

# Police pension schemes (Scotland)

1987 Scheme

Non-Club incoming transfers

Factors and guidance

Date: 10 December 2020





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#### 1 Introduction

- 1.1 This note is provided for the Scottish Public Pension Agency (SPPA) as scheme manager of the police pension schemes. It sets out how to determine the appropriate service credit for incoming non-Club transfers into the 1987 scheme.
- 1.2 A service credit in respect of a non-Club transfer value may be awarded in the 1987 scheme in accordance with regulation F6 of Schedule F of the Police Pensions Regulations 1987 (as amended) (SI 1987/257)
- 1.3 The factors provided in this note have been prepared in light of our advice to SPPA dated 30 October 2018 and its instructions following that advice.
- 1.4 This guidance is intended to supersede any factors and guidance previously issued by GAD for the purposes of calculating non-club incoming transfers, carried out from 30 October 2018. No advice or factors issued in the past should be used for non-club transfers into the scheme after this date. In particular, this guidance supersedes:
  - "Police Pension Schemes (Scotland) 1987 Scheme: Non-Club incoming transfers" dated 15 April 2015.
- 1.5 The formulae and factors for calculating the service credit to be awarded are set out in the following sections:
  - Section 2 covers the details on how transfers in to the 1987 scheme should be processed.
  - Section 3 covers the calculation of the service credit to be awarded to 1987 scheme members under the age of 55.
  - Section 4 covers the calculation of the service credit to be awarded to 1987 scheme members aged 55 and over.
  - Section 5 sets out some example calculations.
  - Appendix A contains the factors required to determine the appropriate service credit for incoming non-Club transfers into the 1987 scheme.
  - Appendix B sets out the principal assumptions underlying the factors contained in this guidance note
  - Appendix C contains some important limitations

#### **Exclusions and scope**

1.6 This note does not cover Club transfers. Club transfers into the 1987 scheme are subject to a time limit of 12 months from joining. As the 1987 scheme has been closed to new entrants for more than 12 months, no transfer in will qualify for Club terms.



- 1.7 Separate guidance and factors cover the calculation of service credits and pension credits for incoming non-Club transfers into the 2006 and 2015 schemes respectively.
- 1.8 This note does not cover transfers in from the British Transport Police Force Superannuation Fund under any bilateral agreement.

#### Implementation and Review

- 1.9 In previous factors and guidance, an adjustment was applied to GMP to reflect the inflationary increases on the GMP, which were the responsibility of the State Scheme after GMP Payment Age. Following the requirement to equalise GMPs as set out in our letter "GMP Equalisation: Calculations involving actuarial factors" dated August 2019 the GMP adjustment factor has been removed from the calculation methodology for all members reaching State Pension age after 6 April 2016 with effect from the date of receipt of this guidance note.
- 1.10 Our understanding of the usual transitional arrangements for transfer in calculations is that quotes are made using factors effective at that time. Therefore, we suggest the following transitional arrangements could be reasonable for transfer in calculations:
  - Where the transfer in has been completed before the effective date of the new approach, this original credit should be honoured. Furthermore, transfer in quotations provided before the effective date of the new approach could remain valid where monies are received within one year of a member's starting date. As noted previously, this is pending any decision to subsequently take retrospective action on completed cases.
  - For any other quotations in progress after the effective date of the new approach, this new approach would be used for the calculation.
- 1.11 We are recommending that the new approach in respect of GMP entitlements is implemented from the date of receipt of each of our updated guidance notes.
- 1.12 This guidance has been written for pension administrators and assumes some knowledge of general pension terminology, and some familiarity with retirement calculations for the Police Pension Schemes in Scotland. Any questions concerning the application of the guidance should, in the first instance, be referred to SPPA.
- 1.13 In line with best practice and in order to make sure that factors are being used as intended and the instructions are fit for purpose, we suggest that some example calculations are sent to GAD for review.
- 1.14 The factors contained in this guidance will be subject to review periodically. This will depend on external circumstances, for example whenever there is a change in the SCAPE basis; when changes in the actuarial assumptions adopted for other scheme factors take place; or following each future actuarial valuation where mortality and other relevant experience is reviewed or if other credible and material information comes to light.



#### Third party reliance

- 1.15 This guidance has been prepared for the use of the SPPA for the purposes of demonstrating the application of the factors covered by this guidance only. This guidance may be published on the SPPA's website but must not otherwise be reproduced, distributed or communicated in whole or in part to any other person without GAD's prior written permission.
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## 2 Processing transfers in

- 2.1 The age and pensionable pay used in the calculation should be determined as at the relevant date (see paragraph 2.5).
- 2.2 The figure for the member's pay should be the pensionable pay in the 1987 scheme expressed as an annual rate (i.e. as would be used in the calculation of lump sum death grant) as at the relevant date (see paragraph 2.5).
- 2.3 Even if the member is working part-time as a police officer in the 1987 scheme, the service credit awarded will count as full-time service. It should therefore be calculated using the member's full-time equivalent pensionable pay.
- 2.4 Factors for the survivor's pension do not depend on whether or not the member has a spouse or civil partner.

#### The relevant date

- 2.5 The relevant date is the date on which the transfer payment is received, except where an officer requests a quotation of the service credit in advance of the transfer value being paid. If the transfer payment is subsequently received within 3 months of the calculation date for the quotation, and if the amount of the transfer value is unchanged from the amount used in the quotation, the relevant date is the same as used for the quotation (i.e. the quoted service credit is honoured).
- 2.6 Before a statutory CETV is accepted a check must be conducted to ensure that the transfer value is large enough to ensure that the GMP liability will be covered. Such part of the transfer value as relates to pension benefit accrual before 6 April 1997 must be at least as great as the product of:
  - the annual amount of the GMP revalued up to the calculation date, and
  - the factor specified below:

 Age
 Factor¹

 29 or under
 8

 30 to 39
 9

 40 to 49
 10

 50 or over
 12

If this test is not satisfied, the transfer cannot be accepted by the 1987 scheme.

