Government Actuary's Department

Principal Civil Service Pension Scheme (PCSPS)

Factors for Added Pension for classic, classic plus, premium and nuvos members

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1 Introduction

1.1 This note is addressed to The Pension Scheme Executive (TPSE) of the Cabinet Office as scheme manager of the Principal Civil Service Pension Scheme (PCSPS or 'scheme').

1.2 The purpose of the note is to provide TPSE with specific factors, and accompanying guidance to demonstrate how these factors should be applied to calculate the amount of added pension (AP) to be awarded when a PCSPS member, their employer or third party opts to make a lump sum payment or a member makes regular periodic payments. These tables apply to members in the **classic**, **classic plus**, **premium** or **nuvos** sections of the Principal Civil Service Pension Scheme. Factors and added pension guidance for the **alpha** scheme (or Civil Service and Others Pension Scheme) has been provided separately to TPSE.

1.3 Members, their employer or a third party may make payments for extra pension in accordance with section 14 of the 1972 part, section C1 of the 2002 part and sections D.4, D.5, D.6, D.7 and D.8 of the 2007 part of the scheme Rules.

1.4 The factors provided in this note have been prepared in accordance with our note *Principal Civil Service Pension Scheme: Advice on actuarial calculation factors* dated 18 November 2014, as subsequently amended.

1.5 We understand the added pension factors are the responsibility of the Minister. We recommended that the new factors be adopted as soon as possible. Cabinet Office have confirmed the revised PCSPS factors have been implemented from 1 April 2015 and are aware of any risks in selecting this implementation date.

1.6 We do not envisage any special cases not covered by this note. However, if any do occur they should be referred to GAD.

1.7 Paragraphs 14.2(7), 14.7 and 14.3(2) of the 1972 part, C1.1(7) C1.2(2) and C1.6 of the 2002 part, and D.4(7)(8), D.5(2)(8) and D.8(6) of the 2007 part of the regulations provide for a restriction on the minimum and maximum amount of added pension that can be purchased by a member. TPSE must check against the current minimum and maximum limits before allowing the member to exercise the option to buy added pension.

1.8 This guidance does not include age addition factors for increases to added pension for members who have reached pension age. These are set out in the *Principal Civil Service Pension Scheme: Early and late retirement factors* dated 5 March 2015, as subsequently amended.

1.9 Similarly, this guidance does not include factors for the buyout of actuarial reduction to added pension. These are set out in the *Principal Service Pension Scheme: Factors for actuarial reduction buy out (ARBO)* dated 19 March 2015, as subsequently amended.

1.10 Some members may have a normal pension age between 60 and 65 years - ie, their 'personal pension age' (PPA). We are currently discussing this issue with Cabinet Office and a separate PPA guidance note may be issued.

1.11 Please contact Brian Allan (020 7221 2629) or Cody Shek (020 7211 2684) for further information on this note.

2 Instructions

2.1 Added pension can be purchased either by a lump sum or by regular annual contributions.

Lump Sum election

2.2 The factors are shown per £1 pa of added pension purchased.

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

- age in complete years,
- for a nuvos member, whether the pension is for the member only, or for all beneficiaries,
- sex, if the member is a nuvos member who is buying member only benefits,
- section of the scheme (classic, classic plus, premium and nuvos) and
- for the revaluation factor, the number of 1 Aprils falling between the calculation date and the NPA

2.4 If a member purchases added pension by a lump sum payment, then the amount credited 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.

2.5 To purchase a specific increase to a member's pension for the relevant scheme year, then the lump sum payment (LS) required is determined as follows:

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

Where:

P	=	amount of added pension purchased
x	=	member's age in complete years on the date of calculation
F_x^{LS}	=	lump sum factor at age x from appropriate table (Appendix A Tables 1-3: P1APLSCL1, P1APLSCP1, or P1APLSNU1)
F_y^{Reval}	=	relevant revaluation factor for a member with y 1 Aprils between calculation date and up to and including NPA (Appendix A Table 7: P1APREVAL1)

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.

