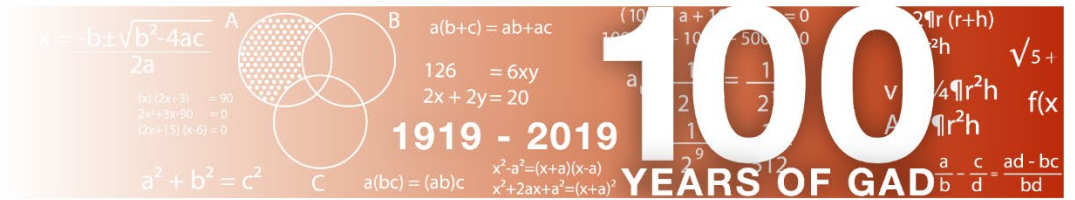




Government
Actuary's
Department



Civil Servants and Others Pension Scheme (CSOPS)

Added Pension for alpha members

Factors and guidance

Version: Issued

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1 Introduction

- 1.1 This note is addressed to Cabinet Office as scheme manager of the Civil Servants and Others Pension Scheme ('CSOPS' or **alpha** scheme). The **alpha** scheme was established by The Public Service (Civil Servants and Others) Pensions Regulations 2014 (SI 2014/1964) ("the Regulations") and came into force on 1 April 2015.
- 1.2 The purpose of the note is to provide Cabinet Office 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 an **alpha** member, their employer or third party opts to make a lump sum payment or a member makes regular periodic payments. These tables do not apply to members in the **classic**, **classic plus**, **premium** or **nuvos** sections of the Principal Civil Service Pension Scheme (PCSPS). Factors and added pension guidance for PCSPS have been provided separately to Cabinet Office.
- 1.3 Members, their employer or a third party may make payments for extra pension in accordance with Schedule 1, part two of the Regulations.
- 1.4 The factors provided in this note have been prepared in light of our advice to Cabinet Office dated 22 February 2018 and 30 October 2018 and its instructions following that advice.
- 1.5 This guidance supersedes the AP guidance "Civil Servants and Others Pension Scheme (CSOPS): Factors for Added Pension for alpha members" dated 29 June 2015 and the subsequent addendum to this guidance note dated 4 April 2016.
- 1.6 The factors in this note have been updated but the calculation methodology remains unchanged.
- 1.7 No advice or factors issued for PCSPS should be used for any calculations relating to AP from the alpha scheme.
- 1.8 We understand the added pension factors are the responsibility of the Minister. These factors come into force with effect from 1 April 2019.
- 1.9 Schedule 1, part one, paragraphs 3-5 of the regulations provide for a restriction on the maximum amount of extra pension (which includes accrued added pension) that can be purchased by a member. This test must be made before allowing the member to exercise the option to buy added pension.
- 1.10 If a member has elected to purchase an effective pension age or enhanced effective pension age option then this can impact on their eligibility to purchase added pension. Further details can be found in our document *Enhanced Effective Pension Age (EEPA) and Effective Pension Age (EPA) options for alpha members: Contribution rates, 'headroom' calculation factors and guidance* currently in force.
- 1.11 Appendix A contains details of the underlying assumptions used to calculate the factors contained in this guidance note.



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

Implementation and Review

- 1.13 The factors contained in this guidance will apply from 1 April 2019. This implementation date has been determined by Cabinet Office. This guidance will apply with immediate effect upon receipt of this guidance.
- 1.14 This guidance has been written for pension administrators and assumes some knowledge of general pension terminology, and some familiarity with retirement calculations for the CSOPS Pension Scheme. Any questions concerning the application of the guidance should, in the first instance, be referred to Cabinet Office.
- 1.15 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.
- 1.16 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

- 1.17 This guidance has been prepared for the use of Cabinet Office and the scheme administrators for the purposes of demonstrating the application of the factors covered by this guidance only. This guidance may be published on Cabinet Office and the scheme administrator'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.
- 1.18 Other than Cabinet Office and the scheme administrators, no person or third party is entitled to place any reliance on the contents of this guidance, except to any extent explicitly stated herein. GAD has no liability to any person or third party for any action taken or for any failure to act, either in whole or in part, on the basis of this guidance, whether or not GAD has agreed to the disclosure of its advice to the third party.



