A Day Cash

System Calculations

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CONTENTS

SPECIFICATION

System Options

These calculations are available for the Extended Parameter Users.
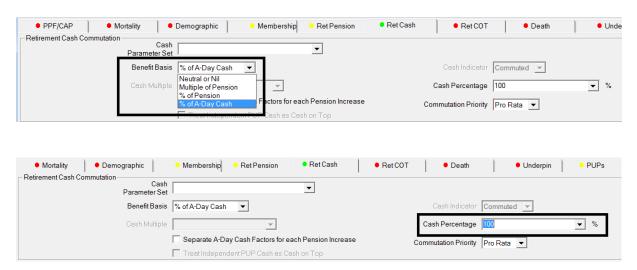
The A Day cash method is available for:

- Actives Retirement Cash commutation
- Actives Ill Health Cash commutation
- Deferreds Retirement Cash commutation

Retirement Cash Parameters

A new method is added to the list(s) of Retirement Cash methods:
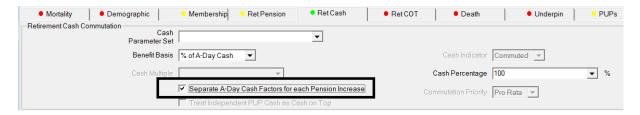
- % of A Day Cash

The Cash percentage field is used for the percentage of A Day cash. This can be a member specific field if required.

A new parameter (Check Box) is added to indicate if separate A Day cash factors are to be calculated for each pension increase or whether a single factor applies to the entire pension.

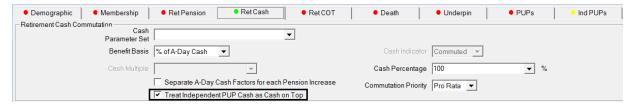- Separate A Day Cash Factors for each Pension Increase

If a user opts for the average factor approach which means the box above is left unchecked, then the user needs to select whether the average factor will be applied Pro Rata or Priority.

- Ind Slices and Ind PUPs

Users sometimes value Cash on Top in the Ind Slices and Ind PUPs giving data items the same payment start and end age. If the intention is to include this Cash on Top amount in the A Day max calculation, then the box to "Treat Independent PUP/Slice Cash as Cash on Top" should be checked.

If this box is unchecked the system will still value cash amounts in the Ind Slices and Ind PUPs but the A Day maximum will not be reduced to allow for this Cash on Top (if the basis has "% of A Day Cash" commutation specified).

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A Day Cash Formula

The formula used to calculate the factor for 100% of A Day Cash is:

$$\frac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$$

Where:

- *Pension* is the particular pension of a pension increase (or total pension summed over all pension increases if the factor is not calculated separately for each pension increase)

- *Lump Sum* is the Cash on Top of a particular pension increase (or total Cash on Top summed over all pension increases if the factor is not calculated separately for each pension increase)

- *Commutation Factor* is the factor for a particular pension increase. If a user is not calculating individual factors for each pension increase then this will be the average commutation factor weighted by pension

Please note, when SuperVal uses the average commutation factor, this is only used to obtain the percentage of pension to be commuted. When the percentage of pension to be commuted is calculated, SuperVal will use the actual commutation factors for the relevant pension increases to work out the cash. The following worked examples should make this clear.

SuperVal will limit the amount of pension it can commute if there is insufficient Excess pension to commute from for any data sets with large GMP.

WORKED EXAMPLES

1 Basic Pension

One Pension with one Pension Increase

Main Pension = 5,000

Commutation Factor = 10

Percentage of Pension commuted = $\dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

$= \dfrac{20 \times 5,000 - 3 \times 0}{5,000 \times (20 + 3 \times 10)}$

= 40%

100% of A Day Cash = 40% × 5,000 × 10 = 20,000

Quick Check – A more familiar format for the formula for the A Day Max Cash is:

100% of A Day Cash = $\dfrac{20 \times Pension \times Commutation\,Factor}{20 + 3 \times Commutation\,Factor} = \dfrac{20 \times 5,000 \times 10}{20 + 3 \times 10}$