2.6 The amount of added pension, P, added to a member's pension for the relevant scheme year in respect of a lump sum payment received is determined as follows:

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

Where:

LS	=	amount of Lump Sum payment
x	=	member's age in complete years on the date of calculation
F_x^{LS}	=	lump sum factor at age x from appropriate table (Appendix A Tables 1-3: P1APLSCL1, P1APLSCP1, P1APLSNU1)
F_y^{Reval}	=	relevant revaluation factor for a member with y 1 Aprils between calculation date and up to and including NPA (Appendix A Table 7: P1APREVAL1)

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.

2.7 A classic member, in addition to their added pension at retirement, is entitled to a lump sum equal to 3 times the added pension at retirement (before commutation, allocation or inverse commutation).

Periodical Payments election

2.8 The factors are shown per £1 pa of added pension purchased.

2.9 A member may buy added pension by opting for a deduction from their pensionable earnings expressed as either a fixed amount or percentage of their pay. Unless the member opts to buy added pension within 3 months of joining the scheme, this will start from beginning of the next scheme year.

2.10 The scheme year runs from 1 April to 31 March.

2.11 Factors should be selected with reference to the member's:

- age in complete years,
- for a nuvos member, whether the pension is for the member only, or for all beneficiaries,
- sex, if the member is a nuvos member who is buying member only benefits,
- section of the scheme (classic, classic plus, premium and nuvos) and
- for the revaluation factor the number of 1 Aprils falling between the calculation date and the NPA

2.12 To calculate the amount of added pension to be awarded for a given scheme year, the total amount of periodic contributions over the scheme year is required.

2.13 The amount of pension added for a scheme year needs to be adjusted to allow for any variations during the year in the level of contributions due to pay awards, members exiting active service or periods of assumed pay, and the commencement of payments falling later than the start of the scheme year (in the case of members starting to buy added pension by periodic payments within 3 months of joining the scheme).

2.14 The amount of added pension, P, added to a member's pension at the end of the period of contributions during that scheme year is determined as follows:

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

Where:

C = total amount of periodic contributions over scheme year

x = member's age in complete years at the start of scheme year or start of the period of payment if later (ie at the calculation date)

F_x^{RC} = regular contribution factor at age x from corresponding table (Appendix A Tables 4-6: P1APPCCL1, P1APPCCP1, or P1APPCNU1)

$F_y^{\mathrm{Re}val}$ = relevant revaluation factor for a member with y 1 Aprils (from the day after the date of commencement of contributions) up to and including NPA (Appendix A Table 7: P1APREVAL1)

2.15 A classic member, in addition to their added pension at retirement, is entitled to a lump sum equal to 3 times the added pension at retirement (before commutation, allocation or inverse commutation).

2.16 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:

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

Where:

P = amount of added pension the member wishes to buy

x = member's age in complete years at the start of the scheme year or start of the period of payment if later

F_x^{RC} = regular contribution factor at age x from corresponding table (Appendix A Tables 4-6: P1APPCCL1, P1APPCCP1, or P1APPCNU1)

F_y^{Reval} = relevant revaluation factor for a member with y 1 Aprils (from the day after the date of commencement of contributions) up to and including NPA (Appendix A Table 7: P1APREVAL1)

2.17 A classic member, in addition to their added pension at retirement, is entitled to a lump sum equal to 3 times the added pension at retirement (before commutation, allocation or inverse commutation).

2.18 The formula in 2.16 should only be used for illustrative purposes and only for cases where level payments are to be made over a complete scheme year. It is not appropriate for cases where a percentage of salary is to be paid to buy added pension.