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,
- whether the pension is for the member only, or for all beneficiaries,
- sex, if buying member only benefits (however please note that the male and female factors have now been unisexed),
- normal pension age (NPA)¹, and
- for the revaluation factor, the number of 1 Aprils falling between the calculation date and the NPA

2.4 If a member has a non-integer NPA then more than one factor is required and these factors are interpolated to obtain the actual factor to use corresponding to their NPA (in complete years and complete months, ignoring part months) – see example 2 for an illustration of this.

2.5 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.

¹ Normal pension age is defined as a member's state pension age (or 65, if that is higher) in the alpha section. For the purpose of this note, a member's expected NPA in the alpha section is the same as their state pension age as set out in The Public Service Pensions (Valuations and Employer Cost Cap) Directions 2014, as subsequently amended – https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/411287/HMT_Directions_9_Mar_2015.pdf



- 2.6 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:

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

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 NPA table (see Appendix B Tables 1-4: P2APLS65-68)
- F_y^{Reval} = relevant revaluation factor for a member with y 1 Aprils between calculation date and up to and including NPA (see Appendix B Table 9 - 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.

- 2.7 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 NPA table (see Appendix B Tables 1-4: P2APLS65-68)
- F_y^{Reval} = relevant revaluation factor for a member with y 1 Aprils between calculation date and up to and including NPA (see Appendix B Table 9 - 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 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 Factors should be selected with reference to the member's:
- age in complete years,
 - whether the pension is for the member only, or for all beneficiaries,
 - sex, if buying member only benefits (however please note that the male and female factors have now been unisexed),
 - normal pension age (NPA), and
 - for the revaluation factor the number of 1 Aprils falling between the calculation date and the NPA
- 2.11 If a member has a non-integer NPA then more than one factor is required and these factors are interpolated to obtain the actual factor to use corresponding to their NPA (in complete years and complete months, ignoring part months) – see example 2 for an illustration of this.
- 2.12 The scheme year runs from 1 April to 31 March.
- 2.13 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.
- 2.14 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).



- 2.15 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:

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

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 NPA table (see Appendix B Tables 5-8 – P2APPC65-68)
- 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 (see Appendix B Table 9 – Revaluation factors)

- 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:

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

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 NPA table (see Appendix B Tables 5-8 – P2APPC65-68)
- 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 (see Appendix B Table 9 – Revaluation factors)

- 2.17 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 only purchased by a given lump sum payment

• Sex	Male
• Date of Birth	15/10/1960
• Normal Pension Age	66 years 7 months
• Amount of lump sum payment	£1000
• Calculation date	01/09/2020
• Age (last birthday) of member on calculation date	59 years
• Number of 1 Aprils between calculation date up to and including NPA	7
• Lump Sum factor F_x^{LS}	12.40 (interpolated)
• Revaluation factor F_y^{Reval} (from Revaluation factors)	1.15
• Added pension purchased immediately on payment, P	$= \frac{LS}{F_x^{LS} \times F_y^{Reval}}$ $= \frac{£1000.00}{12.40 \times 1.15}$ $= £70.13 \text{ p.a.}$

The factors used above were interpolated for non-integer NPA as shown below:

Factor at NPA 66 years 7 months

$$= \left(\frac{5}{12}\right) \times \text{Factor at NPA 66} + \left(\frac{7}{12}\right) \times \text{Factor at NPA 67}$$

eg for the Lump Sum factor for 59 year old male

$$= \left(\frac{5}{12}\right) \times 12.94 + \left(\frac{7}{12}\right) \times 12.02 = 12.40$$

Note: The factor at NPA 66 comes from Table 2 (P2APLS66) whilst the factor at NPA 67 comes from Table 3 (P2APLS67).



