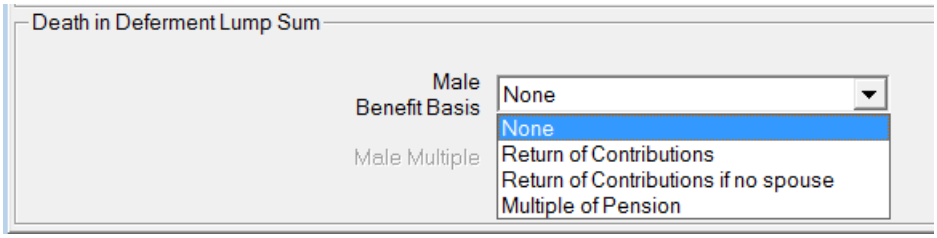
DID cash benefits

3.3.26 DID benefits can be set up on the Leaving service tab:



3.3.27 Benefit Basis (Males/Females)

There are four options:



0 – None

Self-explanatory

1 – Return of Contributions

The benefit includes a return of past contributions, the value is in the "ACW" standard data item, and future contributions as specified in the Contributions tab. It is assumed "ACW" includes interest to the valuation date (if applicable). The “Interest Rate on Service” on the “Contributions” tab will apply to withdrawal. The "Interest Rate in Deferment" on the "Contributions" tab will apply from withdrawal to death in deferment.

2 – Return of Contributions if No Spouse

This is same as option 1 except contributions are returned only if there is no spouse on death in deferment. The benefit value is the product of that of option 1 and (1 - Proportion Married).

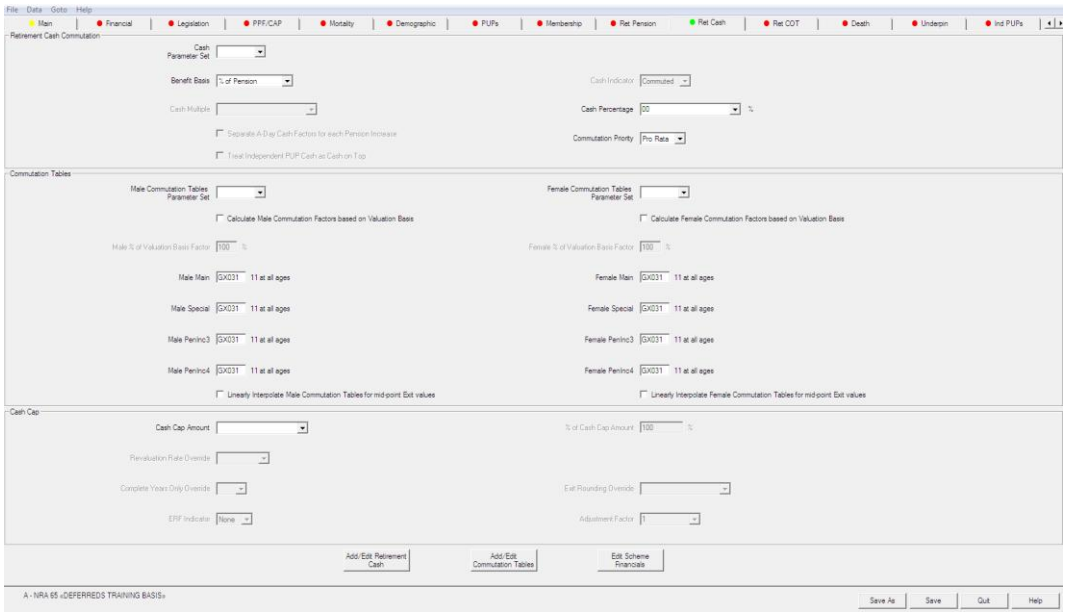
4 – Multiple of Pension

Where a cash benefit is payable on DID which is a multiple of the Deferred Retirement Pension, this option should be used.