= 20,000

One Pension with one Pension Increase and Cash on Top

Main Pension = 5,000

Commutation Factor = 10

Cash on Top Lump Sum of 1 x Pension = 5,000

Percentage of Pension commuted = $\dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

$= \dfrac{20 \times 5,000 - 3 \times 5,000}{5,000 \times (20 + 3 \times 10)}$

= 34%

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Quick Check:

100% of A Day Cash

$$= \frac{20 \times (Pension + Lump\ Sum \div Commutation\ Factor)}{20 \div Commutation\ Factor + 3}$$

$$= \frac{20 \times (5,000 + 5,000 \div 10)}{20 \div 10 + 3}$$

$$= 22,000$$

2 Basic Pension with GMP

One Excess Pension and GMP all with one Pension Increase

This is considering a member where NRA = SPA.

Main Pension = 5,000

GMP = 4,000 (Dynamism indicator on the Legislation tab is set to Main)

Commutation Factor = 10

Percentage of Total Pension commuted = $\dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

$= \dfrac{20 \times 9{,}000 - 3 \times 0}{9{,}000 \times (20 + 3 \times 10)}$

= 40%

Pension Commuted = 40% × 9,000 = 3,600

GMP Coverage check = 3,600 < Excess = 5,000 so no issues commuting

Percentage of Excess commuted = 3,600 / 5,000 = 72% as NRA = SPA and only the Excess is commuted.

One Small Excess Pension and GMP all with one Pension Increase

This is considering a member where NRA = SPA.

Main Pension = 1,000

GMP = 4,000 (Dynamism indicator on the Legislation tab is set to Main)

Commutation Factor = 10

Percentage of Total Pension commuted = $\dfrac{20 \times 5{,}000 - 3 \times 0}{5{,}000 \times (20 + 3 \times 10)}$ = 40%

Commuted Pension = 40% × 5,000 = 2,000

GMP Coverage check = 2,000 > Excess = 1,000 so SuperVal will reduce the cash to allow for the Excess pension available.

Since only a maximum of 1,000 of Excess can be commuted, SuperVal will commute the entire Excess pension and show a GMP liability and cash of 1,000 × 10 = 10,000.

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3 Two Pensions with different Commutation Factors

Two Pensions using the Average Factor approach

If the option on the Ret Cash tab to have "Separate A Day Cash Factors for each Pension Increase" is left unchecked the system will work out the commutable pension using an average commutation factor weighted by pension amount. The user then has the option of whether to use this average factor on a Priority or Pro rata basis.

Pro Rata aims to apply a broad proportion across the whole pension for the amount commuted.

Priority works in order of pension increases: Special, Main, Pension Increase 3 and Pension Increase 4 (eg, if the commutable pension is greater than the special pension, the system commutes all of the Special pension and then goes onto the Main pension and so on)

Pro Rata

Main Pension = 5,000

Special Pension = 10,000

Main Commutation Factor = 10

Special Commutation Factor = 30

Weighted Commutation Factor $= \dfrac{5,000 \times 10 + 10,000 \times 30}{15,000} = 23.33$

Percentage of Pension commuted $= \dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

$= \dfrac{20 \times 15,000 - 3 \times 0}{15,000 \times (20 + 3 \times 23.33)}$

= 22.22%

Commutable Pension = 22.22% × 15,000 = 3,333

100% A Day Cash = 22.22% × 5,000 × 10 + 22.22% × 10,000 × 30 = 77,770

Taking this further, our expected liabilities would be:

Main Liability = (1 – 22.22%) x 5,000 x Annuity at NRA

Special Liability = (1 – 22.22%) x 10,000 x Annuity at NRA

Priority

Main Pension = 5,000

Special Pension = 10,000

Main Commutation Factor = 10

Special Commutation Factor = 30

Weighted Commutation Factor $= \dfrac{5{,}000 \times 10 + 10{,}000 \times 30}{15{,}000}$ = 23.33

Percentage of Pension commuted $= \dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

$= \dfrac{20 \times 15{,}000 - 3 \times 0}{15{,}000 \times (20 + 3 \times 23.33)}$

= 22.22%

Commutable Pension = 22.22% × 15,000 = 3,333

Using the Priority order, as 3,333 < 10,000, the pension is only commuted from Special:

Cash Value = 3,333 × 30 = 99,990

Taking this further, our expected liabilities would be:

Special Liability = (10,000 – 3,333) x Annuity at NRA

Main Liability = 5,000 x Annuity at NRA

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Two Pensions using the Individual Factor approach

If the option on the Ret Cash tab to have "Separate A Day Cash Factors for each Pension Increase" is checked the system will work out the commutable pension for each group of pensions according to pension increase indicator using the relevant commutation factor.

