Government Actuary's Department

The Firefighters' Pension Scheme (England) 2015

Purchase of Additional Pension – Factors and Guidance

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Authors: James Pepler FIA
Mark Shaw FIA

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1 Introduction

1.1 The Secretary of State, as responsible authority under Schedule 2 paragraph 6 of the Public Service Pensions Act 2013 ('the responsible authority'), is required under the Firefighters' Pension Scheme (England) Regulations 2014 ('the 2015 Scheme Regulations') (SI 2014/2848) to issue actuarial guidance on payments for added pension (Schedule 1 of the 2015 Scheme Regulations).

1.2 The scheme manager is required to determine the amounts to be credited to the Added Pension account based on the actuarial guidance under Schedule 1 of the 2015 Regulations.

1.3 The remainder of this introduction contains:

> Details of the implementation and future review of this guidance

> Statements about the use of this note and third party reliance

1.4 In the remainder of this note:

> Section 2 describes the process and sets out the formulae

> Section 3 contains examples

> Section 4 sets out the factors to be used

> Appendix A sets out some important limitations

1.5 The Government Actuary's Department (GAD) seeks to achieve a high standard in all our work. Please go to our website[1] for details of the standards we apply.

Implementation and Review

1.6 The responsible authority is required to consult the scheme actuary before issuing actuarial guidance under the 2015 Scheme Regulations.

1.7 As part of this consultation the responsible authority has asked GAD, as scheme actuary, to recommend actuarial guidance in respect of the regulations detailed below. This document forms part of GAD's recommendation for the actuarial guidance required by these regulations.

1.8 This note has effect only when this guidance is issued by the responsible authority to scheme managers as defined in Regulation 4 of the 2015 Scheme Regulations, and is subject to the implementation instructions provided at that time.

1.9 This note relates to payments for added pension in accordance with Schedule 1 of the 2015 Scheme Regulations. It sets out the general method for determining the amount of added pension to be credited to a member's added pension account.

1.10 This guidance relates only to benefits accrued under the 2015 Scheme Regulations. Some firefighters may also have benefits under the 1992 Scheme or the NFPS which should be dealt with separately according to relevant scheme guidance.

[1] https://www.gov.uk/government/organisations/government-actuarys-department/about/terms-of-reference

1.11 This guidance has been written for pension administrators and assumes some knowledge of general pension terminology, and some familiarity with retirement calculations for the Firefighters' Pension Scheme 2015 (England). Any questions concerning the application of the guidance should, in the first instance, be referred to the Firefighters' Pensions teams at DCLG.

1.12 The factors contained in this note will be reviewed periodically. This will depend on external circumstances, for example when changes in the actuarial assumptions adopted for other scheme factors take place; or following each cycle of future valuations of the Firefighters' Pension Scheme 2015 (England).

1.13 Scheme managers and administrators should ensure that they use the latest factors in circulation.

Use of this note

1.14 This note has been prepared for the responsible authority and can be relied upon by them. We are content for this note to be released to third parties, provided that:

- it is released in full;
- the advice is not quoted selectively or partially; and
- GAD is identified as the source of the note.

1.15 Third parties may wish to seek their own actuarial advice where appropriate. GAD has no liability to any person or third party for any act or omission taken, either in whole or in part, on the basis of this note.

Third party reliance

1.16 When issued by the responsible authority in accordance with paragraph 1.7 above, this note should be used as the actuarial guidance required under the regulations cited. Other than for this purpose, no person or third party is entitled to place any reliance on the contents of this note, except to any extent explicitly stated herein.

2 Instructions

2.1 Regulation 40 requires the "opening balance" of the added pension account at the start of a Scheme Year to include the added pension purchased throughout the previous year in accordance with paragraphs 11 or 14 of Schedule 1 to the 2015 Scheme Regulations.