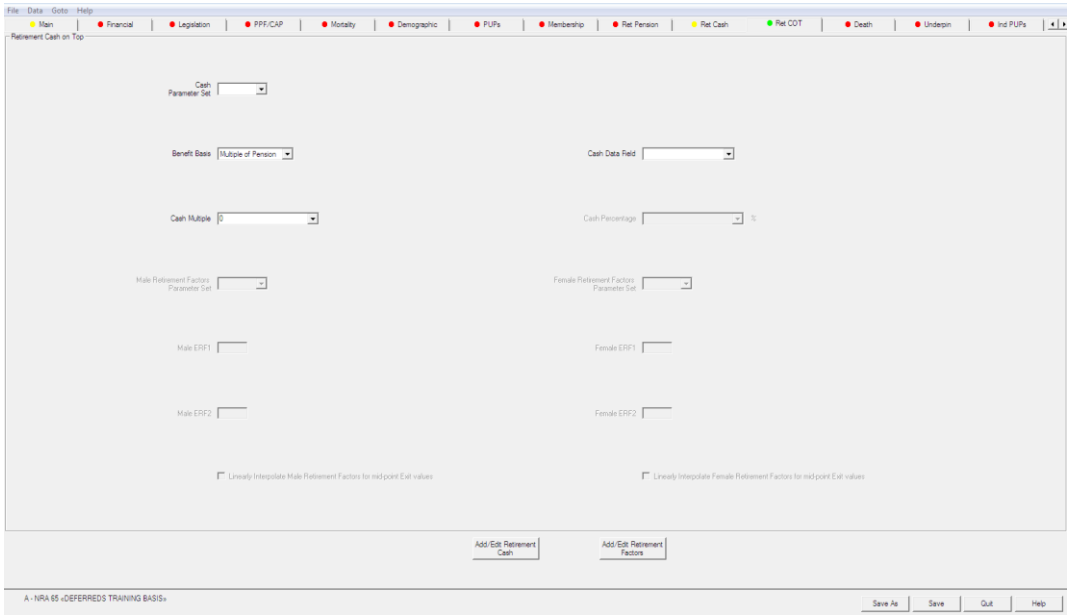
4 Deferreds

4.1 Ret Cash and Ret COT Tabs

Ret Cash



Ret COT



4.1.1 The options in the tabs are:

- Cash Indicator
- Multiple of Pension
- % of Pension

The fields are described below.

Cash Indicator

4.1.2 Select from the options as to whether the retirement cash benefit is payable "On Top" of pension or provided through "Commutation" of the pension.

[Added functionality for Client Code 3 users: A combination of BOTH cash on top AND cash commuted can be specified, so this field is not included in CC3.]

Multiple

4.1.3 The cash benefit can be a multiple of the retirement pension. Note that this means the cash amount will have been subject to the same deferred revaluation (excess and GMP) as the pension up to retirement age.

Percentage

4.1.4 Alternatively, the cash benefit can be a % of the retirement pension multiplied by the relevant Commutation Table factor. Again note that the cash will then be subject to the same deferred revaluation as the pension.

[Added functionality for Client Code 3 users: The Cash Multiple or Percentage amount may be input as a member specific data item (within the CSV file) using the relevant FIELD input.]

4.2 Commutation Table (Males/Females)

4.2.1 Select the cash commutation factor tables that are applicable. These tables will be used if the cash is provided through commuting the pension or if using the % pension benefit option.