3 Worked Examples

Example 1 – Lump sum election – Added Pension for self and dependant purchased by a given lump sum payment

> Sex	Male
> Date of Birth	15/10/1960
> Section	Classic
> Normal Pension Age	60 years
> Amount of lump sum payment	£1,000
> Calculation date	01/09/2015
> Age (last birthday) of member on calculation date	54 years
> Number of 1 Aprils between calculation date up to and including NPA	5
> Lump Sum factor F_x^{LS} (from P1APLSCL1)	17.61
> Revaluation factor F_y^{Reval} (from P1APREVAL1)	1.10
> Added pension purchased immediately on payment, P	$= \frac{LS}{F_x^{LS} \times F_y^{Reval}}$ $= \frac{£1{,}000}{17.61 \times 1.10}$ = £51.62 p.a.
> If the pension of the member at retirement was £51.62 p.a. then the member will also receive a lump sum of	3 x £51.62 = £154.86

Example 2 – Lump sum election – Lump sum payment required to purchase Added Pension for self and dependant

> Sex	Male
> Date of Birth	15/10/1960
> Section	Classic Plus
> Normal Pension Age	60 years
> 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 1 Aprils between calculation date up to and including NPA	5
> Lump Sum factor F_x^{LS} (from P1APLSCP1)	15.22
> Revaluation factor F_y^{Reval} (from P1APREVAL1)	1.10

> Lump Sum, *LS*, payment required to immediately purchase added pension

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

= £200 x 15.22 x 1.10

= £3,348.40

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

> Sex	Female
> Date of Birth	01/04/1980
> Section	Premium
> Normal Pension Age	60 years
> Pensionable Earnings (PE)	£48,000 pa
> Amount of monthly contribution	5% of PE
> Start of periodic payment (calculation date)	01/04/2015
> Age of member at the start of scheme year	35 years
> Number of 1 Aprils between calculation date up to and including NPA	25
> Expected monthly contributions	(£48,000 × 5%) / 12 = £200 pm
> Expected amount of periodic contributions over scheme year 2015-16, C	£2,400
> Regular Contribution factor F_x^{RC} (from P1APPCCP1)	6.39
> Revaluation factor $F_y^{\text{Re}val}$ (from P1APREVAL1)	1.64

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

$$P = \frac{C}{F_x^{RC} \times F_y^{\text{Re}val}}$$

$$= \frac{2{,}400}{6.39 \times 1.64}$$

= £ 229.02 p.a.

Accounting for a promotion part way through the year

- Salary Increase — 20%
- Date of Salary Increase — 01/01/2016
- Amount of monthly contribution in final three months — (£48,000 × 120% × 5%)/12 = £240 pm
- Total amount of periodic contributions over scheme year 2015-16, C — £200 × 9 + £240 × 3 = £2,520

- Regular Contribution factor F_x^{RC} (from P1APPCCP1) — 6.39
- Revaluation factor $F_y^{\text{Re}val}$ (from P1APREVAL1) — 1.64
- added pension purchased, P

$$= \frac{C}{F_x^{RC} \times F_y^{\text{Re}val}}$$

$$= \frac{2{,}520}{6.39 \times 1.64}$$

= £ 240.47 p.a.

Therefore the member should be granted an added pension of £240.47 pa at the end of the scheme year.

Example 4 – Periodic payments – Added Pension purchased for self only by level payments from 2017-18

> Sex	Female
> Date of Birth	18/06/1975
> Section	Nuvos
> Normal Pension Age	65 years
> Amount of monthly contribution	£100 pm
> Start date of periodic payments (calculation date)	01/04/2017
> Age of member at start of scheme year	41 years
> Number of 1 Aprils between calculation date up to and including NPA	23

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 ×10 = £1,000
> Regular Contribution factor F_x^{RC} (from P1APPCNU1)	5.92
> Revaluation factor F_y^{Reval} (from P1APREVAL1)	1.58

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

$$= \frac{1{,}000}{5.92 \times 1.58}$$

= £ 106.91 p.a.