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<sup>&</sup>lt;sup>1</sup> The factors are set out in Regulation F6 of The Police Pensions Regulations 1987 (SI 1987/257) and these are the current factors at the date of issue. Any changes in the regulations override this guidance.



2.7 In a case where a transfer cannot be accepted because the GMP test in paragraph 2.6 is not satisfied, the 1987 scheme would nevertheless be able to accept a transfer value in respect of the benefits in excess of the GMP, with the GMP liability remaining with the former scheme.

#### Section 9(2B) rights

2.8 If the transfer value received includes benefits in respect of service after 6 April 1997 in a contracted out pension scheme, the 1987 scheme service credit in respect of benefits identified by the former scheme as post-97 contracted-out rights must be recorded as Section 9(2B) rights. The length of the service credit that counts as Section 9(2B) rights is determined as follows:

Where:

SC service credit calculated in accordance with section 3 or 4

TV<sub>post 97</sub> the portion of the transfer value identified as post-1997 contracted-out rights

TV total transfer value

#### Members' records

- 2.9 As well as service credit, a record should be kept of:
  - amount of the transfer value received
  - the portion of that transfer value identified as section 9(2B) rights
  - length of service credit that is section 9(2B) rights
  - if the actual length of 1987 scheme membership is less than two years, the length of qualifying service transferred from the former scheme



# 3 Service credits for members under the age of 55

- 3.1 The first step is to calculate the amount available for purchase of benefits (AAPB). The AAPB will equal the transfer value.
- 3.2 The service credit to be awarded depends on the member's 'total prospective service' (TPS) to age 55 as at the calculation date (excluding any service credit to be awarded), i.e. the member's actual service at the calculation date plus the potential service between the calculation date and age 55 assuming full-time employment.
- 3.3 Paragraphs 3.4 to 3.7 describe the calculation of the service credit for members with TPS less than 20 years. Paragraphs 3.8 to 3.11 and 3.12 to 3.13 describe the calculation for members with TPS between 20 and 30 years and over 30 years respectively.

#### Total prospective service less than 20 years

3.4 The cost of one year's accrual (1yr<sub>A</sub>) is calculated as

$$1yr_A = [F_p + (0.5 \times F_{sur})] \times PAY \div 60$$

Where:

$F_p$	factor for member's pension – Table TVIN_87M or Table TVIN_87F
$F_{sur}$	factor for survivor's pension – Table TVIN_87M or Table TVIN_87F
PAY	member's pensionable pay in the 1987 scheme as at the relevant date, see paragraphs 2.1 to 2.3

3.5 The AAPB is sufficient to purchase a service credit (in years) of



3.6 However, the maximum service credit that can be purchased at this cost is 20 years less TPS. If the service credit calculated in paragraph 3.5 is greater than this amount then only a service credit of 20 years less TPS can be purchased under paragraph 3.5, at a total cost of:

$$(20 - TPS) \times 1yr_A$$

- 3.7 The balance of the AAPB (= AAPB  $[(20 TPS) \times 1yr_A]$ ) can be used to purchase further service under paragraphs 3.8 to 3.11. In this case, the total service credit will be
  - 20 years less TPS; and
  - the credit that can be purchased under paragraphs 3.8 to 3.10 (assuming the member has TPS of 20 years) with the amount AAPB substituted by

AAPB - 
$$[(20 - TPS) \times 1yr_A]$$

(i.e. the balance available after the purchase of the maximum service credit available under this section).

#### Total prospective service between 20 and 30 years

3.8 The cost of one year's accrual (1yr<sub>B</sub>) is calculated as:

$$1yr_B = [F_p + (0.5 \times F_{sur})] \times PAY \div 30$$

Where:

Fp	factor for member's pension – Table TVIN_87M or Table TVIN_87F
F <sub>sur</sub>	factor for survivor's pension – <b>Table TVIN_87M</b> or <b>Table TVIN_87F</b>
PAY	member's pensionable pay in the 1987 scheme as at the relevant date, see paragraphs 2.1 to 2.3

3.9 The AAPB is sufficient to purchase a service credit (in years) of:

3.10 However, the maximum service credit that can be purchased at this cost is 30 years less TPS. If the service credit calculated in paragraph 3.9 is greater than this amount then only a service credit of 30 years less TPS can be purchased under paragraph 3.9, at a total cost of:

$$(30 - TPS) \times 1yr_B$$



- 3.11 The balance of the AAPB (= AAPB  $[(30 TPS) \times 1yr_B]$ ) can be used to purchase further service under paragraphs 3.12 to 3.13. In this case, the total service credit will be :
  - 30 years less TPS; and
  - the credit that can be purchased under paragraphs 3.12 to 3.13 (assuming the member has TPS of 30 years) with the amount AAPB substituted by:

AAPB 
$$- [(30 - TPS) \times 1yr_B]$$

(i.e. the balance available after the purchase of the maximum service credit available under this section).

### Total prospective service greater than 30 years

3.12 The cost of one year's accrual (1yr<sub>C</sub>) is calculated as:

$$1yr_C = \{ [F_p + (0.5 \times F_{sur})] \times PAY \div 30 \times [1 + (TPS - 30) \times F_{EP}] \} \times [1 + (20 \times F_{EP})]$$

Where:

$F_p$	factor for member's pension – Table TVIN_87M or Table TVIN_87F
F <sub>sur</sub>	factor for survivor's pension – Table TVIN_87M or Table TVIN_87F
$F_{EP}$	factor for early payment – Table TVIN_87M or Table TVIN_87F
PAY	member's pensionable pay in the 1987 scheme as at the relevant date, see paragraphs 2.1 to 2.3
TPS	total prospective service

3.13 The service credit is calculated as:

AAPB ÷ 1yrc



## 4 Service credits for members aged 55 and over

- 4.1 The first step is to calculate the amount available for purchase of benefits (AAPB). The AAPB will equal the transfer value.
- 4.2 For members aged 55 and over, the service credit to be awarded depends on the member's service (SER) as at the calculation date (excluding any service credit to be awarded).
- 4.3 Paragraphs 4.4 to 4.7 describe the calculation of the service credit for members with SER less than 20 years. Paragraphs 4.8 and 4.9 describe the calculation for members with SER over 20 years.

