EQUINITI

InFocus Document
Death in Service Benefits
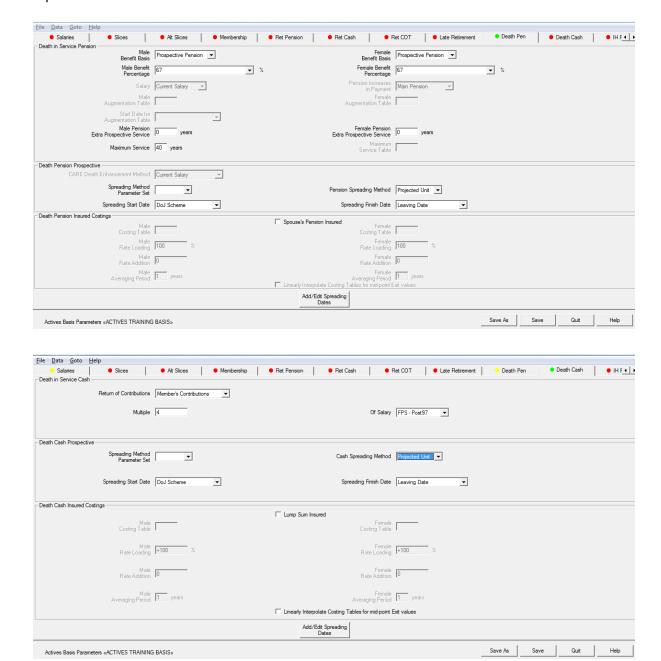
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Contents

1 Introduction

1.1.1   This document lists the options available for Death in Service

1.1.2   We have tried to incorporate numerical examples towards the end in the appendix to help understanding how the system works.

2 Inputs

2.1 Actives Tabs

Below are screenshots of the fields you need to fill in when defining Death-in-Service benefits in SuperVal. The screenshots are taken from the Death Pen and Death Cash Tab:
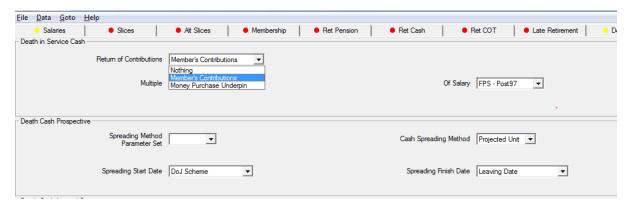
3 Valuing Lump Sum DIS Benefits

The user has a range of options as to how to specify lump sum DIS benefits. The different parameters are considered below.

3.1 Return of Contributions

Where a return of contributions is payable after the death of an active member, the user has the following options to value the benefit:

3.1.1 Nothing

Self-explanatory – no benefit is valued.

3.1.2 Member's Contributions

If this option is selected, any past contributions (with interest if applicable) must be specified in the member data .CSV file as the ACW data item. For future contributions, employee contributions must be set up on the Contributions Tab (including whether or not interest should be applied up to the time of decrement). A screenshot is shown below of the Contributions Tab, but users can refer to the In Focus document "Setting up Contribution Rates" for more details.

3.1.3 Money Purchase Underpin

If this option is selected, the value of the underpin at the valuation date (with interest if applicable) must be specified in the member data .CSV file as a user-defined variable. This must be selected on the Contributions tab in the Underpin Contributions section.
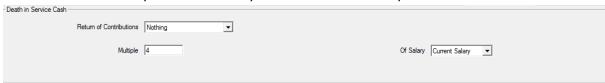
3.2 Multiple of Salary

Where a multiple of salary is paid out on the death of an active member, this must be specified based on the following parameters:

3.2.1   Multiple
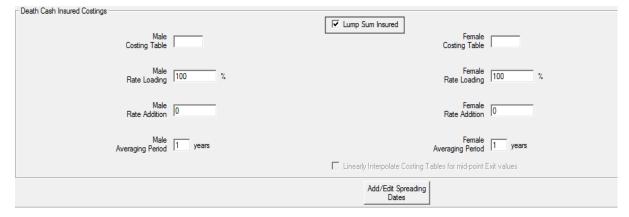
Self-explanatory – enter the multiple of salary

3.2.2   Of Salary

The user can choose any of the nine salary definitions on the Salary Tab
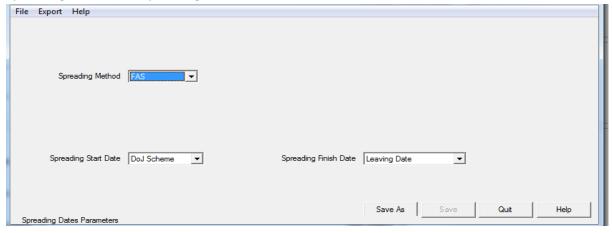

3.2.3   Lump Sum Insured?

If the multiple of salary benefit is not insured, enter "No". If the benefit is insured and you want to use SuperVal functionality to work out a 1-yr insurance premium, enter "Yes". If users would rather work out any insured costs outside of SuperVal, then do not specify any multiple of salary benefit.

Spreading Start Date / Spreading Finish Date

For benefits that are NOT insured, the user must specify how the benefit accrues. SuperVal will assume that the benefit accrues uniformly from the Spreading Start Date defined up to the Spreading Finish Date and is split between past and future service on the same uniform basis.

The future service liability will be deemed to be the fraction:

VDATE to SFD , where SSD = Spreading Start Date & SFD = Spreading Finish Date
SSD to SFD

The past service liability will be deemed to be the fraction:
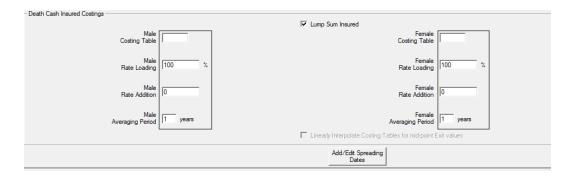
SSD to VDATE
SSD to SFD

For example, the user may input DJF for SSD and LDATE for SFD if the benefit accrues uniformly over the entire service period. ***See Appendix for Spreading of DIS Benefits.***

3.2.4   DIS Lump Sum Insured Costings

If the multiple of salary benefit is insured and the user wishes to calculate an estimate for a 1yr insurance premium in SuperVal, you will check the box in the 'Lump Sum Insured?' field and then specify the basis upon which the cost is calculated.

The user needs to specify:

- The relevant premium rates (for males and females) – (the rate should be per £1,000 of lump sum benefit).

- Any loadings to these premium rates (the loading is input as a percentage (the default is 100) so that if it were required to increase the rates by 20% then the Rate Loading would be set to 120).

- Any additions to the calculated premium (i.e. an expense loading (not age dependent)). This addition must be specified in terms of per £1,000 of sum assured.

- Any average period applied (i.e. if the insurance premium is smoothed over a number of years).

Note 1: Users ***could*** specify mortality rates rather than premium rates in the Rate Table, but would then need to adjust the Rate Loading entry by a factor of 1,000 (and so Rate Loading would be 100% x 1,000 = 100,000%).
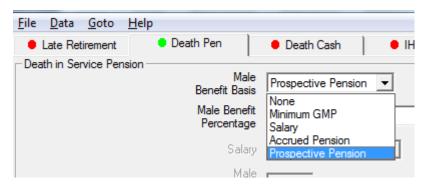
4 Valuing DIS Pension Benefits

The user has a range of options as to how to specify DIS Pension benefits. The different parameters are considered below.

4.1 Benefit Basis – Males/Females

Where a spouse's pension is payable after the death of an active member, the user has the following options for the type of benefit:

4.1.1   None

Self-explanatory – no benefit is valued

4.1.2   Minimum GMP

In this case, only the Widow's/Widower's GMP is valued as a pension. This will be 50% of the Post '88 GMP plus 50% of the Pre'88 GMP for Widows (i.e. no pre'88 Widower's GMP for Female members).

4.1.3   Salary

Where a percentage of salary pension benefit is paid out to the spouse on the death of an active member, this option must be chosen.