Therefore the member should be granted an added pension of £106.91 pa at the date of leaving.

4 Limitations of this guidance

4.1 This note is intended for the use of the Cabinet Office and the scheme administrators for the purposes of demonstrating the application of the factors covered by this guidance only. The information and advice in this note should not be relied upon, or assumed to be appropriate, for any other purpose or by any other person. GAD does not accept any liability to third parties, whether or not GAD has agreed to the disclosure of its advice to the third party.

4.2 The factors contained in this note are subject to regular review. Administrators need to ensure that they are using the latest factors, as relevant, when processing cases.

4.3 Advice provided by GAD must be taken in context and is intended to be read and used as a whole, not in parts. 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.

4.4 This note only covers the actuarial principles around the factors covered in this note. Any legal advice in this area should be sought from an appropriately qualified person or source. In no circumstances should this guidance take precedence over the scheme rules. If users of this guidance believe it to contain any inconsistencies with the scheme rules, they should bring this to the attention of Cabinet Office and GAD.

Appendix A: Factor tables

List of Tables

Table 1: P1APLSCL1 – Added Pension by Lump Sum factors for classic

	Unisex
Age	**Member + spouse**
17	3.02
18	3.17
19	3.33
20	3.49
21	3.67
22	3.85
23	4.04
24	4.23
25	4.44
26	4.66
27	4.89
28	5.13
29	5.38
30	5.64
31	5.92
32	6.21
33	6.51
34	6.83
35	7.16
36	7.51
37	7.87
38	8.25
39	8.65
40	9.07
41	9.51
42	9.97
43	10.45
44	10.96

Table 1: P1APLSCL1 – Added Pension by Lump Sum factors for classic (continued)

	Unisex
Age	Member + spouse
45	11.49
46	12.04
47	12.62
48	13.24
49	13.88
50	14.55
51	15.26
52	16.00
53	16.78
54	17.61
55	18.47
56	19.38
57	20.35
58	21.38
59	22.47
60	22.82
61	22.42
62	22.01
63	21.60
64	21.17
65	20.73
66	20.29
67	19.83
68	19.37
69	18.89
70	18.41
71	17.92
72	17.42
73	16.91
74	16.41
75	15.90

Table 2: P1APLSCP1 –Added Pension by Lump Sum factors for classic plus and premium

	Unisex
Age	**Member + spouse**
17	2.64
18	2.77
19	2.91
20	3.05
21	3.20
22	3.36
23	3.52
24	3.69
25	3.87
26	4.06
27	4.26
28	4.47
29	4.69
30	4.91
31	5.15
32	5.40
33	5.66
34	5.94
35	6.22
36	6.52
37	6.84
38	7.17
39	7.51
40	7.87
41	8.25
42	8.65
43	9.06
44	9.50

Table 2: P1APLSCP1 – Added Pension by Lump Sum factors for classic plus and premium (continued)

	Unisex
Age	Member + spouse
45	9.96
46	10.43
47	10.94
48	11.46
49	12.02
50	12.59
51	13.20
52	13.84
53	14.51
54	15.22
55	15.96
56	16.75
57	17.57
58	18.46
59	19.40
60	19.68
61	19.28
62	18.87
63	18.46
64	18.03
65	17.60
66	17.16
67	16.71
68	16.25
69	15.78
70	15.31
71	14.83
72	14.35
73	13.86
74	13.38
75	12.89