#### Service less than 20 years

4.4 The cost of one year's accrual (1yr<sub>A</sub>) is calculated as:

$$1yr_A = [F_p + (0.5 \times F_{sur})] \times PAY \div 60$$

Where:

F<sub>p</sub> factor for member's pension – **Table TVIN\_87M** or **Table TVIN\_87F**F<sub>sur</sub> factor for survivor's pension – **Table TVIN\_87M** or **Table TVIN\_87F**PAY member's pensionable pay in 1987 scheme as at the relevant ate, see paragraphs 2.1 to 2.3

4.5 The AAPB is sufficient to purchase a service credit (in years) of:

4.6 However, the maximum service credit that can be purchased at this cost is 20 years less SER. If the service credit calculated in paragraph 4.5 is greater than this amount then only a service credit of 20 years less SER can be purchased under paragraph 4.5, at a total cost of

$$(20 - SER) \times 1yr_A$$

- 4.7 The balance of the AAPB (= AAPB [(20 SER) x 1yr<sub>A</sub>]) can be used to purchase further service under paragraphs 4.8 and 4.9. In this case, the total service credit will be:
  - 20 years less SER; and
  - the credit that can be purchased under paragraphs 4.8 and 4.9 (assuming the member has SER of 20 years) with the amount AAPB substituted by

AAPB 
$$-$$
 [(20  $-$  SER) x 1yr<sub>A</sub>]



(i.e. the balance available after the purchase of the maximum service credit available under this section).

#### Service greater than 20 years

4.8 The cost of one year's accrual (1yr<sub>B</sub>) is calculated as:

$$1yr_B = [F_p + (0.5 \times F_{sur})] \times PAY \div 30$$

Where:

F<sub>p</sub> factor for member's pension – **Table TVIN\_87M** or **Table TVIN\_87F**F<sub>sur</sub> factor for survivor's pension – **Table TVIN\_87M** or **Table TVIN\_87F**PAY member's pensionable pay in the 1987 scheme as at the relevant date, see paragraphs 2.1 to 2.3

4.9 The service credit is calculated as:



# 5 Example calculations

#### Example 1: Member under age 55, TPS less than 20 years

The following information is needed for this calculation:

Member date of birth	23 April 1966
Relevant date	26 October 2020
Member age	54 years, 186 days
Gender	Male
Annual rate of Pensionable Pay in 1987 scheme	£45,000
Transfer Value from previous scheme	£130,000
TV in respect of section 9(2B) rights	£27,500
Reckonable service	10 years
	Relevant date Member age Gender Annual rate of Pensionable Pay in 1987 scheme Transfer Value from previous scheme TV in respect of section 9(2B) rights

#### Calculation of AAPB

From 3.1, the amount available for purchase of benefits (AAPB) is:

#### AAPB = TV

Therefore AAPB = £130,000 (from F. above)

#### **Calculation of TPS**

Past Service = 10 years (from H. above)

Potential Future Service = 55 years – 54 years 186 days = 179 days

TPS = Past Service + Potential Future Service = 10 years 179 days

TPS is less than 20 years and so the service credit is calculated in accordance with paragraphs 3.4 to 3.7.



#### Calculation of the value of one year's accrual

From 3.4, the cost of one year's accrual is:

$$1yr_A = [F_p + (0.5 \times F_{sur})] \times PAY \div 60$$

 $F_p = 21.01 \text{ (from Table TVIN_87M)}$ 

 $F_{sur} = 2.88$  (from **Table TVIN\_87M**)

PAY = £45,000(from E. above)

Substituting these values into the formula above, we get

$$1yr_A = [21.01 + (0.5 \times 2.88)] \times £45,000 \div 60$$
$$= [21.01 + 1.44] \times £45,000 \div 60$$
$$= 22.45 \times £45,000 \div 60$$
$$= £16.837.50$$

#### Calculation of service credit

From 3.5, AAPB is sufficient to purchase a service credit of:

From above we have

AAPB = £130,000

 $1yr_A = £16,837.50$ 

Substituting these values into the formula above, we get

Potential service credit

- =£130,000  $\div$ £16,837.50
- = 7.7209 years
- = 7 years 264 days (rounding up to the nearest day)

From 3.6, the maximum service credit that can be purchased at this cost is 20 years less TPS, i.e. 9 years 186 days (20 years less 10 years 179 days).

The potential service credit is less than this so the service credit awarded is **7 years 264 days**.



### Service credit in respect of section 9(2B) rights

From 2.8 the formula for the calculation of service credits in respect of section 9(2B) rights is:

SC x 
$$TV_{post97} \div TV$$

From above we have

SC = 7.7209 (7 years 264 days)

 $TV_{post97}$  = £27,500 (from G. above)

TV = £130,000

Substituting these values into the formula above, we get

Service credit in respect of section 9(2B) rights

- $= 7.7209 \times £27,500 \div £130,000$
- = 1.6333 years
- = 1 year 232 days (rounding up to the nearest day)



# Example 2: Member under age 55, TPS less than 20 years (service credit exceeds the difference between TPS and 20 years)

The following information is needed for this calculation:

A.	Member date of birth	17 May 1966
В.	Relevant date	17 May 2020
C.	Member age	54 years, 0 days
D.	Gender	Female
E.	Annual rate of Pensionable Pay in 1987scheme	£26,000
F.	Transfer Value from previous scheme	£120,000
G.	TV in respect of section 9(2B) rights	£50,000
Н.	Reckonable service	12 years 100 days

#### **Calculation of AAPB**

From 3.1, the amount available for purchase of benefits (AAPB) is:

#### AAPB = TV

Therefore AAPB = £120,000 (from F. above)

#### **Calculation of TPS**

Past Service = 12 years 100 days (from H. above)

Potential Future Service = 55 years - 54 years = 1 years

TPS = Past Service + Potential Future Service = 13 years and 100 days

TPS is less than 20 years and so the service credit is calculated in accordance with paragraphs 3.4 to 3.6.