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
- Normal Pension Age 66 years 7 months
- Amount of AP intended to purchase £200 pa
- Calculation date 01/09/2020
- Age (last birthday) of member on calculation date 59 years
- Number of 1 Aprils between calculation date up to and including NPA 7
- Lump Sum factor F_x^{LS} 13.31 (interpolated)
- Revaluation factor F_y^{Reval} (from Revaluation factors) 1.15
- Lump Sum, LS, payment required to immediately purchase added pension

$$\begin{aligned}
 LS &= P \times F_x^{LS} \times F_y^{Reval} \\
 &= £200 \times 13.31 \times 1.15 \\
 &= £3061.30
 \end{aligned}$$

The factors used above were interpolated for non-integer NPA as shown below:

Factor at NPA 66 years 7 month

$$= \left(\frac{5}{12}\right) \times \text{Factor at NPA 66} + \left(\frac{7}{12}\right) \times \text{Factor at NPA 67}$$

e.g. for the Lump Sum factor for 59 year old (unisex factors for self + dependent)

$$= \left(\frac{5}{12}\right) \times 13.86 + \left(\frac{7}{12}\right) \times 12.92 = 13.31$$

Note: The factor at NPA 66 comes from Table 2 (P2APLS66) whilst the factor at NPA 67 comes from Table 3 (P2APLS67).



Example 3 – Periodic payments – Added Pension purchased for self and dependant by a percentage of salary in the scheme year 2020-21

- Sex Male
- Date of Birth 01/04/1985
- Normal Pension Age 68 years
- Pensionable Earnings (PE) £48,000 pa
- Amount of monthly contribution 5% of PE
- Start of periodic payment (calculation date) 01/04/2020
- Age of member at the start of scheme year 35 years
- Number of 1 Aprils between calculation date up to and including NPA 33
- Expected monthly contributions $(£48,000 \times 5\%) / 12 = £200$ pm
- Expected amount of periodic contributions over scheme year 2020-21, C £2400
- Regular Contribution factor F_x^{RC} 4.82
- Revaluation factor F_y^{Reval} 1.92
- Added pension, P , expected to be purchased by end of scheme year

$$\begin{aligned} P &= \frac{C}{F_x^{RC} \times F_y^{Reval}} \\ &= \frac{£2400.00}{4.82 \times 1.92} \\ &= £259.34 \text{ p.a.} \end{aligned}$$



Accounting for a promotion part way through the year

- Salary Increase 20%
- Date of Salary Increase 01/01/2021
- Amount of monthly contribution in final three months $(£48,000 \times 120\% \times 5\%) / 12$
= £240 pm
- Total amount of periodic contributions over scheme year 2020-21, C $£200 \times 9 + £240 \times 3$
= £2520
- Regular Contribution factor F_x^{RC} 4.82
- Revaluation factor F_y^{Reval} 1.92
- Added pension purchased, P
$$= \frac{C}{F_x^{RC} \times F_y^{Reval}}$$
$$= \frac{£2520.00}{4.82 \times 1.92}$$
$$= £272.30 \text{ p.a.}$$

Therefore the member should be granted an added pension of £272.30 pa at the end of the scheme year.



Example 4 – Periodic payments – Added Pension purchased for self and dependant by level payments from 2022-23

• Sex	Female
• Date of Birth	18/06/1980
• Normal Pension Age	68 years
• Amount of monthly contribution	£100 pm
• Start date of periodic payments (calculation date)	01/04/2022
• Age of member at start of scheme year	41 years
• Number of 1 Aprils between calculation date up to and including NPA	26

Accounting for the member leaving the scheme before completing the payments

• Date of leaving scheme	31/01/2023
• Number of months in which member has made contributions	10
• Total amount of periodic contributions over scheme year 2022-23, C	£100 × 10 = £1000
• Regular Contribution factor F_x^{RC}	6.11
• Revaluation factor F_y^{Reval}	1.67

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

$$= \frac{£1000.00}{6.11 \times 1.67}$$

$$= £98.00 \text{ p.a.}$$

Therefore the member should be granted an added pension of £98.00 pa at the date of leaving.