Table 3: P1APLSNU1 – Added Pension by Lump Sum factors for nuvos

	Males	Females	Unisex
Age	Member's pension factor	Member's pension factor	Member + spouse
17	1.73	1.84	1.89
18	1.81	1.93	1.98
19	1.90	2.02	2.08
20	2.00	2.12	2.18
21	2.10	2.23	2.29
22	2.20	2.34	2.40
23	2.31	2.45	2.52
24	2.42	2.57	2.65
25	2.54	2.70	2.78
26	2.66	2.84	2.91
27	2.79	2.97	3.05
28	2.93	3.12	3.20
29	3.07	3.27	3.36
30	3.22	3.43	3.52
31	3.38	3.60	3.70
32	3.54	3.78	3.87
33	3.71	3.96	4.06
34	3.89	4.15	4.26
35	4.08	4.35	4.46
36	4.28	4.56	4.68
37	4.48	4.78	4.90
38	4.70	5.01	5.13
39	4.92	5.25	5.38
40	5.15	5.51	5.63
41	5.40	5.77	5.90
42	5.66	6.04	6.18
43	5.93	6.33	6.48
44	6.21	6.64	6.78

Table 3: P1APLSNU1 – Added Pension by Lump Sum factors for nuvos (continued)

	Males	Females	Unisex
Age	Member's pension factor	Member's pension factor	Member + spouse
45	6.50	6.95	7.10
46	6.81	7.29	7.44
47	7.14	7.63	7.79
48	7.48	8.00	8.16
49	7.83	8.38	8.55
50	8.21	8.78	8.95
51	8.60	9.20	9.38
52	9.01	9.64	9.82
53	9.44	10.10	10.28
54	9.89	10.58	10.77
55	10.37	11.09	11.28
56	10.87	11.62	11.82
57	11.40	12.18	12.39
58	11.97	12.78	12.99
59	12.56	13.40	13.62
60	13.19	14.07	14.28
61	13.86	14.76	14.99
62	14.57	15.50	15.73
63	15.34	16.30	16.53
64	16.15	17.14	17.39
65	16.34	17.36	17.60
66	15.89	16.91	17.16
67	15.42	16.46	16.71
68	14.95	16.00	16.25
69	14.47	15.53	15.78
70	13.99	15.06	15.31
71	13.50	14.58	14.83
72	13.01	14.09	14.35
73	12.52	13.60	13.86
74	12.04	13.11	13.38
75	11.56	12.63	12.89

Table 4: P1APPCCL1 – Added Pension by Periodical Contribution factors for classic

	Unisex
Age	**Member + spouse**
17	3.10
18	3.26
19	3.42
20	3.59
21	3.76
22	3.95
23	4.14
24	4.35
25	4.56
26	4.79
27	5.02
28	5.27
29	5.52
30	5.80
31	6.08
32	6.38
33	6.69
34	7.01
35	7.35
36	7.71
37	8.08
38	8.47
39	8.88
40	9.31
41	9.76
42	10.24
43	10.73
44	11.25

Table 4: P1APPCCL1 – Added Pension by Periodical Contribution factors for classic (continued)

	Unisex
Age	Member + spouse
45	11.80
46	12.37
47	12.97
48	13.59
49	14.25
50	14.95
51	15.67
52	16.44
53	17.24
54	18.08
55	18.97
56	19.91
57	20.90
58	21.96
59	23.08
60	23.44
61	23.03
62	22.61
63	22.18
64	21.74
65	21.29
66	20.84
67	20.37
68	19.89
69	19.40
70	18.90
71	18.40
72	17.89
73	17.37
74	16.85
75	16.33

Table 5: P1APPCCP1 – Added Pension by Periodical Contribution factors for classic plus and premium

	Unisex
Age	**Member + spouse**
17	2.72
18	2.85
19	2.99
20	3.14
21	3.29
22	3.45
23	3.62
24	3.79
25	3.98
26	4.17
27	4.38
28	4.59
29	4.81
30	5.05
31	5.29
32	5.55
33	5.82
34	6.10
35	6.39
36	6.70
37	7.02
38	7.36
39	7.71
40	8.09
41	8.47
42	8.88
43	9.31
44	9.76

Table 5: P1APPCCP1 –Added Pension by Periodical Contribution factors for classic plus and premium (continued)