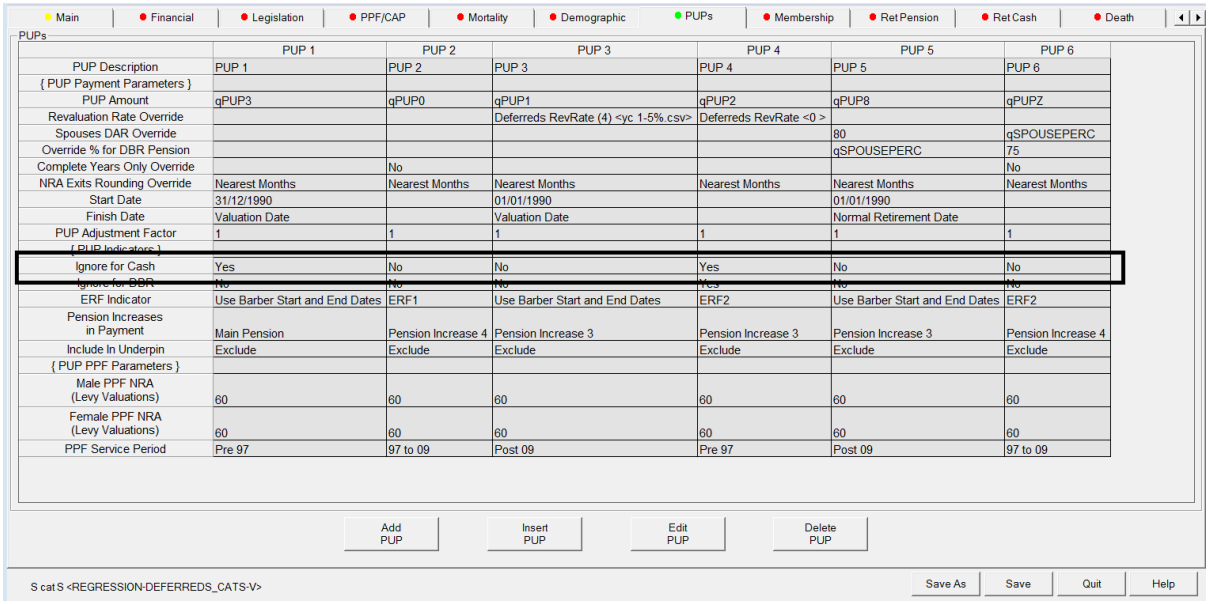
4.2.2 Note that only ONE set of cash factor tables can be specified. Furthermore, no "Priority" setting can be specified for Deferreds. Cash commutation for Deferreds will behave like the actives "Priority" setting "No Priority" (in other words, by pension increase rate). This order is:

- Special increasing pension
- Main increasing pension
- Pen Inc 3
- Pen Inc 4

4.2.3 It is therefore prudent with Deferreds where more than one pension increase rate is being used to set the lowest pension increase rate as Special. This is to ensure that the "cheaper" pension is used up for commutation for cash first. See Appendix for a worked example

[Added functionality for Client Code 3 users: For CC3 users, FOUR sets of CCFs can be defined (for Main, Special, Peninc3 & Peninc4 pensions), and Commutation Priority can also be specified.]

4.3 PUPs

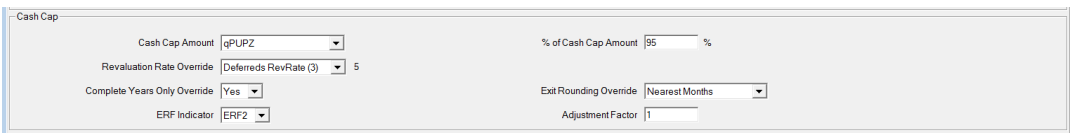


	PUP 1	PUP 2	PUP 3	PUP 4	PUP 5	PUP 6
PUP Description	PUP 1	PUP 2	PUP 3	PUP 4	PUP 5	PUP 6
{ PUP Payment Parameters }						
PUP Amount	qPUP3	qPUP0	qPUP1	qPUP2	qPUP8	qPUPZ
Revaluation Rate Override			Deferreds RevRate (4) <yc 1-5%.csv>	Deferreds RevRate <0 >		
Spouses DAR Override					80	qSPOUSEPERC
Override % for DBR Pension					qSPOUSEPERC	75
Complete Years Only Override		No				No
NRA Exits Rounding Override	Nearest Months	Nearest Months	Nearest Months	Nearest Months	Nearest Months	Nearest Months
Start Date	31/12/1990		01/01/1990		01/01/1990	
Finish Date	Valuation Date		Valuation Date		Normal Retirement Date	
PUP Adjustment Factor	1	1	1	1	1	1
{ PUP Indicators }						
Ignore for Cash	Yes	No	No	Yes	No	No
Ignore for DBR	No	No	No	Yes	No	No
ERF Indicator	Use Barber Start and End Dates	ERF1	Use Barber Start and End Dates	ERF2	Use Barber Start and End Dates	ERF2
Pension Increases in Payment	Main Pension	Pension Increase 4	Pension Increase 3	Pension Increase 3	Pension Increase 3	Pension Increase 4
Include In Underpin	Exclude	Exclude	Exclude	Exclude	Exclude	Exclude
{ PUP PPF Parameters }						
Male PPF NRA (Levy Valuations)	60	60	60	60	60	60
Female PPF NRA (Levy Valuations)	60	60	60	60	60	60
PPF Service Period	Pre 97	97 to 09	Post 09	Pre 97	Post 09	97 to 09