4 Limitations of this guidance

- 4.1 This note is intended for the use of Cabinet Office and the scheme administrators for the purposes of demonstrating the application of the factors covered by this guidance only.
- 4.2 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.
- 4.3 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.
- 4.4 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.
- 4.5 This note only covers the actuarial principles around the calculation and application of additional pension factors. Any legal advice in this area should be sought from an appropriately qualified person or source.
- 4.6 Administrators should satisfy themselves that arrangements to secure additional pension comply with all legislative requirements including, but not limited to, tax and contracting-out requirements.
- 4.7 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 Cabinet Office. In no circumstances should this guidance take precedence over the Regulations. Administrators should ensure that they comply with all relevant Regulations.



Appendix A: Assumptions underlying factors

Financial assumptions

Nominal discount rate	4.448% pa
Real discount rate (in excess of CPI)	2.40% pa
Real discount rate (in excess of RPI)	1.25% pa

Mortality assumptions

Base mortality tables and adjustments:

	Males	Females
Retirements in normal and ill health	104% of S2NMA	104% of S2NFA
Dependants	117% of S2NMA	100% of S2DFA

Future mortality improvement	Based on ONS principal UK population projections 2016
Year of Use	2020

In-service decrement rates

Withdrawal Age retirement Ill Health Retirement	In line with 2016 valuation assumptions
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Other assumptions

Proportion of male members for unisex factors	50%
Proportion partnered	100% for Additional Pension with attaching dependants' pension, nil otherwise
Age difference between member and partner	Male members assumed to be 3 years older than their partners and female members are assumed to be 2 years younger than their partners
Allowance for commutation	Nil



Appendix B: Factor tables

List of Tables

- Table 1: P2APLS65 – Alpha Added Pension by Lump Sum factors for normal pension age of 65 (**Table 714 in consolidated factor spreadsheet**)
- Table 2: P2APLS66 – Alpha Added Pension by Lump Sum factors for normal pension age of 66 (**Table 715 in consolidated factor spreadsheet**)
- Table 3: P2APLS67 – Alpha Added Pension by Lump Sum factors for normal pension age of 67 (**Table 716 in consolidated factor spreadsheet**)
- Table 4: P2APLS68 – Alpha Added Pension by Lump Sum factors for normal pension age of 68 (**Table 717 in consolidated factor spreadsheet**)
- Table 5: P2APPC65 – Alpha Added Pension by Periodical Contribution factors for normal pension age of 65 (**Table 718 in consolidated factor spreadsheet**)
- Table 6: P2APPC66 – Alpha Added Pension by Periodical Contribution factors for normal pension age of 66 (**Table 719 in consolidated factor spreadsheet**)
- Table 7: P2APPC67 – Alpha Added Pension by Periodical Contribution factors for normal pension age of 67 (**Table 720 in consolidated factor spreadsheet**)
- Table 8: P2APPC68 – Alpha Added Pension by Periodical Contribution factors for normal pension age of 68 (**Table 721 in consolidated factor spreadsheet**)
- Table 9: Revaluation factors (**Table 001 in consolidated factor spreadsheet**)



Table 1: P2APLS65 – Alpha Added Pension by Lump Sum factors for normal pension age of 65 (*Table 714 in consolidated factor spreadsheet*)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
16	2.43	2.43	2.61
17	2.53	2.53	2.73
18	2.64	2.64	2.85
19	2.75	2.75	2.97
20	2.87	2.87	3.09
21	2.98	2.98	3.22
22	3.11	3.11	3.35
23	3.24	3.24	3.49
24	3.37	3.37	3.64
25	3.52	3.52	3.79
26	3.66	3.66	3.95
27	3.82	3.82	4.11
28	3.97	3.97	4.28
29	4.14	4.14	4.46
30	4.31	4.31	4.65
31	4.49	4.49	4.84
32	4.68	4.68	5.04
33	4.87	4.87	5.25
34	5.07	5.07	5.47
35	5.28	5.28	5.69
36	5.50	5.50	5.92
37	5.73	5.73	6.17
38	5.96	5.96	6.42
39	6.21	6.21	6.68
40	6.46	6.46	6.96
41	6.73	6.73	7.24
42	7.01	7.01	7.54
43	7.29	7.29	7.84
44	7.59	7.59	8.16