Main Pension = 5,000

Special Pension = 10,000

Main Commutation Factor = 10

Special Commutation Factor = 30

Percentage of Pension commuted = $\dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

Percentage of Main Pension Commuted = $\dfrac{20 \times 5{,}000 - 3 \times 0}{5{,}000 \times (20 + 3 \times 10)}$ = 40%

Percentage of Special Pension Commuted = $\dfrac{20 \times 10{,}000 - 3 \times 0}{10{,}000 \times (20 + 3 \times 30)}$ = 18.18%

Max Cash = 40% × 5,000 × 10 + 18.18% × 10,000 × 30 = 74,540

Two Pensions with Cash on Top using the Average Factor approach

If the option on the Ret Cash tab to have "Separate A Day Cash Factors for each Pension Increase" is left unchecked the system will work out the commutable pension using an average commutation factor weighted by pension amount. The user then has the option of whether to use this average factor on a Priority or Pro rata basis.

Pro Rata aims to apply a broad proportion across the whole pension for the amount commuted.

Priority works in order of pension increases: Special, Main, Pension Increase 3 and Pension Increase 4 (eg, if the commutable pension is greater than the special pension, the system commutes all of the Special pension and then goes onto the Main pension and so on)

Pro Rata

Main Pension = 5,000

Special Pension = 10,000

Main Commutation Factor = 10

Special Commutation Factor = 30

Cash on Top is 1xPen, so 5,000 for Main and 10,000 for Special

Weighted Commutation Factor $= \dfrac{5{,}000 \times 10 + 10{,}000 \times 30}{15{,}000}$ = 23.33

Percentage of Pension commuted $= \dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

$= \dfrac{20 \times 15{,}000 - 3 \times 15{,}000}{15{,}000 \times (20 + 3 \times 23.33)}$

= 18.89%

Commutable Pension = 18.89% × 15,000 = 2,834

100% A Day Cash = 18.89% × 5,000 × 10 + 18.89% × 10,000 × 30 + 10,000 + 5,000 = 81,115

Taking this further, our expected liabilities would be:

Main Liability = (1 – 18.89%) x 5,000 x Annuity at NRA

Special Liability = (1 – 18.89%) x 10,000 x Annuity at NRA

Priority

Main Pension = 5,000

Special Pension = 10,000

Main Commutation Factor = 10

Special Commutation Factor = 30

Cash on Top of 1xPen, so 5,000 for Main and 10,000 for Special

Weighted Commutation Factor = $\dfrac{5,000 \times 10 + 10,000 \times 30}{15,000}$ = 23.33

Percentage of Pension commuted = $\dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\ Factor)}$

= $\dfrac{20 \times 15,000 - 3 \times 15,000}{15,000 \times (20 + 3 \times 23.33)}$

= 18.89%

Commutable Pension = 18.89% × 15,000 = 2,834

Using the Priority order, as 2,834 < 10,000, the pension is only commuted from Special:

Cash Value = 2,834 × 30 + 10,000 + 5,000 = 100,020

Taking this further, our expected liabilities would be:

Special Liability = (10,000 − 3,333) x Annuity at NRA

Main Liability = 5,000 x Annuity at NRA

Two Pensions and Cash on Top using the Individual Factor approach

If the option on the Ret Cash tab to have "Separate A Day Cash Factors for each Pension Increase" is checked the system will work out the commutable pension for each group of pensions according to pension increase indicator using the relevant commutation factor.