#### Calculation of the value of one year's accrual

From 3.4, the cost of one year's accrual is:

$$1yr_A = [F_p + (0.5 \times F_{sur})] \times PAY \div 60$$

 $F_p = 21.01$  (from **Table TVIN\_87F**)

 $F_{sur} = 2.88$  (from **Table TVIN\_87F**)

PAY = £26,000(from E. above)

Substituting these values into the formula above, we get

$$1yr_A = [21.01 + (0.5 \times 2.88)] \times £26,000 \div 60$$
$$= [21.01 + 1.44] \times £26,000 \div 60$$
$$= 22.45 \times £26,000 \div 60$$
$$= £9.728.33$$

#### Calculation of service credit

From 3.5, AAPB is sufficient to purchase a service credit of:

From above we have

AAPB = £120,000

 $1yr_A = £9,728.33$ 

Substituting these values into the formula above, we get

Potential service credit

- =£120,000  $\div$  9,728.33
- = 12.335 years
- = 12 years 123 days (rounding up to the nearest day)

From 3.6, the maximum service credit that can be purchased at this cost is 20 years less TPS, i.e. 6 years 265 days (20 years less 13 years 100 days).

The potential service credit is greater than the maximum that can be purchased under paragraph 3.6. Therefore, the maximum service credit (6 years 265 days) is purchased under 3.4, with the balance of the AAPB being used to purchase further service under paragraphs 3.8 to 3.10 (assuming TPS of 20 years).



From 3.7 the new amount available for the purchase of benefits under paragraphs 3.8 to 3.10 is:

#### NEW AAPB = AAPB - $[(20 - TPS) \times 1yr_A]$

From above we have

AAPB = £120,000

TPS = 13.274

 $1yr_A = £9,728.33$ 

Substituting these values into the formula above, we get

NEW AAPB = £120,000 - 
$$[(20 - 13.274) \times £9,728.33]$$
  
= £120,000 -  $[6.726 \times £9,728.33]$   
= £120,000 - £65,432.75  
= £54,567.25

From 3.8, the new cost of one year's accrual is:

$$1yr_B = [F_P + (0.5 \times F_{SUR})] \times PAY \div 30$$

 $F_p = 21.01$  (from above)

 $F_{sur} = 2.88$  (from above)

PAY = £26,000 (from above)

Substituting these into the formula above, we get

$$1yr_B = [21.01 + (0.5 \times 2.88)] \times £26,000 \div 30$$
$$= [21.01 + 1.44] \times £26,000 \div 30$$
$$= 22.45 \times £26,000 \div 30$$
$$= £19,456.67$$

From 3.9, NEW AAPB is sufficient to purchase a service credit of:

#### **NEW AAPB ÷ 1yr**<sub>B</sub>

From above we have New AAPB = £54,567.25  $1yr_B = £19,456.67$ 



Substituting these into the formula above, we get

Potential additional service credit

- =£54,567.25  $\div$ £19,456.67
- = 2.805 years
- = 2 years and 294 days (rounding up to the nearest day)

From 3.10, the maximum service credit that can be purchased at this cost is 30 years less TPS, i.e. 16 years 265 days (30 years less 13 years 100 days).

The potential additional service credit is less than this so the additional service credit awarded is 2 years 294 days.

Therefore, the total service credit awarded is **9 years and 194 days** (6 years 265 days from paragraphs 3.4 to 3.6 and 2 years 294 days from paragraphs 3.8 to 3.10).

#### Service credit in respect of section 9(2B) rights

From 2.8 the formula for the calculation of service credits in respect of section 9(2B) rights is:

From above we have

SC = 9.532 (= 9 years 194 days)

 $TV_{post97} = £50,000 \text{ (from G.)}$ 

TV = £120,000 (from F.)

Substituting these values into the formula above, we get

Service credit in respect of section 9(2B) rights

- $= 9.532 \times £50,000 \div £120,000$
- = 3.971 years
- = 3 years 355 days (rounding up to the nearest day)



#### Example 3: Member under age 55, TPS between 20 and 30 years

The following information is needed for this calculation:

A. Member date of birth11 September 1966B. Relevant date11 September 2020C. Member age54 years, 0 days

D. Gender
E. Annual rate of Pensionable Pay in 1987 scheme
F. Transfer Value from previous scheme
G. TV in respect of section 9(2B) rights
Male
£23,000
£95,000
£10,000

H. Reckonable service20 years 0 days

#### **Calculation of AAPB**

From 3.1, the amount available for purchase of benefits (AAPB) is:

Therefore, AAPB = £95,000 (from F. above)

#### **Calculation of TPS**

Past Service = 20 years 0 days (from H. above)

Potential Future Service = 55 years – 54 years = 1 years

TPS = Past Service + Potential Future Service = 21 years and 0 days

TPS is between 20 and 30 years and so the service credit is calculated in accordance with paragraphs 3.8 to 3.10



#### Calculation of the value of one year's accrual

From 3.8, the cost of one year's accrual is:

$$1yr_B = [F_p + (0.5 \times F_{sur})] \times PAY \div 30$$

 $F_p = 21.01 \text{ (from Table TVIN_87M)}$ 

 $F_{sur} = 2.88$  (from **Table TVIN\_87M**)