4.3.1 Ensure the “Ignore for Cash” options in the PUPs are set accordingly. These can be useful if any pensions are non-commutable, or if Cash on Top is only provided on certain pensions

4.4 Using Cash Cap

4.4.1 If the cash data item for each member is available then you can use the "Cash Cap" region in the Retirement Cash tab to value the benefit:



4.4.2 Using this section gives complete control over the amount of retirement cash. The following parameters that can be applied to the cash data item:

- Revaluation Rate
- Complete Years Only (early retirement exits)
- (NRA) Exit Rounding
- % Data Item
- Early Retirement Reduction Factor Table (ERF1 or ERF2)
- Adjustment Factor

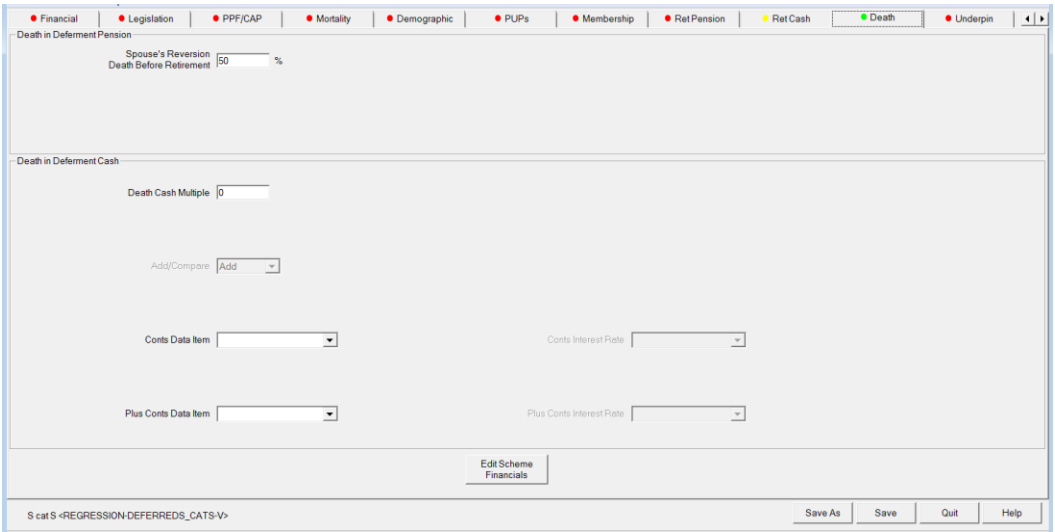
4.4.3 Note, however, that this is a Cash Cap – i.e. the maximum amount each member can take. So, to ensure that this data item is valued, the formula on the "Benefits" screen needs to be set to a rate that will exceed the cash benefit specified in this "Cash Cap" column for every member.

Ind PUPs: Added Functionality for Client Code 3 users

4.4.4 Cash benefits can also be defined in the Ind PUPs Tab within each Ind PUP for CC3 users. By setting the start age and end age as the same (either by specifying the ages on the PUP or using a member-specific data item), SuperVal will value the benefit as cash].

4.5 Pre Retirement Cash Benefits

4.5.1 Death in Deferment cash benefits can be specified on the “Death” tab:



Death Cash Multiple

4.5.2 If a lump sum multiple of Deferred Pension is payable on DID, enter the multiple applicable i.e. enter 5 for 5 x Pension.