	Unisex
Age	Member + spouse
45	10.22
46	10.72
47	11.23
48	11.77
49	12.34
50	12.93
51	13.56
52	14.22
53	14.91
54	15.63
55	16.39
56	17.20
57	18.05
58	18.96
59	19.93
60	20.21
61	19.80
62	19.38
63	18.95
64	18.52
65	18.08
66	17.62
67	17.16
68	16.69
69	16.21
70	15.72
71	15.23
72	14.73
73	14.24
74	13.74
75	13.24

Table 6: P1APPCNU1 – Added Pension by Periodical Contribution factors for nuvos

	Males	Females	Unisex
Age	Member's pension factor	Member's pension factor	Member + spouse
17	1.77	1.89	1.94
18	1.86	1.98	2.04
19	1.95	2.08	2.14
20	2.05	2.18	2.24
21	2.15	2.29	2.35
22	2.26	2.40	2.47
23	2.37	2.52	2.59
24	2.49	2.64	2.72
25	2.61	2.77	2.85
26	2.74	2.91	2.99
27	2.87	3.05	3.14
28	3.01	3.21	3.29
29	3.16	3.36	3.45
30	3.31	3.53	3.62
31	3.47	3.70	3.80
32	3.64	3.88	3.98
33	3.81	4.07	4.17
34	4.00	4.27	4.37
35	4.19	4.47	4.58
36	4.39	4.69	4.80
37	4.60	4.91	5.03
38	4.82	5.15	5.27
39	5.05	5.40	5.52
40	5.29	5.65	5.79
41	5.55	5.92	6.06
42	5.81	6.21	6.35
43	6.09	6.51	6.65
44	6.38	6.82	6.97

Table 6: P1APPCNU1 – Added Pension by Periodical Contribution factors for nuvos (continued)

	Males	Females	Unisex
Age	Member's pension factor	Member's pension factor	Member + spouse
45	6.68	7.14	7.30
46	7.00	7.48	7.64
47	7.33	7.84	8.00
48	7.68	8.21	8.38
49	8.04	8.61	8.78
50	8.43	9.02	9.19
51	8.83	9.45	9.63
52	9.25	9.90	10.08
53	9.70	10.37	10.56
54	10.16	10.87	11.06
55	10.65	11.39	11.59
56	11.17	11.94	12.14
57	11.71	12.51	12.72
58	12.29	13.12	13.34
59	12.90	13.77	13.98
60	13.55	14.45	14.67
61	14.23	15.16	15.39
62	14.96	15.92	16.16
63	15.75	16.74	16.98
64	16.59	17.61	17.85
65	16.78	17.82	18.08
66	16.32	17.37	17.62
67	15.84	16.91	17.16
68	15.36	16.43	16.69
69	14.87	15.95	16.21
70	14.37	15.46	15.72
71	13.87	14.97	15.23
72	13.36	14.47	14.73
73	12.86	13.97	14.24
74	12.36	13.47	13.74
75	11.87	12.97	13.24

Table 7: P1APREVAL1 – Added Pension Revaluation factors

Number of 1 Aprils	Factor	Number of 1 Aprils	Factor	Number of 1 Aprils	Factor
0	1.00	17	1.40	34	1.96
1	1.02	18	1.43	35	2.00
2	1.04	19	1.46	36	2.04
3	1.06	20	1.49	37	2.08
4	1.08	21	1.52	38	2.12
5	1.10	22	1.55	39	2.16
6	1.13	23	1.58	40	2.21
7	1.15	24	1.61	41	2.25
8	1.17	25	1.64	42	2.30
9	1.20	26	1.67	43	2.34
10	1.22	27	1.71	44	2.39
11	1.24	28	1.74	45	2.44
12	1.27	29	1.78	46	2.49
13	1.29	30	1.81	47	2.54
14	1.32	31	1.85	48	2.59
15	1.35	32	1.88	49	2.64
16	1.37	33	1.92	50	2.69

Government Actuary's Department