Government Actuary's Department

Principal Civil Service Pension Scheme Northern Ireland

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

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Contents

1   Introduction

1.1   This note is addressed to the Department of Finance and Personnel (DFP) as scheme manager of the Principal Civil Service Pension Scheme Northern Ireland (PCSPS(NI) or 'scheme').

1.2   The purpose of the note is to provide DFP 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 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 PCSPS(NI), factors for the alpha scheme are provided separately.

1.3   Added pension factors are the responsibility of DFP under rule 14.2 (6)(b) of the 1972 part and D.4(6)(b) of the 2007 part of the scheme Rules

1.4   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.

1.5   The factors provided in this note have been prepared in light of our advice to DFP dated 3 October 2014 and subsequent correspondence following that advice.

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. DFP 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. Similarly, this guidance does not include factors for the buyout of actuarial reduction to added pension. These will be provided separately.

1.9   Please contact John Bayliss (020 7221 3454) for further information on this draft 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:

$$LS = P \times F_x^{LS} \times F_y^{\mathrm{Re}\,val}$$

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)

$F_y^{\mathrm{Re}\,val}$ = relevant revaluation factor for a member with y 1 Aprils between calculation date and up to and including NPA (Appendix A Table 7: P1APREVAL1)

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:

$$P = \frac{LS}{F_x^{LS} \times F_y^{\text{Re}\,val}}$$

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)
$F_y^{\text{Re}\,val}$	=	relevant revaluation factor for a member with y 1 Aprils between calculation date and up to and including NPA (Appendix A Table 7: P1APREVAL1)

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:

$$MP = \frac{P \times F_x^{RC} \times F_y^{Re\,val}}{12}$$

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)

$F_y^{Re\,val}$ = 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)

2.17 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 member and dependant purchased by a given lump sum payment

> Sex	Male
> Date of Birth	15/10/1960
> Section	Classic
> Normal Pension Age (NPA)	60 years
> Amount of lump sum payment	£1,000
> Calculation date	01/09/2015
> Age (last birthday) of member at 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)	17.893
> Revaluation factor $F_y^{\mathrm{Re}val}$ (from P1APREVAL1)	1.10

> Added pension purchased immediately on payment, P

$$= \frac{LS}{F_x^{LS} \times F_y^{\mathrm{Re}val}}$$

$$= \frac{£1,000}{17.893 \times 1.10}$$

$$= £50.81 \text{ p.a.}$$

> If the pension of the member at retirement was £50.81 pa then the member will also receive a lump sum of

3 x £50.81

= £152.42

Example 2 – Lump sum election – Lump sum payment required to purchase Added Pension for member 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)   15.367
> Revaluation factor F_y^{Reval} (from P1APREVAL1)   1.10
> Lump Sum, *LS*, payment required to immediately purchase added pension

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

$$= £200 \times 15.367 \times 1.10$$

$$= £3,380.74$$

Example 3 – Periodic payments – Added Pension purchased for member and dependant by a periodic contributions in the scheme year 2015-16

> Sex   Female

> Date of Birth   01/04/1980

> Section   Premium

> Normal Pension Age   60 years

> Amount of monthly contribution   £200 pm

> 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 amount of periodic contributions over scheme year 2015-16, C £2,400

> Periodic Contribution factor F_x^{PC} (from P1APPCCP1)   6.661

> Revaluation factor $F_y^{\mathrm{Re}\,val}$ (from P1APREVAL1)   1.64

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

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

$$= \frac{2,400}{6.661 \times 1.64}$$

$$= £219.70 \text{ pa}$$

Example 4 – Periodic payments – Added Pension purchased for member 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 $\times$ 10 = £1,000
>	Regular Contribution factor F_x^{PC} (from P1APPCNU1)	6.158
>	Revaluation factor $F_y^{\mathrm{Re}\,val}$ (from P1APREVAL1)	1.58

> Added pension purchased, $P = \dfrac{C}{F_x^{PC} \times F_y^{\mathrm{Re}\,val}}$

$$= \frac{1,000}{6.158 \times 1.58}$$

$$= £\,102.78 \text{ pa}$$

Therefore the member should be granted an added pension of £102.78 pa at the date of leaving.