2.2 A Scheme Year is 1 April to 31 March.

2.3 Added pension can be purchased either by a lump sum or by regular monthly contributions during a particular scheme year. Paragraph 2 of Schedule 1 to the 2015 Regulations sets an overall limit on the Added Pension account (£6,500 for 2015/16). This guidance does not set out how the overall limit should be applied in practice and this is something that the scheme manager will separately have to ensure is not breached.

2.4 We have provided factors up to and including age 59. Please refer to GAD if further factors are required should added pension payments continue after normal pension age.

Lump sum payments

2.5 The factors provided in Section 4 are the factors to be used to convert lump sum contributions into Added Pension in order to meet the requirements of Regulation 40 as set out above.

2.6 The factors are unisex and are shown per £1 pa of added pension purchased.

2.7 The factors should be selected with reference to the member's:

> age last birthday at the calculation date

> for the revaluation factor, the number of complete scheme years falling between the date of payment and a member's normal pension age

2.8 If a member purchases added pension by a lump sum payment, then the amount to be credited under paragraph 14(3) of Schedule 1 of the 2015 Scheme Regulations is either that set out on any statement of amount of added pension given to the member following their election to buy added pension by lump sum, or the amount determined as at the date of receipt of payment by the member if this occurs more than 1 month after the date of the statement.

2.9 To purchase a specific increase to a member's Added Pension account for the relevant Scheme Year, then the lump sum payment (LS) required is determined as follows:

$$LS = P \times F_x \times F_y^{Reval}$$

Where:

P	=	amount of added pension purchased
x	=	member's age last birthday on the calculation date
F_x	=	lump sum factor at age x from Table 1 – Lump Sum factors
F_y^{Reval}	=	relevant revaluation factor for a member with y complete scheme years between calculation date and up to and including NPA from Table 2 – Added Pension Revaluation factors

Where the calculation date is either the date of the statement of amount of added pension to be purchased or the date of receipt of payment if this occurs more than 1 month after the date of the statement.

2.10 The amount of added pension, P, added to a member's Added Pension account for the relevant Scheme Year in respect of a lump sum payment received is determined as follows:

$$P = \frac{LS}{F_x \times F_y^{\mathrm{Reval}}}$$

Where:

LS	=	amount of Lump Sum payment
x	=	member's age last birthday on the calculation date
F_x	=	lump sum factor at age x from Table 1 – Lump Sum factors
F_y^{Reval}	=	relevant revaluation factor for a member with y complete scheme years between calculation date and up to and including NPA from Table 2 – Added Pension Revaluation factors

Where the calculation date is either the date of the statement of amount of added pension to be purchased or the date of receipt of payment if this occurs more than 1 month after the date of the statement.

Periodical Payments

2.11 If a member purchases added pension by periodical payments, the amount of pension, P, added to a member's added pension account at the end of the Scheme Year is determined in a similar way to that described in 2.10 above except that:

- an adjustment is applied to the total amount of periodic contributions over the Scheme Year in order to "accumulate" contributions paid over the Scheme Year to the end of the Scheme Year;

- The revaluation factor is based on the number of complete Scheme Years falling between the closing date of the Scheme Year during which the contributions are paid and a member's normal pension age; and
- the formula to be used for the purpose of this paragraph is as follows:

$$P = \frac{C \times Adj}{F_x \times F_y^{Reval}}$$

Where:

C	=	total amount of periodic contributions over Scheme Year
Adj	=	1.025 (equivalent to an addition of half a year's interest on contributions payable throughout the Scheme Year)
x	=	member's age last birthday at the end of the Scheme Year
F_x	=	regular contribution factor at age x from Table 1 – Lump Sum factors
F_y^{Reval}	=	relevant revaluation factor for a member with y complete scheme years up to and including NPA from Table 2 – Added Pension Revaluation factors

2.12 The amount of level monthly payments, MP, required to purchase a given amount of added pension if paid over a single full Scheme Year is determined as follows:

$$MP = \frac{P \times F_x \times F_y^{Reval}}{12 \times Adj}$$

Where:

P	=	amount of added pension the member wishes to buy
Adj	=	1.025 (equivalent to an addition of half a year's interest on contributions payable throughout the Scheme Year)
x	=	member's age last birthday at the end of the Scheme Year
F_x	=	lump sum contribution factor at age x from Table 1 – Lump Sum factors
F_y^{Reval}	=	relevant revaluation factor for a member with y complete Scheme Years up to and including NPA from Table 2 – Added Pension Revaluation factors

2.13 If periodical payments continue into a further Scheme Year, the formulae in 2.11 and 2.12 would need to be recalculated for the payments made in this further Scheme Year with new factors appropriate for the member's situation in that year.

3 Example calculations

Example 1 – Lump sum election – Added Pension for a given lump sum payment

- Date of Birth — 15/10/1960
- Amount of lump sum payment — £1,000
- Calculation date — 01/09/2015
- Age (last birthday) of member on calculation date — 54 years
- Number of complete Scheme Years between calculation date and NPA — 4
- Lump Sum factor F_x — 15.07
- Revaluation factor F_y^{Reval} — 1.08
- Added pension purchased immediately on payment, P $= \dfrac{LS}{F_x \times F_y^{\mathrm{Reval}}}$

(See paragraph 2.10) $= \dfrac{£1{,}000}{15.07 \times 1.08}$

= £ 61.44 pa

Example 2 – Lump sum election – Lump sum payment required to purchase Added Pension

- Date of Birth 15/10/1960
- Amount of AP intended to purchase £200 pa
- Calculation date 01/09/2015
- Age (last birthday) of member on calculation date 54 years
- Number of complete 1 Aprils between calculation date up to NPA 4
- Lump Sum factor F_x^{LS} 15.07
- Revaluation factor F_y^{Reval} 1.08
- Lump Sum, *LS*, payment required to immediately purchase added pension

  (See paragraph 2.9) $LS = P \times F_x \times F_y^{\mathrm{Reval}}$

  = £200 x 15.07 x 1.08

  = £3,255.12

Example 3 – Periodic payments – Added Pension purchased for a percentage of salary in the scheme year 2015-16

> Date of Birth	01/04/1980
> Pensionable Earnings (PE)	£30,000 pa
> Amount of monthly contribution	5% of PE
> Start of periodic payment	01/04/2015
> Age (last birthday) of member at the end of the Scheme Year	35 years
> Number of complete subsequent Scheme Years up to NPA	24
> Expected monthly contributions	(£30,000 ✕ 5%) / 12 = £125 pm
> Expected amount of periodic contributions over scheme year 2015-16, C	£1,500
> Regular Contribution factor F_x	6.32
> Revaluation factor $F_y^{\mathrm{Re}\,val}$	1.61

> Added pension, P, expected to be purchased by end of scheme year

(See paragraph 2.11)

$$P = \frac{1.025 \times C}{F_x \times F_y^{\mathrm{Re}\,val}}$$

$$= \frac{1.025 \times 1{,}500}{6.32 \times 1.61}$$

= £ 151.10 pa

Accounting for a promotion part way through the year

> Salary Increase	10%
> Date of Salary Increase	01/01/2016
> Amount of monthly contribution in final three months	(£30,000 ✕ 110% ✕ 5%)/12 = £137.50 pm
> Total amount of periodic contributions over scheme year 2015-16, C	£125 ✕ 9 + £137.50 ✕ 3 = £1,537.50
> Regular Contribution factor F_x	6.32

- Revaluation factor $F_y^{\mathrm{Re}\,val}$ 1.61

- added pension purchased, P $= \dfrac{1.025 \times C}{F_x \times F_y^{\mathrm{Re}\,val}}$

  (See paragraph 2.11) $= \dfrac{1.025 \times 1{,}537.50}{6.32 \times 1.61}$

  = £ 154.88 pa

Example 4 – Periodic payments – Added pension purchased by level payments from 2017-18