Main Pension = 5,000

Special Pension = 10,000

Main Commutation Factor = 10

Special Commutation Factor = 30

Cash on Top of 1xPen, so 5,000 for Main and 10,000 for Special

$$\text{Percentage of Pension commuted} = \frac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$$

$$\text{Percentage of Main Pension Commuted} = \frac{20 \times 5{,}000 - 3 \times 5{,}000}{5{,}000 \times (20 + 3 \times 10)} = 34\%$$

$$\text{Percentage of Special Pension Commuted} = \frac{20 \times 10{,}000 - 3 \times 10{,}000}{10{,}000 \times (20 + 3 \times 30)} = 15.45\%$$

Max Cash = 34% × 5,000 × 10 + 15.45% × 10,000 × 30 + 5,000 + 10,000 = 78,350

4 Two Pensions and GMP with different Commutation Factors

Two Pensions and GMP using the Average Factor approach

Assuming NRA = SPA

If the option on the Ret Cash tab to have "Separate A Day Cash Factors for each Pension Increase" is left unchecked the system will work out the commutable pension using an average commutation factor weighted by pension amount. The user then has the option of whether to use this average factor on a Priority or Pro rata basis.

Pro Rata aims to apply a broad proportion across the whole pension for the amount commuted.

Priority works in order of pension increases: Special, Main, Pension Increase 3 and Pension Increase 4 (eg, if the commutable pension is greater than the special pension, the system commutes all of the Special pension and then goes onto the Main pension and so on)

<u>Pro Rata</u>

Main Pension = 5,000

Special Pension = 10,000

GMP = 4,000 where the GMP Dynamism is set to Main

Main Commutation Factor = 10

Special Commutation Factor = 20

Weighted Commutation Factor $= \dfrac{9{,}000 \times 10 + 10{,}000 \times 20}{(5{,}000 + 10{,}000 + 4{,}000)} = 15.26$

Percentage of Pension commuted $= \dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\ Factor)}$

$= \dfrac{20 \times 19{,}000 - 3 \times 0}{19{,}000 \times (20 + 3 \times 15.26)}$

= 30.40%

Commutable Pension = 30.40% × 19,000 = 5,776

100% A Day Cash = 30.40% × 9,000 × 10 + 30.40% × 10,000 × 20 = 88,160

Taking this further, our expected liabilities would be:

Main Liability = [(1 – 30.40%) x 9,000 – 4,000] x Annuity at NRA

Special Liability = (1 – 30.40%) x 10,000 x Annuity at NRA

Priority

Main Pension = 5,000

Special Pension = 10,000

GMP = 4,000 where the GMP has the Dynamism indicator set to Main

Main Commutation Factor = 10

Special Commutation Factor = 20

Weighted Commutation Factor = $\dfrac{9{,}000 \times 10 + 10{,}000 \times 20}{19{,}000}$ = 15.26

Percentage of Pension commuted = $\dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

= $\dfrac{20 \times 19{,}000 - 3 \times 0}{19{,}000 \times (20 + 3 \times 15.26)}$

= 30.40%

Commutable Pension = 30.40% × 19,000 = 5,776

Using the Priority order, as 5,776 < 10,000, the pension is only commuted from Special:

Cash Value = 5,776 × 20 = 115,520

Taking this further, our expected liabilities would be:

Special Liability = (10,000 – 5,776) x Annuity at NRA

Main Liability = 5,000 x Annuity at NRA

Two Pensions and GMP using the Individual Factor approach

If the option on the Ret Cash tab to have "Separate A Day Cash Factors for each Pension Increase" is checked the system will work out the commutable pension for each group of pensions according to pension increase indicator using the relevant commutation factor.