4.1.4   Accrued Pension

Where a percentage of *accrued* pension benefit (based on pensionable service up to death) is paid out to the spouse on the death of an active member, this option must be chosen.

4.1.5   Prospective Pension

Where a percentage of *prospective* pension benefit (based on prospective pensionable service up to assumed Normal Retirement Age) is paid out to the spouse on the death of an active member, this option must be chosen.

4.2 Benefit Set-up

Where a spouse's pension is paid out on the death of an active member, this must be specified based on the following parameters:

4.2.1   Percentage (OR Percentage Field) – Males/Females

The relevant percentage must be entered here (either as a percentage of pension or salary, depending on the "Benefit Basis" chosen above).
This can either be entered as a fixed amount for all males/females (e.g. 50 for 50%) in the Percentage input, or as a member-specific variable (included in the data .CSV file) in the Percentage Field input.

4.2.2   Salary

An entry in this field is required if the spouse's death in service pension is type 2 (Salary). Any of the nine salary projections can be selected. The salary will be used rather than the final average salary.

4.2.3   Increase in Payment (Option 2)

If the pension benefit is a multiple of salary (as per Option 2), the user must specify how the DIS pension will increase in payment (whether the pension increase rate is Main, Special, PenInc3 or PenInc4)

4.2.4   Spouse's Insured?

If the DIS pension benefit is not insured, leave the box unchecked. If the benefit is insured and you want to use SuperVal functionality to work out a 1-yr insurance premium, check the box. If users would rather work out any insured costs outside of SuperVal, then do not specify any DIS pension benefit.

4.2.5   Spreading Start Date / Spreading Finish Date

This field needs to be set if the Spouse's Death in Service Pension benefit is not insured.

The benefit is assumed to accrue uniformly between the Spreading Start Date and the Spreading Finish Date and is split between past and future service on the same uniform basis.

The Spreading Start Date and Spreading Finish Date fields will only have an effect if the death in service pension is either % of Salary or Prospective.

If the pension is % of salary then the whole of the benefit is apportioned between past and future service liability.

For the prospective benefit it is the prospective element only that is spread. (The part of the pension determined from past service is still past service liability, the part of the pension determined from service from valuation date to exit point is future service liability. It is the part of the pension determined from service from the exit to NRD that is spread.)

The future service liability will be deemed to be the fraction:

$\underline{\text{VDATE to SFD}}$, where SSD = Spreading Start Date, SFD = Spreading Finish Date
SSD to SFD

The past service liability will be deemed to be the fraction:

$\underline{\text{SSD to VDATE}}$
SSD to SFD

See Appendix for Spreading of DIS Benefits.

4.2.6   Extra Prosp Serv for Males/Females SDISP

If a prospective DIS pension benefit is based on any additional service (e.g. based on service up to age 65, but Normal Retirement Age is set as 60), then users may include an additional amount here (e.g. 5 for 5 years). This amount will be added to the prospective service calculation.

4.2.7   DIS Pension Insured Costings

If the DIS Pension benefit is insured and the user wishes to calculate an estimate for a 1yr insurance premium in SuperVal, you will need to check the box labelled 'Spouse's Insured?' and then specify the basis upon which the cost is calculated.

For details of set-up, see note above in relation to DIS lump sum insured costings*. Note, however, that the premium rates should be specified per £100 (per annum) of pension assured.*

[Added functionality for Client Code 3 users: An Additional field "Spreading Method for Prospective Element" allows the user to either use the default 'FAS' approach, or use a 'Projected Unit' approach]
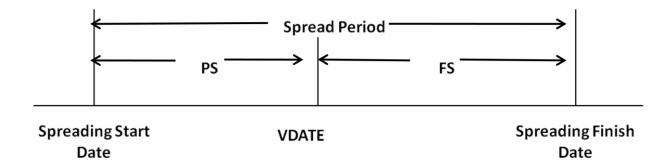
5 Appendix – Spreading DIS Benefits

5.1 Do Spreading Dates have any effect?

When setting up DIS benefits in SuperVal, if spreading dates are inputted, then, depending on the type of benefit being valued, they may or may not have any effect on the calculation. The following table sets out which benefits are affected by these dates:

Lump Sum Benefit Option	Effect?
None	NO
Member's Contributions	NO
Money Purchase Underpin	NO
Multiple of Salary	**YES**

Pension Benefit Option	Effect?
None	NO
Minimum GMP	NO
Salary	**YES**
Accrued Pension	NO
Prospective Pension	**YES**

5.2 Timeline for Spreading of Benefits

5.3 Apportioning benefits between Past & Future Service

Need to consider decrements (i.e. deaths) *separately for each year*.