4 Limitations of this guidance

4.1 This note is intended for the use of the DFP 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. Administrators should satisfy themselves that any added pension complies with all legislative requirements including, but not limited to, tax and contracting-out requirements. 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 DFP and GAD.

Appendix A: Factor tables

List of Tables

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

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

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

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

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

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

> Table 7: P1APREVAL1 – Alpha Added Pension Revaluation factors

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

	Unisex
Age	**Member + spouse**
16	3.108
17	3.260
18	3.418
19	3.584
20	3.755
21	3.933
22	4.119
23	4.315
24	4.520
25	4.736
26	4.961
27	5.198
28	5.447
29	5.707
30	5.978
31	6.261
32	6.556
33	6.864
34	7.185
35	7.520
36	7.871
37	8.237
38	8.620
39	9.021
40	9.440
41	9.878
42	10.338
43	10.818
44	11.322
45	11.849
46	12.400
47	12.977
48	13.582
49	14.216
50	14.881
51	15.579
52	16.311
53	17.082
54	17.893
55	18.750
56	19.655
57	20.613
58	21.630
59	22.712
60	23.073
61	22.674
62	22.266
63	21.850
64	21.424
65	20.988
66	20.543
67	20.087
68	19.621
69	19.145
70	18.659
71	18.166
72	17.665
73	17.159
74	16.650
75	16.396

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

	Unisex
Age	**Member + spouse**
16	2.691
17	2.822
18	2.958
19	3.101
20	3.249
21	3.402
22	3.563
23	3.731
24	3.908
25	4.093
26	4.287
27	4.491
28	4.705
29	4.929
30	5.162
31	5.405
32	5.658
33	5.923
34	6.198
35	6.486
36	6.787
37	7.101
38	7.430
39	7.773
40	8.132
41	8.508
42	8.901
43	9.313
44	9.744
45	10.195
46	10.667
47	11.161
48	11.679
49	12.221
50	12.790
51	13.387
52	14.014
53	14.673
54	15.367
55	16.100
56	16.875
57	17.695
58	18.565
59	19.492
60	19.773
61	19.373
62	18.966
63	18.550
64	18.126
65	17.694
66	17.252
67	16.801
68	16.342
69	15.875
70	15.400
71	14.919
72	14.434
73	13.947
74	13.460
75	13.217

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
16	1.806	1.917	2.050
17	1.894	2.010	2.149
18	1.985	2.107	2.252
19	2.081	2.210	2.360
20	2.180	2.315	2.470
21	2.282	2.423	2.584
22	2.388	2.536	2.704
23	2.500	2.655	2.830
24	2.617	2.780	2.961
25	2.739	2.911	3.099
26	2.868	3.048	3.244
27	3.003	3.192	3.395
28	3.144	3.343	3.554
29	3.292	3.501	3.720
30	3.445	3.666	3.893
31	3.604	3.837	4.072
32	3.770	4.015	4.258
33	3.942	4.201	4.452
34	4.121	4.394	4.653
35	4.307	4.595	4.863
36	4.502	4.804	5.081
37	4.704	5.022	5.309
38	4.916	5.250	5.546
39	5.136	5.488	5.793
40	5.366	5.736	6.051
41	5.605	5.996	6.320
42	5.855	6.268	6.600
43	6.116	6.552	6.893
44	6.388	6.850	7.199
45	6.672	7.160	7.518
46	6.969	7.483	7.850
47	7.280	7.819	8.196
48	7.606	8.168	8.557
49	7.946	8.532	8.933
50	8.302	8.913	9.325
51	8.675	9.312	9.735
52	9.064	9.729	10.162
53	9.471	10.165	10.609
54	9.899	10.623	11.077
55	10.349	11.104	11.568
56	10.824	11.609	12.084
57	11.327	12.141	12.626
58	11.858	12.700	13.197
59	12.423	13.292	13.801
60	13.025	13.921	14.443
61	13.669	14.592	15.126
62	14.358	15.310	15.855
63	15.100	16.079	16.637
64	15.900	16.907	17.477
65	16.089	17.116	17.694
66	15.631	16.671	17.252
67	15.165	16.217	16.801
68	14.692	15.754	16.342
69	14.212	15.284	15.875
70	13.726	14.806	15.400
71	13.237	14.323	14.919
72	12.746	13.835	14.434
73	12.258	13.346	13.947
74	11.774	12.857	13.460
75	11.299	12.372	13.217