PAY = £23,000 (from E. above)

Substituting these values into the formula above, we get

$$1yr_B = [21.01 + (0.5 \times 2.88)] \times £23,000 \div 30$$
$$= [21.01 + 1.44] \times £23,000 \div 30$$
$$= 22.45 \times £23,000 \div 30$$
$$= £17,211.67$$

#### Calculation of service credit

From 3.9, AAPB is sufficient to purchase a service credit of:

From above we have

AAPB = £95,000

 $1yr_B = £17,211.67$ 

Substituting these values into the formula above, we get

Potential service credit

- =£95,000  $\div$ £17,211.67
- = 5.5195 years
- = 5 years 190 days (rounding up to the nearest day)

From 3.10, the maximum service credit that can be purchased at this cost is 30 years less TPS, i.e. 9 years (30 years less 21 years).

The potential service credit is less than this so the service credit awarded is **5 years and 190 days**.



### Service credit in respect of section 9(2B) rights

From 2.8 the formula for the calculation of service credits in respect of section 9(2B) rights is:

SC x 
$$TV_{post97} \div TV$$

From above we have

SC = 5.5195 (5 years 190 days)

 $TV_{post97} = £10,000 \text{ (from G.)}$ 

TV = £95,000 (from F.)

Substituting these values into the formula above, we get

Service credit in respect of section 9(2B) rights

- $= 5.5195 \times £10,000 \div £95,000$
- = 0.581 years
- = 0 years 213 days (rounding up to the nearest day)



# Example 4: Member under age 55, TPS between 20 and 30 years (service credit exceeds the difference between TPS and 30 years)

The following information is needed for this calculation:

A. Member date of birth17 December 1966B. Relevant date17 December 2020C. Member age54 years, 0 daysD. GenderMale

E. Annual rate of Pensionable Pay in 1987 scheme £55,000
F. Transfer Value from previous scheme £120,000

**G.** TV in respect of section 9(2B) rights £0

H. Reckonable service 28 years 0 days

#### Calculation of AAPB

From 3.1, the amount available for purchase of benefits (AAPB) is:

#### AAPB = TV

Therefore, AAPB = £120,000 (from F. above)

#### **Calculation of TPS**

Past Service = 28 years 0 days (from H. above)

Potential Future Service = 55 years - 54 years = 1 year

TPS = Past Service + Potential Future Service = 29 years and 0 days

TPS is greater than 20 years, and less than 30 years and so the service credit is calculated in accordance with paragraphs 3.8 to 3.10

#### Calculation of the value of one year's accrual

From 3.8, the cost of one year's accrual is:

$$1yr_B = [F_p + (0.5 \times F_{sur})] \times PAY \div 30$$

 $F_p = 21.01$  (from **Table TVIN\_87M**)

 $F_{sur} = 2.88$  (from **Table TVIN\_87M**)

PAY = £55,000(from E. above)

Substituting these values into the formula above, we get

$$1yr_B = [21.01 + (0.5 \times 2.88)] \times £55,000 \div 30$$
$$= [21.01 + 1.44] \times £55,000 \div 30$$



- $= 22.45 \times £55,000 \div 30$
- =£41,158.33

#### Calculation of service credit

From 3.9, AAPB is sufficient to purchase a service credit of:

#### AAPB ÷ 1yr<sub>B</sub>

From above we have

AAPB = £120.000

 $1yr_B = £41,158.33$ 

Substituting these values into the formula above, we get

Potential service credit

- =£120,000  $\div$ £41,158.33
- = 2.916 years
- = 2 years 335 days (rounding up to the nearest day)

From 3.10, the maximum service credit that can be purchased at this cost is 30 years less TPS, i.e. 1 year (30 years less 29 years).

The potential service credit is greater than the maximum that can be purchased under section 3.10. Therefore, the maximum service credit (one year) is purchased under 3.10, with the balance of the AAPB being used to purchase further service under section paragraphs 3.11 to 3.13 (assuming TPS of 30 years).

From 3.11, the new amount available for the purchase of benefits under paragraphs 3.11 to 3.13 is:

#### NEW AAPB = AAPB $- [(30 - TPS) \times 1yr_B]$

From above we have

AAPB = £120,000

**TPS = 29** 

 $1yr_B = £41,158.33$ 

Substituting these values into the formula above, we get

NEW AAPB = £120,000 - 
$$[(30 - 29) \times £41,158.33]$$
  
= £120,000 -  $[1 \times £41,158.33]$ 



$$=$$
 £120,000  $-$  £41,158.33  $=$  £78,841.67

From 3.12, the new cost of one year's accrual is:

$$1yr_C = \{ [F_p + (0.5 \times F_{sur})] \times PAY \div 30 \times [1 + (TPS - 30) \times F_{EP}] \} \times [1 + (20 \times F_{EP})]$$

 $F_p = 21.01$  (from above)

 $F_{sur} = 2.88$  (from above)

PAY = £55,000 (from above)

 $F_{EP} = 0.021$  (from **Table TVIN\_87M**)

TPS = 30 (under 3.11 we now assume that the member has TPS of 30 years)

Substituting these into the formula above, we get

$$1 \text{yr}_{\text{C}} = \{ [21.01 + (0.5 \times 2.88)] \times £55,000 \div 30 \times [1 + (30 - 30) \times 0.021] \} \times [1 + (20 \times 0.021)]$$

$$= \{ [21.01 + 1.44] \times £55,000 \div 30 \times [1 + 0 \times 0.021] \} \times [1 + 0.42]$$

$$= \{ 22.45 \times £55,000 \div 30 \times 1 \} \times 1.42$$

$$= £58,444.83$$

From 3.13, NEW AAPB is sufficient to purchase a service credit of:

#### New AAPB ÷ 1yrc

From above we have

New AAPB = £78,841.67

 $1yr_c = £58,444.83$ 

Substituting these into the formula above, we get

Additional service credit

- =£78,841.67  $\div$ £58,444.83
- = 1.349 years
- = 1 year and 128 days

Therefore, the total service credit awarded is **2 years and 128 days** (1 year from paragraph 3.10 and 1 year 128 days from paragraph 3.13).