For benefits that are based on a multiple of salary, then benefit is apportioned as follows:

- Past Service Benefit = Multiple of Salary x {PS / Spread Period}

- Future Service Benefit = Multiple of Salary x {FS / Spread Period}

For prospective pension benefits, the benefit is apportioned as follows:

- PSB = Past Serv Pension + (Outstanding Prospective Pension x {PS / Spread Period})

- FSB = Fut Serv Pension + (Outstanding Prospective Pension x {FS / Spread Period})

Where FS is future service **to assumed Finish Date**,

and Outstanding Prospective Pen= Pen in relation to service from Finish Date to NRD =

[Total Prospective Service – (PS) – (FS)] x Total Prospective Pension
            Total Prospective Service

5.4 Worked Example

Data/Assumptions:

- Member age = 47 @VDATE

- Past Service = 12 years (to VDATE)

- Salary = £25,000 (@VDATE)

- NRA = 60

- Accrual rate =60ths

- Salary increase assumption – 0% p.a.

- Proportion married – 100%

- LS DIS benefit = 4 x salary

- DIS pension = 50% prospective

Q1) How is the Lump Sum benefit split between Past and Future Service in each of the 4 spreading periods shown in the table below? Just consider the 4th year after VDATE.

Q2) How is the Pension benefit split between Past and Future Service in each of the 4 spreading periods shown in the table below? Again, just consider the 4th year after VDATE.

	Spreading Start Date	Spreading Finish Date
1	DJF	LDATE
2	VDATE	LDATE
3	DJF	VDATE
4	DJF	NRD

(Note - remember that SuperVal assumes exits occur mid-year)

Solution 1:

Total Lump Sum benefit = 4 x 25,000 = 100,000.

Consider Spreading Period 1:

- PS = 12 years, FS = 3.5 years (halfway through yr 4). Spread Period = 15.5 years

- So Lump Sum allocated to PS = 12/15.5 x 100,000 = 77,419

- And Lump Sum allocated to FS = 3.5/15.5 x 100,000 = 22,581

Repeating the exercise for the other spreading periods gives:

	Spreading Start Date	Spreading Finish Date	PS	FS	Spread Period	PS LS	FS LS	TOTAL LS
1	DJF	LDATE	12	3.5	15.5	77,419	22,581	100,000
2	VDATE	LDATE	0	3.5	3.5	-	100,000	100,000
3	DJF	VDATE	12	0	12	100,000	-	100,000
4	DJF	NRD	12	13	25	48,000	52,000	100,000

Solution 2:

Firstly, allocate the 'Accrued Pension' part (this element is not spread)

- Past Service = 12/60 x 25,000 x 50% = 2,500

- Future Service = 3.5/60 x 25,000 x 50% = 729

Now calculate the 'Prospective' element:

- Prospective element = 9.5/60 x 25,000 x 50% = 1,979

We only spread the prospective element, so for Spreading Period 1:

- Pension allocated to Past service = 2,500 + 12/15.5 x 1,979 = 4,032

- Pension allocated to Future service = 729 + 3.5/15.5 x 1,979 = 1,176

Repeating the exercise for the other spreading periods gives:

	Spreading Start Date	Spreading Finish Date	PS	FS	Spread Period	PS pen	FS pen	Tot Pen
1	DJF	LDATE	12	3.5	15.5	4,032	1,176	5,208
2	VDATE	LDATE	0	3.5	3.5	2,500	2,708	5,208
3	DJF	VDATE	12	0	12	4,479	729	5,208
4	DJF	NRD	12	13	25	3,450	1,758	5,208