Conts Data Item (Plus Conts Data Item)

4.5.3 If a return of contributions is payable on DID, then choose the data item for this field from the data .CSV file. Up to two different contribution amounts can be selected (two separate fields)

Conts Interest Rate (Plus Conts Interest Rate)

4.5.4 If a return of contributions is payable on DID (specified in the previous field), input the interest rate to apply to the amount (from valuation date to decrement date). Since two separate contribution items can be specified, two separate interest rates can also be specified.

Add/Compare

4.5.5 If both “Death Cash Multiple” and (one or more) “Conts Data Item(s)” are specified, SuperVal can either value all benefits (i.e. Add them up) or take the greater of the “Death Cash Multiple” and the (sum of the) “Conts Data Item(s)” (i.e. Compare them). Select the appropriate option.

5 Appendix

5.1 Actives – Pro Rata Example

Cash=25% of pension – Cash Commutation on Retirement

Data:

- Member has 10 years' Past Service (PS) and 10 years' potential Future Service (FS) to assumed retirement age.
- Benefit is accrued uniformly over whole service period, but pension increases in respect of FS are higher than those in respect of PS.
- Cash Commutation Factor for PS= 10.
  Cash Commutation Factor for FS=15.
- Assume total projected pension benefit = £20,000.
- Assume 25% of pension is commuted.

SuperVal will commute pension as follows:

- Total Pension commuted = 25% of £20,000 = £5,000
- This is split in proportion to the pension, so 50% goes to PS and 50% to FS
- PS: Pen comm = £2,500. Cash = £2,500 x 10 = £25,000
- FS: Pen comm = £2,500. Cash = £2,500 x 15 = £37,500
- Total cash = £62,500

Note 1: SuperVal includes any ERFs or LRFs when working out the proportion of pension commuted.

Note 2: The position is skewed if there is GMP, and "Ignore GMP in split?" is set to "No". The pension commuted is the same, but it's assumed only to be taken from excess over GMP pension.
For example, if GMP **at retirement** was £4,000 in the above example, then total excess is £16,000 (£6,000 PS and £10,000 FS). So:

- PS: Pen comm = £5,000 x 6/16 = £1,875. Cash = £1,875 x 10 = £18,750
- FS: Pen comm = £5,000 x 10/16 = £3,125. Cash = £3,125 x 15 = £47,875
- Total cash = £65,625

(If NRA<SPA, Superval will also check that there is sufficient residual benefit at SPA to cover GMP - and limit the retirement cash if necessary.)

Note 3: Only member's pension will be commuted. The spouse's DAR pension is valued based on the pre-commutation pension amounts.

Cash=2.25xPension

Data:

- Member has 10 years' Past Service (PS) and 10 years' potential Future Service (FS) to assumed retirement age.
- Benefit is accrued uniformly over whole service period, but pension increases in respect of FS are higher than those in respect of PS.
- Cash Commutation Factor for PS= 10.
  Cash Commutation Factor for FS=15.
- Assume total projected pension benefit = £20,000.
- Assume 2.25 x pension is taken as cash.

SuperVal[21] will commute pension as follows:

- Total cash = 2.25 x 20,000 = £45,000.
- As noted earlier, **SuperVal calculates the split between pension and cash by pro-rating the pension commuted.** Therefore we need to calculate the proportion (P) commuted which will lead to a lump sum of £45,000:
- P x (10,000 x 10 + 10,000 x 15) = 45,000.
- Therefore P = 18%
- So PS pension = 0.82 x 10,000 = £8,200, and PS cash = 0.18 x 10,000 x 10 = 18,000
- And FS pension = 0.82 x 10,000 = £8,200, and FS cash = 0.18 x 10,000 x 15 = 27,000

Note 1: SuperVal[21] includes any ERFs or LRFs when working out the proportion of pension commuted.