# Service credit in respect of section 9(2B) rights

The transfer value in respect of section 9(2B) rights is zero and so there is no service credit in respect of section 9(2B) rights.



#### Example 5: Member under age 55, TPS greater than 30 years

The following information is needed for this calculation:

A.	Member date of birth	23 July 1966
В.	Relevant date	23 July 2020
C.	Member age	54 years
D.	Gender	Female
E.	Annual rate of Pensionable Pay in 1987 scheme	£75,000
F.	Transfer Value from previous scheme	£85,000
G.	TV in respect of section 9(2B) rights	£0
Н.	Reckonable service	30 years

#### **Calculation of AAPB**

From 3.1, the amount available for purchase of benefits (AAPB) is:

#### AAPB = TV

Therefore AAPB = £85,000 (from F. above)

#### **Calculation of TPS**

Past Service = 30 years (from H. above)

Potential Future Service = 55 years - 54 years = 1 years

TPS = Past Service + Potential Future Service = 31 years

TPS is greater than 30 years and so the service credit is calculated in accordance with paragraphs 3.12 to 3.13.

#### Calculation of TPS the value of one year's accrual

From 3.12, the cost of one year's accrual is:

$$1yr_C = \{ [F_p + (0.5 \times F_{sur})] \times PAY \div 30 \times [1 + (TPS - 30) \times F_{EP}] \} \times [1 + (20 \times F_{EP})]$$

 $F_p = 21.01$  (from **Table TVIN\_87F**)

 $F_{sur} = 2.88 \text{ (from Table TVIN_87F)}$ 

PAY = £75,000 (from E. above)

TPS = 31 (from above)

 $F_{EP} = 0.021$  (from Table TVIN\_87F)



Substituting these values into the formula above, we get

$$1 \text{yr}_{\text{C}} = \{ [21.01 + (0.5 \times 2.88)] \times £75,000 \div 30 \times [1 + (31 - 30) \times 0.021] \} \times [1 + (20 \times 0.021)]$$

$$= \{ [21.01 + 1.44] \times £75,000 \div 30 \times [1 + 1 \times 0.021] \} \times [1 + 0.42]$$

$$= \{ 22.45 \times £75,000 \div 30 \times [1 + 0.021] \} \times 1.42$$

$$= \{ 22.45 \times £75,000 \div 30 \times 1.021 \} \times 1.42$$

$$= £81,371.15$$

#### Calculation of service credit

From 3.13, AAPB is sufficient to purchase a service credit of:

#### AAPB ÷ 1yrc

From above we have

AAPB = £85,000

 $1yr_C = £81,371.15$ 

Substituting these values into the formula above, we get

Potential service credit

- =£85,000  $\div$ £81,371.15
- = 1.044 years
- = 1 year 17 days (rounding up to the nearest day)

The service credit awarded is 1 year 17 days.

#### Service credit in respect of section 9(2B) rights

The transfer value in respect of section 9(2B) rights is zero and so there is no service credit in respect of section 9(2B) rights.



#### Example 6: Member above age 55, SER less than 20 years

The following information is needed for this calculation:

A.	Member date of birth	2 January 1964
В.	Relevant date	2 January 2021
C.	Member age	57 years, 0 days
D.	Gender	Male
E.	Annual rate of Pensionable Pay in 1987 scheme	£75,000
F.	Transfer Value from previous scheme	£255,000
G.	TV in respect of section 9(2B) rights	£0
Н.	Reckonable service	9 years

#### **Calculation of AAPB**

From 4.1, the amount available for purchase of benefits (AAPB) is:

#### AAPB = TV

Therefore, AAPB = £255,000 (from F. above)

Service is less than 20 years and so the service credit is calculated in accordance with paragraphs 4.4 to 4.6.

#### Calculation of the value of one year's accrual

From 4.4, the cost of one year's accrual is:

$$1yr_A = [F_p + (0.5 \times F_{sur})] \times PAY \div 60$$

 $F_p = 19.61$  (from **Table TVIN\_87M**)

 $F_{sur} = 2.81$  (from **Table TVIN\_87M**)

PAY = £75,000(from E. above)

Substituting these values into the formula above, we get

$$1yr_A = [19.61 + (0.5 \times 2.81)] \times £75,000 \div 60$$
$$= [19.61 + 1.405] \times £75,000 \div 60$$
$$= 22.02 \times £75,000 \div 60$$
$$= £27,525.00$$



#### Calculation of service credit

From 4.5, AAPB is sufficient to purchase a service credit of:

#### AAPB ÷ 1yr<sub>A</sub>

From above we have

AAPB = £255,000

 $1yr_A = £27,525.00$ 

Substituting these values into the formula above, we get

Potential service credit

- =£255,000  $\div$ £27,525
- = 9.264 years
- = 9 years 97 days (rounding up to the nearest day)

From 4.6, the maximum service credit that can be purchased at this cost is 20 years less SER, i.e. 11 years 0 days (20 years less 9 years).

The potential service credit is less than this so the service credit awarded is **9 years 97 days**.

#### Service credit in respect of section 9(2B) rights

The transfer value in respect of section 9(2B) rights is zero and so there is no service credit in respect of section 9(2B) rights.