> Date of Birth	18/06/1975
> Amount of monthly contribution	£100 pm
> Start date of periodic payments	01/04/2017
> Age (last birthday) at the end of the Scheme Year	42 years
> Number of subsequent complete Scheme Years up to NPA	17

Accounting for the member leaving the scheme before completing the payments

> Date of leaving scheme	31/01/2018
> Number of months in which member has made contributions	10
> Total amount of periodic contributions over scheme year 2017-18, C	£100 $\times$10 = £1000
> Regular Contribution factor F_x	8.73
> Revaluation factor F_y^{Reval}	1.40

>

> Added pension purchased, $P = \dfrac{1.025 \times C}{F_x \times F_y^{Reval}}$

(See paragraph 2.11) $= \dfrac{1.025 \times £1{,}000}{8.73 \times 1.40}$

= £83.87 pa

Example 5 – Periodic payments – Monthly payments required to purchase added pension during 2017-18

> Date of Birth	18/06/1975
> Amount of added pension desired to be purchased over the scheme year	£200 pa
> Start date of periodic payments	01/04/2017
> Age (last birthday) at the end of the Scheme Year	42 years
> Number of subsequent complete Scheme Years up to NPA	17
> Regular Contribution factor F_x	8.73
> Revaluation factor F_y^{Reval}	1.40

> Monthly Payment, *MP*, required from periodical payments over the scheme year

(See paragraph 2.12)

$$MP = \frac{P \times F_x \times F_y^{Reval}}{12 \times 1.025}$$

$$= \frac{200 \times 8.73 \times 1.40}{12 \times 1.025}$$

= £198.73 pm

4 Tables of factors

Table 1 – Added Pension Lump Sum factors

Age Last Birthday	Lump Sum factor
18	2.85
19	2.98
20	3.13
21	3.28
22	3.44
23	3.60
24	3.78
25	3.96
26	4.15
27	4.35
28	4.56
29	4.78
30	5.01
31	5.25
32	5.50
33	5.76
34	6.03
35	6.32
36	6.62
37	6.94
38	7.26
39	7.61
40	7.97
41	8.34
42	8.73
43	9.14
44	9.57
45	10.02
46	10.48
47	10.97
48	11.48
49	12.01
50	12.57
51	13.15
52	13.76
53	14.40
54	15.07
55	15.77
56	16.52
57	17.31
58	18.15
59	19.05

Table 2 - Added Pension Revaluation factors

Number of Complete Scheme Years before NRA	Revaluation Factor
0	1.00
1	1.02
2	1.04
3	1.06
4	1.08
5	1.10
6	1.13
7	1.15
8	1.17
9	1.20
10	1.22
11	1.24
12	1.27
13	1.29
14	1.32
15	1.35
16	1.37
17	1.40
18	1.43
19	1.46
20	1.49
21	1.52
22	1.55
23	1.58
24	1.61
25	1.64
26	1.67
27	1.71
28	1.74
29	1.78
30	1.81
31	1.85
32	1.88
33	1.92
34	1.96
35	2.00
36	2.04
37	2.08
38	2.12
39	2.16
40	2.21

Appendix A – Limitations

A.1 This note should not be used for any purpose other than as the actuarial guidance required under the regulations cited.

A.2 The factors contained in this note are subject to regular review. Scheme managers and administrators need to ensure that they are using the latest factors, as relevant, when processing cases.

A.3 This note should be considered in its entirety as individual sections, if considered in isolation, may be misleading, and conclusions reached by a review of some sections on their own may be incorrect.

A.4 This note only covers the actuarial principles of calculations required under the regulations cited. Any legal advice in this area should be sought from an appropriately qualified person or source.

A.5 Scheme managers and administrators should satisfy themselves that calculations and benefit awards comply with all legislative requirements including, but not limited to, tax and contracting out requirements.

A.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 the responsible authority. In no circumstances should this guidance take precedence over the Regulations. Scheme managers and administrators should ensure that they comply with all relevant Regulations.