Main Pension = 5,000

Special Pension = 10,000

GMP = 4,000 where the GMP has the Dynamism indicator set to Main

Main Commutation Factor = 10

Special Commutation Factor = 20

Percentage of Pension commuted = $\dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

Percentage of Main Pension Commuted= $\dfrac{20 \times 9{,}000 - 3 \times 0}{9{,}000 \times (20 + 3 \times 10)}$ = 40%

Percentage of Special Pension Commuted= $\dfrac{20 \times 10{,}000 - 3 \times 0}{10{,}000 \times (20 + 3 \times 20)}$ = 25%

GMP Coverage check: Main Pension commuted = 40% × 9,000 = 3,600

As 3,600 < Excess = 5,000, we can commute 40% of the Main pension

100% Max A Day Cash = 40% × 9,000 × 10 + 25% × 10,000 × 20 = 86,000

Two Pensions and GMP with Cash on Top using the Average Factor approach

Assuming NRA = SPA

If the option on the Ret Cash tab to have "Separate A Day Cash Factors for each Pension Increase" is left unchecked the system will work out the commutable pension using an average commutation factor weighted by pension amount. The user then has the option of whether to use this average factor on a Priority or Pro rata basis.

Pro Rata aims to apply a broad proportion across the whole pension for the amount commuted.

Priority works in order of pension increases: Special, Main, Pension Increase 3 and Pension Increase 4 (eg, if the commutable pension is greater than the special pension, the system commutes all of the Special pension and then goes onto the Main pension and so on)

<u>Pro Rata</u>

Main Pension = 5,000

Special Pension = 10,000

GMP = 4,000 where the GMP Dynamism is set to Main

Cash on Top of 5,000 for Main and 10,000 for Special (same as Excess pensions)

Main Commutation Factor = 10

Special Commutation Factor = 20

Weighted Commutation Factor $= \dfrac{9,000 \times 10 + 10,000 \times 20}{(5,000 + 10,000 + 4,000)}$ = 15.26

Percentage of Pension commuted $= \dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

$= \dfrac{20 \times 19,000 - 3 \times 15,000}{19,000 \times (20 + 3 \times 15.26)}$

= 26.80%

Commutable Pension = 26.80% × 19,000 = 5,092

100% A Day Cash = 26.80% × 9,000 × 10 + 26.80% × 10,000 × 20 + 15,000 = 92,720

Taking this further, our expected liabilities would be:

Main Liability = [(1 − 26.80%) x 9,000 − 4,000] x Annuity at NRA

Special Liability = (1 − 26.80%) x 10,000 x Annuity at NRA

<u>Priority</u>

Main Pension = 5,000

Special Pension = 10,000

GMP = 4,000 where the GMP has the Dynamism indicator set to Main

Cash on Top of 5,000 for Main and 10,000 for Special (same as Excess pensions)

Main Commutation Factor = 10

Special Commutation Factor = 20

Weighted Commutation Factor = $\dfrac{9,000 \times 10 + 10,000 \times 20}{19,000}$ = 15.26

Percentage of Pension commuted = $\dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

$= \dfrac{20 \times 19,000 - 3 \times 15,000}{19,000 \times (20 + 3 \times 15.26)}$

= 26.80%

Commutable Pension = 26.80% × 19,000 = 5,092

Using the Priority order, as 5,092 < 10,000, the pension is only commuted from Special:

Cash Value = 5,092 × 20 + 15,000 = 116,840

Taking this further, our expected liabilities would be:

Special Liability = (10,000 − 5,092) x Annuity at NRA

Main Liability = 5,000 x Annuity at NRA

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Two Pensions and GMP with Cash on Top using the Individual Factor approach

If the option on the Ret Cash tab to have "Separate A Day Cash Factors for each Pension Increase" is checked the system will work out the commutable pension for each group of pensions according to pension increase indicator using the relevant commutation factor.

Main Pension = 5,000

Special Pension = 10,000

GMP = 4,000 where the GMP has the Dynamism indicator set to Main

Cash on Top of 5,000 for Main and 10,000 for Special (same as Excess pensions)

Main Commutation Factor = 10

Special Commutation Factor = 20

Percentage of Pension commuted = $\dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

Percentage of Main Pension Commuted= $\dfrac{20 \times 9,000 - 3 \times 5,000}{9,000 \times (20 + 3 \times 10)}$ = 36.67%

Percentage of Special Pension Commuted= $\dfrac{20 \times 10,000 - 3 \times 10,000}{10,000 \times (20 + 3 \times 20)}$ = 21.25%

GMP Coverage check: Main Pension commuted = 36.67% × 9,000 = 3,300

As 3,300 < Excess = 5,000, we can commute 36.67% of the Main pension

100% Max A Day Cash = 36.67% × 9,000 × 10 + 21.25% × 10,000 × 20 + 15,000 = 90,503

5 Two Small Excess Pensions and GMP with different Commutation Factors

Two small Pensions and GMP using the Average Factor approach

Assuming NRA = SPA

If the option on the Ret Cash tab to have "Separate A Day Cash Factors for each Pension Increase" is left unchecked the system will work out the commutable pension using an average commutation factor weighted by pension amount. The user then has the option of whether to use this average factor on a Priority or Pro rata basis.

