

InFocus Document

Proportion Married

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1 Introduction

This document is based on V9.25 of SuperVal. Any screenshots from previous versions are not materially different. It is relevant for the actives, deferreds and pensioners module.

When users define Proportion Married, SuperVal gives the option to apply this either at Retirement or at Death.

This document outlines the difference between these two options.

If you choose "Death", SuperVal will use the table specified to determine the proportion married at death for each age.

If you choose "Retirement", SuperVal will calculate proportion married at death by taking the proportion married at Retirement Age (or Age at valuation date for pensioners) and then allowing for spouse's mortality thereafter.

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Main Financial Legislation PPF/CAP Mortality Demographic Pensions

Spouse Parameters

Spouse Parameter Set [v]

Spouse Definition [Retirement] [Retirement] [Death] ☐ Ignore Spouse Details in Data (Marital Status/Spouse Date of Birth)

Male Proportion Married [H000] ZERO AT ALL AGES

Female Proportion Married [H000] ZERO AT ALL AGES

Male Age Difference Table (m-f) [] Female Age Difference Table (f-m) []

Male Age Difference (m-f) [] years Female Age Difference (f-m) [] years

☐ Project 'Unknown' Spouse from Retirement

Retirement Date for 'Unknown' Spouse [v] Retirement Age for 'Unknown' Spouse [v] years

Add/Edit Spouse Parameters

2 The Different Methods

The different methods can be illustrated by a couple of examples. The examples are based on the data set out in the table below.

Table 1 Proportion Married Assumption

Member's Age	Proportion Married %	Spouse's Age	Spouse's Lx Table
65	70	62	100,000
66	72	63	99,000
67	74	64	97,000
68	76	65	95,565
69	77	66	93,176
70	78	67	90,380
71	79	68	87,217
72	80	69	83,728
73	80	70	79,961
74	80	71	75,963
75	80	72	71,785

2.1 Actives and Deferreds

Consider an active member with a Normal Retirement Age of 65. His spouse is 3 years younger than him.

The proportion married, at age 70, used by SuperVal is calculated below.

If Retirement is selected for Spouse's Definition, SuperVal will use age at Normal Retirement Date for actives and allow for the spouse's mortality thereafter.

Proportion Married = Proportion married at NRD $\times l_{67}/l_{62}$ (using spouse's mortality)

= 70% \times 90,380/100,000

= 63%

If Death is selected for Spouse's Definition, SuperVal will calculate the cashflows using the member's proportion married based on his age in each year of calculation. Hence at age 70, the proportion married will be:

$$\begin{aligned}\text{Proportion Married} &= \text{Proportion married at 70} \\ &= 78\%\end{aligned}$$

2.2 Pensioners

Consider a pensioner member with a Normal Retirement Age of 65. At the valuation date he is aged 70 with a spouse assumed to be age 67.

The proportion married, at age 75, used by SuperVal is calculated below.

If Retirement is selected under Spouse Definition, SuperVal will use age at valuation date for pensioners.

$$\begin{aligned}\text{Proportion Married} &= \text{Proportion married at valuation date} \times l_{72}/l_{67} \text{ (using spouse's mortality)} \\ &= 78\% \times 71,785/90,380 \\ &= 62\%\end{aligned}$$

Note that this uses the proportion married table to determine proportion married at valuation date and spouse mortality thereafter.

Users can use the proportion married at Retirement with allowance for the Spouse Mortality between the Retirement Date and the Valuation Date if the Marital Status is not "M", "S" or "W" (Married, Single or Widowed).

The Retirement Date can be specified as either:

- a date field in the pensioner member's data; or
- a specified age e.g. 65, 60; or
- an age specified as a numeric field in the pensioner member's data.

To do this, tick the "Project 'Unknown' Spouse from Retirement" field and specify what age or what date the User wants to project the spouse's data from.

SuperVal 9.20.00 - Pensioner Valuation/Benefits Basis

File Data Goto Help

Main Financial Legislation PPF/CAP Mortality Demographic Pensions

Spouse Parameters

Spouse Parameter Set: []

Spouse Definition: [Retirement]

Ignore Spouse Details in Data (Marital Status/Spouse Date of Birth)

Male Proportion Married: [0.000] DEFAULT: 90% AT ALL AGES

Female Proportion Married: [0.000] DEFAULT: 90% AT ALL AGES

Male Age Difference Table (y-a): [1]

Female Age Difference Table (y-a): [1]

Male Age Difference (y-a): [3] years

Female Age Difference (y-a): [3] years

☒ Project Unknown Spouse from Retirement

Retirement Date for Unknown Spouse: []

Retirement Age for Unknown Spouse: [] years

Add/Edit Spouse Parameters

If Death is selected under Spouse Definition, SuperVal will calculate the cashflows using the member's proportion married based on his age in each year after the valuation date. Hence at age 75, the proportion married will be:

Proportion Married = Proportion married at 75

= 80%

3 PPF S179 (Levy) Valuations

3.1 Pensioners

When running a PPF Section 179 (Levy) valuation, the PPF guidance states that you must use the proportion married assumptions as set out in the relevant guidance appropriate to the valuation date.

For existing pensioners, adjustments to the proportion married percentage to reflect survival of the spouse between Normal Pension Age (NPA) and the valuation date may need to be made for existing pensioners.

SuperVal adjusts the proportion married used to reflect the probability of the spouse surviving between the Date Pension Commenced (DPC) data field imported into SuperVal and the valuation date. The adjustment takes account of both the base mortality table and the mortality improvements specified.

Post-valuation date adjustments continue to use the base mortality table adjusted for mortality improvements.