# Example 7: Member above age 55, SER less than 20 years (service credit exceeds the difference between TPS and 20 years)

The following information is needed for this calculation:

Α.	Member date of birth	20 April 1965
В.	Relevant date	20 October 2020
C.	Member age	55 years, 183 days
D.	Gender	Male
E.	Annual rate of Pensionable Pay in 1987 scheme	£50,000
F.	Transfer Value from previous scheme	£275,000
G.	TV in respect of section 9(2B) rights	n/a
Н.	Reckonable service	15 years 0 days

#### **Calculation of AAPB**

From 4.1, the amount available for purchase of benefits (AAPB) is:

#### AAPB = TV

Therefore, AAPB = £275,000 (from F. above)

Service is less than 20 years and so the service credit is calculated in accordance with paragraphs 4.4 to 4.6.

#### Calculation of the value of one year's accrual

From 4.4, the cost of one year's accrual is:

$$1yr_A = [F_p + (0.5 \times F_{sur})] \times PAY \div 60$$

 $F_p = 20.41$  (from **Table TVIN\_87M**)

 $F_{sur} = 2.84$  (from **Table TVIN\_87M**)

PAY = £50,000 (from E. above)

Substituting these values into the formula above, we get

$$1yr_A = [20.41 + (0.5 \times 2.84)] \times £50,000 \div 60$$
$$= [20.41 + 1.42] \times £50,000 \div 60$$
$$= 21.83 \times £50,000 \div 60$$
$$= £18,191.67$$



#### Calculation of service credit

From 4.5, AAPB is sufficient to purchase a service credit of:

AAPB ÷ 1yr<sub>A</sub>

From above we have

AAPB = £275,000

 $1yr_A = £18,191.67$ 

Substituting these values into the formula above, we get

Potential service credit

- =£275,000  $\div$ £18,191.67
- = 15.1168 years
- = 15 years 43 days (rounding up to the nearest day)

From 4.6, the maximum service credit that can be purchased at this cost is 20 years less Service, i.e. 5 years 0 days (20 years less 15 years 0 days).

The potential service credit is greater than the maximum that can be purchased under paragraph 4.6. Therefore, the maximum service credit (5 years) is purchased under 4.6, with the balance of the AAPB being used to purchase further service under paragraphs 4.7 to 4.9 (assuming TPS of 20 years).

From 4.7, the new amount available for the purchase of benefits under section 0 is:

#### NEW AAPB = AAPB - $[(20 - Service) \times 1yr_A]$

From above we have

AAPB = £275,000

Service = 15 years

 $1yr_A = £18,191.67$ 

Substituting these values into the formula above, we get

NEW AAPB = £275,000 -  $[(20 - 15) \times £18,191.67]$ 

=£275,000 - [5 x £18,191.67]

=£275,000 -£90,958.35

=£184,041.65



From 4.8, the new cost of one year's accrual is:

$$1yr_B = [F_P + (0.5 \times F_{SUR})] \times PAY \div 30$$

 $F_p = 20.41$  (from above)

 $F_{sur} = 2.84$  (from above)

PAY = £50,000 (from above)

Substituting these into the formula above, we get

$$1yr_B = [20.41 + (0.5 \times 2.84)] \times £50,000 \div 30$$

 $= [20.41 + 1.42] \times £50,000 \div 30$ 

 $= 21.83 \times £50,000 \div 30$ 

=£36,383.33

From 4.9, NEW AAPB is sufficient to purchase a service credit of:

#### New AAPB ÷ 1yr<sub>B</sub>

From above we have

New AAPB = £184,041.65

 $1yr_B = £36,383.33$ 

Substituting these into the formula above, we get

Additional service credit

- =£184,041.65  $\div$ £36,383.33
- = 5.0584 years
- = 5 years and 22 days

Therefore, the total service credit awarded is **10 years and 55 days** (5 years from paragraphs 4.4 to 4.6 and 5 years 22 days from paragraphs 4.7 to 4.9).

#### Service credit in respect of section 9(2B) rights

The transfer value in respect of section 9(2B) rights is zero and so there is no service credit in respect of section 9(2B) rights.



#### Example 8: Member above age 55, SER greater than 20 years

The following information is needed for this calculation:

Member date of birth19 February 1963Relevant date19 February 2021Member age58 years, 0 daysGenderMale

Annual rate of Pensionable Pay in 1987 scheme £125,000
Transfer Value from previous scheme £10,000
TV in respect of section 9(2B) rights £0

Reckonable service 21 years 0 days

#### **Calculation of AAPB**

From 4.1, the amount available for purchase of benefits (AAPB) is:

#### AAPB = TV

Therefore, AAPB = £10,000 (from F. above)

Service is greater than 20 years and so the service credit is calculated in accordance with paragraphs 4.8 to 4.9.

#### Calculation of the value of one year's accrual

From 4.8, the cost of one year's accrual is:

$$1yr_B = [F_p + (0.5 \times F_{sur})] \times PAY \div 30$$

 $F_p = 19.15$  (from **Table TVIN\_87M**)

 $F_{sur} = 2.76$  (from **Table TVIN\_87M**)

PAY = £125,000(from E. above)

Substituting these values into the formula above, we get

$$1yr_B = [19.15 + (0.5 \times 2.76)] \times £125,000 \div 30$$

 $= [19.15 + 1.38] \times £125,000 \div 30$ 

 $= 20.53 \times £125,000 \div 30$ 

=£85,541.67



#### Calculation of service credit

From 4.9, AAPB purchases a service credit of:

AAPB ÷ 1yr<sub>B</sub>

From above we have

AAPB = £10,000.00

 $1yr_B = £85,541.67$ 

Substituting these values into the formula above, we get

Service credit

- =£10,000.00  $\div$ £81,187.50
- = 0.1169 years
- = 0 years 43 days (rounding up to the nearest day)

Therefore the total service credit awarded is 0 years and 43 days.

#### Service credit in respect of section 9(2B) rights

The transfer value in respect of section 9(2B) rights is zero and so there is no service credit in respect of section 9(2B) rights.