Note 2: The position is skewed if there is GMP, and "Ignore GMP in split?" is set to "No". The total cash is the same, but it's assumed only to be taken from excess over GMP pension. Therefore P will end up higher. For example, if GMP **at retirement** was £4,000 in the above example, then then total excess is £16,000 (£6,000 PS and £10,000 FS).
P x (6,000 x 10 + 10,000 x 15) = 45,000, and so P = 21.43%.

- So PS pension = 0.7857 x 6,000 +4,000 = £8,712, and PS cash = 0.2143 x 6,000 x 10 = £12,858
- And FS pension = £7,857, and FS cash = 0.2143 x 10,000 x 15 = £32,145
- (If NRA<SPA, SuperVal will also check that there is sufficient residual benefit at SPA to cover GMP - and limit the retirement cash if necessary.)

Note 3: Only member's pension will be commuted. The spouse's DAR pension is valued based on the pre-commutation pension amounts.

Cash=25% example showing affect of “Ignore Split”

The tables below illustrate the resulting cash if other options are chosen for spreading the cash.

Note: In the examples below, "Split date" is set as VDATE

"Before split" - and "No Priority" (GMP = £4,000)						
	Pension increases	Pre commutation pension	Pension commuted	Commutation factor	Cash	Post commutation pension
GMP		4,000				4,000
PS (Excess)	Special	6,000	5,000	10	50,000	1,000
FS	Main	10,000		15	0	10,000
Total		**20,000**	**5,000**		**50,000**	**15,000**

Because PS has "Special" increases, it is commuted first if there is "No Priority"

"Before split" - and "No Priority" (GMP = £6,000)						
	Pension increases	Pre commutation pension	Pension commuted	Commutation factor	Cash	Post commutation pension
GMP		6,000				6,000
PS (Excess)	Special	4,000	4,000	10	40,000	0
FS	Main	10,000	1,000	15	15,000	9,000
Total		**20,000**	**5,000**		**55,000**	**15,000**

There is not enough PS excess pension to cover all the pension commuted, so some FS pension is commuted as well

"After split"						
	Pension increases	Pre commutation pension	Pension commuted	Commutation factor	Cash	Post commutation pension
GMP		4,000				4,000
PS (Excess)	Special	6,000	0	10	0	6,000
FS	Main	10,000	5,000	15	75,000	5,000
Total		**20,000**	**5,000**		**75,000**	**15,000**

5.2 Deferreds

Cash Commutation of 25% at Retirement

Data:

- Male Member has Total Projected Deferred Pension of £1,000 p.a. at 65
- Benefit is split: £600 GMP, £200 Pre'97 XS, £200 Post '97 Pension
- Cash Commutation assumption: 25% of Pension at 65 commuted for cash
- CCF to apply at 65 = 16

Question:
Calculate the cash amount & split of post-commutation pension at 65 if:

a) Pre'97 XS & Post '97 Pension are both valued with "Special" increases".

b) Pre'97 XS valued with "Special" increases, Post '97 Pension valued with "Main" increases".

Solution:
[Note: This solution relates to Client Code 0 users only. There is more flexibility in the set-up for Client Code 3 users]

a) SuperVal will commute pension as follows:

- Total Cash = 25% x 1,000 x 16 = £4,000
- Total Pension Commuted = 25% x 1000 = £250
- Total Post-Commutation Pension = £750
- GMP will not be commuted, and since both pre'97 XS & post'97 pensions have been set up with the same increases, they will be reduced proportionally by the same amount.
- Hence, split of Post-Commutation Pension is as follows:
  - GMP = £600
  - Pre'97 XS = £75
  - Post '97 Pension = £75

b) SuperVal will commute pension as follows:

- Total Cash =£4,000, Total Pension Commuted = £250, Total Post-Comm Pension = £750
- GMP not commuted. Since pre'97 XS has been set-up with "Special" increases and post '97 Pension set-up with "Main" increases", it will commute the "Special" pension first.
- Hence, split of Post-Commutation Pension is as follows:
  - GMP = £600
  - Pre'97 XS = £0
  - Post '97 Pension = £150