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

	Unisex
Age	Member + spouse
16	3.192
17	3.348
18	3.510
19	3.681
20	3.857
21	4.039
22	4.231
23	4.432
24	4.642
25	4.863
26	5.095
27	5.339
28	5.594
29	5.861
30	6.139
31	6.430
32	6.733
33	7.049
34	7.379
35	7.723
36	8.083
37	8.459
38	8.853
39	9.264
40	9.695
41	10.145
42	10.617
43	11.110
44	11.627
45	12.168
46	12.735
47	13.328
48	13.949
49	14.600
50	15.282
51	15.999
52	16.752
53	17.543
54	18.376
55	19.256
56	20.186
57	21.170
58	22.214
59	23.325
60	23.696
61	23.286
62	22.867
63	22.440
64	22.002
65	21.555
66	21.097
67	20.629
68	20.150
69	19.661
70	19.163
71	18.656
72	18.142
73	17.623
74	17.100
75	16.838

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

	Unisex
Age	Member + spouse
16	2.764
17	2.898
18	3.038
19	3.185
20	3.337
21	3.494
22	3.659
23	3.832
24	4.013
25	4.204
26	4.403
27	4.612
28	4.832
29	5.062
30	5.301
31	5.551
32	5.811
33	6.082
34	6.366
35	6.661
36	6.970
37	7.293
38	7.630
39	7.983
40	8.352
41	8.738
42	9.142
43	9.564
44	10.007
45	10.470
46	10.955
47	11.463
48	11.994
49	12.551
50	13.135
51	13.748
52	14.392
53	15.069
54	15.782
55	16.535
56	17.330
57	18.173
58	19.066
59	20.018
60	20.307
61	19.896
62	19.478
63	19.051
64	18.616
65	18.171
66	17.718
67	17.255
68	16.783
69	16.303
70	15.815
71	15.322
72	14.824
73	14.323
74	13.823
75	13.574

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
16	1.855	1.969	2.106
17	1.945	2.064	2.207
18	2.039	2.164	2.313
19	2.138	2.269	2.423
20	2.239	2.377	2.537
21	2.343	2.488	2.654
22	2.453	2.605	2.777
23	2.567	2.727	2.906
24	2.687	2.855	3.041
25	2.813	2.989	3.183
26	2.945	3.130	3.331
27	3.084	3.278	3.487
28	3.229	3.433	3.650
29	3.381	3.595	3.820
30	3.538	3.765	3.998
31	3.702	3.941	4.182
32	3.872	4.124	4.373
33	4.048	4.314	4.572
34	4.232	4.512	4.779
35	4.424	4.719	4.994
36	4.623	4.934	5.218
37	4.831	5.158	5.452
38	5.048	5.392	5.696
39	5.275	5.636	5.950
40	5.511	5.891	6.214
41	5.757	6.158	6.490
42	6.013	6.437	6.779
43	6.281	6.729	7.080
44	6.560	7.034	7.393
45	6.852	7.353	7.721
46	7.157	7.685	8.062
47	7.476	8.030	8.417
48	7.811	8.388	8.788
49	8.161	8.763	9.174
50	8.527	9.154	9.577
51	8.909	9.563	9.998
52	9.308	9.991	10.437
53	9.727	10.439	10.895
54	10.166	10.910	11.376
55	10.628	11.404	11.880
56	11.117	11.923	12.410
57	11.633	12.469	12.967
58	12.178	13.043	13.553
59	12.758	13.650	14.174
60	13.377	14.297	14.832
61	14.038	14.986	15.534
62	14.745	15.723	16.283
63	15.508	16.513	17.086
64	16.330	17.364	17.949
65	16.523	17.578	18.171
66	16.053	17.121	17.718
67	15.575	16.654	17.255
68	15.088	16.179	16.783
69	14.595	15.696	16.303
70	14.096	15.206	15.815
71	13.594	14.709	15.322
72	13.090	14.209	14.824
73	12.588	13.706	14.323
74	12.092	13.204	13.823
75	11.604	12.706	13.574

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