Pro Rata aims to apply a broad proportion across the whole pension for the amount commuted.

Priority works in order of pension increases: Special, Main, Pension Increase 3 and Pension Increase 4 (eg, if the commutable pension is greater than the special pension, the system commutes all of the Special pension and then goes onto the Main pension and so on)

<u>Pro Rata</u>

Main Pension = 1,000

Special Pension = 1,000

GMP = 4,000 where GMP Dynamism set to Main

Main Commutation Factor = 10

Special Commutation Factor = 20

Weighted Commutation Factor $= \dfrac{5,000 \times 10 + 1,000 \times 20}{6,000} = 11.67$

Percentage of Pension commuted $= \dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

$= \dfrac{20 \times 6,000 - 3 \times 0}{6,000 \times (20 + 3 \times 11.67)}$

= 36.36%

Commutable Pension = 36.36% × 6,000 = 2,182

As 2,182 > 2,000, all of Main and Special is commuted, and the commutable pension is restricted to 2,000.

Cash Value = 1,000 × 20 + 1,000 × 10 = 30,000

So the only liabilities that should be produced are the cash of 30,000 and the value of the GMP liability.

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Priority

Main Pension = 1,000

Special Pension = 1,000

GMP = 4,000 where the GMP has the Dynamism indicator set to Main

Main Commutation Factor = 10

Special Commutation Factor = 20

Weighted Commutation Factor = $\dfrac{5,000 \times 10 + 1,000 \times 20}{6,000}$ = 11.67

Percentage of Pension commuted = $\dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

$= \dfrac{20 \times 6,000 - 3 \times 0}{6,000 \times (20 + 3 \times 11.67)}$

= 36.36%

Commutable Pension = 36.36% × 6,000 = 2,182

Using the Priority order, as 2,182 > 1,000, all of Special is commuted, the remaining 1,182 > 1000 and so all of Main is also commuted. As such, the commutable pension is limited to 2,000.

Cash Value = 1,000 × 20 + 1,000 × 10 = 30,000

So the only liabilities that should be produced are the cash of 30,000 and the value of the GMP liability.

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Two Small Pensions using the Individual Factor approach

If the option on the Ret Cash tab to have "Separate A Day Cash Factors for each Pension Increase" is checked the system will work out the commutable pension for each group of pensions according to pension increase indicator using the relevant commutation factor.

Main Pension = 1,000

Special Pension = 1,000

GMP = 4,000 where the GMP has the Dynamism indicator set to Main

Main Commutation Factor = 10

Special Commutation Factor = 20

Percentage of Pension commuted = $\dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

Percentage of Main Pension Commuted = $\dfrac{20 \times 5,000 - 3 \times 0}{5,000 \times (20 + 3 \times 10)}$ = 40%

GMP Coverage Check: 40% × 5,000 = 2,000

As 2,000 > Excess = 1,000, the system restricts the commutable pension to 1,000

Percentage of Main Pension Commuted = 100%

Percentage of Special Pension Commuted = $\dfrac{20 \times 1,000 - 3 \times 0}{1,000 \times (20 + 3 \times 20)}$ = 25%

Max Cash = 100% × 1,000 × 10 + 25% × 1,000 × 20 = 15,000

Taking this further, our expected Excess liabilities would be:

Special Liability = 75% × 1,000 x Annuity at NRA

Main Liability = 0

Two small Pensions and GMP with Cash on Top using the Average Factor approach

Assuming NRA = SPA

If the option on the Ret Cash tab to have "Separate A Day Cash Factors for each Pension Increase" is left unchecked the system will work out the commutable pension using an average commutation factor weighted by pension amount. The user then has the option of whether to use this average factor on a Priority or Pro rata basis.