# **Appendix A: Factors**

Table TVIN\_87M (Table 222 in consolidated factors spreadsheet) - Factors for non-Club incoming transfers – 1987 Scheme, male

Age last birthday at relevant date	Gross Pension of £1 per annum	Survivor's Pension of £1 per annum	Adjustment for Early Payment
30	32.16	4.21	0.019
31	30.99	4.07	0.019
32	29.92	3.95	0.019
33	28.97	3.83	0.019
34	28.13	3.74	0.019
35	27.44	3.66	0.019
36	26.73	3.58	0.019
37	26.02	3.50	0.019
38	25.42	3.43	0.019
39	24.91	3.37	0.019
40	24.57	3.34	0.019
41	24.34	3.32	0.019
42	24.08	3.29	0.019
43	23.79	3.26	0.019
44	23.57	3.24	0.019
45	23.44	3.22	0.019
46	23.32	3.21	0.019
47	23.16	3.20	0.019
48	22.92	3.15	0.019
49	22.59	3.11	0.020
50	22.27	3.06	0.020
51	21.99	3.02	0.020
52	21.71	2.97	0.020
53	21.44	2.92	0.020
54	21.01	2.88	0.020
55	20.41	2.84	
56	20.02	2.83	
57	19.61	2.81	
58	19.15	2.76	
59	18.82	2.72	
60	18.38	2.70	
61	17.89	2.72	
62	17.38	2.75	
63	16.87	2.77	
64	16.35	2.70	

#### Notes:

<sup>1.</sup> As noted in paragraph 1.10, the GMP adjustment factor has been removed from the calculation methodology



# Table TVIN\_87F (Table 223 in consolidated factors spreadsheet) - Factors for non-Club incoming transfers – 1987 Scheme, female

Age last birthday at relevant date	Gross Pension of £1 per annum	Survivor's Pension of £1 per annum	Adjustment for Early Payment
30	32.16	4.21	0.018
31	30.99	4.07	0.018
32	29.92	3.95	0.018
33	28.97	3.83	0.018
34	28.13	3.74	0.018
35	27.44	3.66	0.018
36	26.73	3.58	0.018
37	26.02	3.50	0.018
38	25.42	3.43	0.018
39	24.91	3.37	0.018
40	24.57	3.34	0.018
41	24.34	3.32	0.018
42	24.08	3.29	0.018
43	23.79	3.26	0.018
44	23.57	3.24	0.018
45	23.44	3.22	0.019
46	23.32	3.21	0.019
47	23.16	3.20	0.019
48	22.92	3.15	0.019
49	22.59	3.11	0.019
50	22.27	3.06	0.020
51	21.99	3.02	0.020
52	21.71	2.97	0.020
53	21.44	2.92	0.020
54	21.01	2.88	0.021
55	20.41	2.84	
56	20.02	2.83	
57	19.61	2.81	
58	19.15	2.76	
59	18.82	2.72	
60	18.38	2.70	
61	17.89	2.72	
62	17.38	2.75	
63	16.87	2.77	
64	16.35	2.70	

#### Notes:

1. As noted in paragraph 1.10, the GMP adjustment factor has been removed from the calculation methodology



# **Appendix B: Assumptions underlying factors**

#### Financial assumptions

Nominal discount rate	4.448% pa
CPI	2.00% pa
RPI	3.15% pa
Long term earnings growth	4.20% pa
Real discount rate (in excess of CPI)	2.40% pa
Real discount rate (in excess of RPI)	1.25% pa
Real discount rate (in excess of general earnings growth)	0.24% pa

**Mortality assumptions** 

Members in normal health 117% of S2NMA (males) and 117% of S2NFA

(females)

Members in ill health 100% of S2IMA (males) and 100% of S2IFA

(females)

Dependants 116% of S2NMA (males) and 116% S2NFA

(females)

Future mortality improvement Based on ONS principal UK population

projections 2016

Year of Use 2020

Other assumptions

Proportion of male members for unisex 70% for members and 30% for dependants

factors

age difference between member Males assumed 3 years older than female

Age difference between member Males assumed 3 years older than female and partner partners and females assumed to be 3 years

younger than partner

As assumed for the 2016 valuation

Family statistics 80% (male), 75% (female) of members

assumed married at retirement (85% (male),

80% (female) assumed partnered)

Allowance for commutation Nil

Expense loading Nil

Salary scale for transfers-in In line with long term assumptions proposed

for the 2016 valuation

In-service decrements (where applicable)

In line with 2016 valuation proposals



## **Appendix C: Limitations**

- C.1 This guidance should not be used for any purpose other than those set out in this guidance.
- C.2 The factors contained in this guidance are subject to regular review. Scheme managers and administrators need to ensure that they are using the latest factors, as relevant, when processing cases.
- C.3 Advice provided by GAD must be taken in context and is intended to be considered in its entirety. Individual sections, if considered in isolation, may be misleading, and conclusions reached by a review of some sections on their own may be incorrect. GAD does not accept responsibility for advice that is altered or used selectively. Clarification should be sought if there is any doubt about the intention or scope of advice provided by GAD.
- C.4 This guidance only covers the actuarial principles around the calculation and application of non-club incoming transfer factors. Any legal advice in this area should be sought from an appropriately qualified person or source.
- C.5 Scheme managers and administrators should satisfy themselves that non-club incoming transfer calculations and benefit awards comply with all legislative requirements including, but not limited to, tax and contracting-out requirements.
- C.6 This guidance is based on the Regulations in force at the time of writing. It is possible that future changes to the Regulations might create inconsistencies between this guidance and the Regulations. If users of this guidance believe there to be any such inconsistencies, they should bring this to the attention of SPPA and GAD. Under no circumstances should this guidance take precedence over the Regulations. Administrators should ensure that they comply with all relevant Regulations.