Pro Rata aims to apply a broad proportion across the whole pension for the amount commuted.

Priority works in order of pension increases: Special, Main, Pension Increase 3 and Pension Increase 4 (eg, if the commutable pension is greater than the special pension, the system commutes all of the Special pension and then goes onto the Main pension and so on)

<u>Pro Rata</u>

Main Pension = 1,000

Special Pension = 5,000

GMP = 4,000 where GMP Dynamism set to Main

Cash on Top of 5,000 for Main and 10,000 for Special

Main Commutation Factor = 10

Special Commutation Factor = 20

Weighted Commutation Factor $= \dfrac{5,000 \times 10 + 5,000 \times 20}{10,000} = 15$

Percentage of Pension commuted $= \dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

$= \dfrac{20 \times 10,000 - 3 \times 15,000}{10,000 \times (20 + 3 \times 15)}$

= 23.85%

Commutable Pension = 23.85% × 10,000 = 2,385 < 6,000 so we have sufficient pension to commute from

Checking Pre97 coverage: 23.85% x 5,000 = 1,192.5 > 1,000 of Pre 97 Excess available. So, all of the Main Excess pension is commuted and the rest of the commutable pension, 2,385 − 1,000 = 1,385 is commuted from the Special pension.

Cash Value = 1,000 × 10 + 1,385 × 20 + 15,000 = 52,700

Special Liability = (5,000 − 1,385) x Annuity at NRA

Priority

Main Pension = 1,000

Special Pension = 5,000

GMP = 4,000 where the GMP has the Dynamism indicator set to Main

Cash on Top of 5,000 for Main and 10,000 for Special

Main Commutation Factor = 10

Special Commutation Factor = 20

Weighted Commutation Factor $= \dfrac{5,000 \times 10 + 5,000 \times 20}{10,000} = 15$

Percentage of Pension commuted $= \dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

$= \dfrac{20 \times 10,000 - 3 \times 15,000}{10,000 \times (20 + 3 \times 15)}$

= 23.85%

Commutable Pension = 23.85% × 10,000 = 2,385

Using the Priority order, as 2,385 < 5,000, only Special pension is commuted from.

Cash Value = 2,385 × 20 + 15,000 = 62,700

Taking this further, our expected liabilities would be:

Special Liability = (5,000 – 2,385) x Annuity at NRA

Main Liability = 5,000 x Annuity at NRA - 4,000 x Annuity at SPA

Two small Pensions and GMP with Cash on Top using the Individual Factor approach

If the option on the Ret Cash tab to have "Separate A Day Cash Factors for each Pension Increase" is checked the system will work out the commutable pension for each group of pensions according to pension increase indicator using the relevant commutation factor.

Main Pension = 1,000

Special Pension = 5,000

GMP = 4,000 where the GMP has the Dynamism indicator set to Main

Cash on Top of 5,000 for Main and 10,000

Main Commutation Factor = 10

Special Commutation Factor = 20

Percentage of Pension commuted = $\dfrac{20 \times Pension - 3 \times Lump\,Sum}{Pension \times (20 + 3 \times Commutation\,Factor)}$

Percentage of Main Pension Commuted= $\dfrac{20 \times 5,000 - 3 \times 5,000}{5,000 \times (20 + 3 \times 10)}$ = 34%

Percentage of Special Pension Commuted= $\dfrac{20 \times 5,000 - 3 \times 10,000}{5,000 \times (20 + 3 \times 20)}$ = 17.5%

GMP Coverage check: Main Pension commuted = 34% ×5,000 = 1,700

As 1,700 > Excess = 1,000, the system limits the amount it can commute from the Main pension to 1,000 so that no GMP is commuted. As the Individual Factor approach considers the pensions grouped by pension increase in isolation, the system will not commute the extra 700 of commutable pension from the Special pension. The resulting value of cash will be lower than if an Average factor approach is used.

100% Max A Day Cash = 1,000 (Main Excess) × 10 + 17.5% × 5,000 × 20 + 15,000 = 42,500