Table 1: P2APLS65 – Alpha Added Pension by Lump Sum factors for normal pension age of 65 (continued)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
45	7.90	7.90	8.50
46	8.23	8.23	8.84
47	8.56	8.56	9.20
48	8.91	8.91	9.57
49	9.28	9.28	9.96
50	9.66	9.66	10.37
51	10.06	10.06	10.79
52	10.47	10.47	11.22
53	10.90	10.90	11.68
54	11.35	11.35	12.15
55	11.81	11.81	12.65
56	12.30	12.30	13.16
57	12.82	12.82	13.70
58	13.35	13.35	14.26
59	13.91	13.91	14.85
60	14.50	14.50	15.47
61	15.12	15.12	16.12
62	15.78	15.78	16.80
63	16.47	16.47	17.52
64	17.21	17.21	18.29
65	17.32	17.32	18.42
66	16.78	16.78	17.88
67	16.24	16.24	17.34
68	15.69	15.69	16.79
69	15.13	15.13	16.23
70	14.58	14.58	15.67
71	14.02	14.02	15.11
72	13.46	13.46	14.55
73	12.90	12.90	13.98
74	12.34	12.34	13.42
75	12.07	12.07	13.13



Table 2: P2APLS66 – Alpha Added Pension by Lump Sum factors for normal pension age of 66 (*Table 715 in consolidated factor*)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
16	2.28	2.28	2.46
17	2.38	2.38	2.57
18	2.47	2.47	2.68
19	2.58	2.58	2.79
20	2.68	2.68	2.91
21	2.80	2.80	3.03
22	2.91	2.91	3.15
23	3.03	3.03	3.28
24	3.16	3.16	3.42
25	3.29	3.29	3.56
26	3.43	3.43	3.71
27	3.57	3.57	3.87
28	3.72	3.72	4.03
29	3.88	3.88	4.19
30	4.04	4.04	4.37
31	4.21	4.21	4.55
32	4.38	4.38	4.74
33	4.56	4.56	4.93
34	4.75	4.75	5.13
35	4.94	4.94	5.34
36	5.15	5.15	5.56
37	5.36	5.36	5.79
38	5.58	5.58	6.03
39	5.81	5.81	6.27
40	6.04	6.04	6.53
41	6.29	6.29	6.79
42	6.55	6.55	7.07
43	6.81	6.81	7.36
44	7.09	7.09	7.65



Table 2: P2APLS66 – Alpha Added Pension by Lump Sum factors for normal pension age of 66 (continued)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
45	7.38	7.38	7.96
46	7.68	7.68	8.29
47	8.00	8.00	8.62
48	8.32	8.32	8.97
49	8.66	8.66	9.33
50	9.01	9.01	9.71
51	9.38	9.38	10.10
52	9.76	9.76	10.50
53	10.16	10.16	10.92
54	10.57	10.57	11.36
55	11.00	11.00	11.82
56	11.45	11.45	12.30
57	11.93	11.93	12.80
58	12.42	12.42	13.31
59	12.94	12.94	13.86
60	13.48	13.48	14.43
61	14.05	14.05	15.02
62	14.65	14.65	15.65
63	15.29	15.29	16.32
64	15.96	15.96	17.02
65	16.68	16.68	17.76
66	16.78	16.78	17.88
67	16.24	16.24	17.34
68	15.69	15.69	16.79
69	15.13	15.13	16.23
70	14.58	14.58	15.67
71	14.02	14.02	15.11
72	13.46	13.46	14.55
73	12.90	12.90	13.98
74	12.34	12.34	13.42
75	12.07	12.07	13.13



Table 3: P2APLS67 – Alpha Added Pension by Lump Sum factors for normal pension age of 67 (*Table 716 in consolidated factor spreadsheet*)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
16	2.14	2.14	2.31
17	2.23	2.23	2.42
18	2.32	2.32	2.52
19	2.41	2.41	2.62
20	2.51	2.51	2.73
21	2.62	2.62	2.85
22	2.73	2.73	2.96
23	2.84	2.84	3.09
24	2.96	2.96	3.22
25	3.08	3.08	3.35
26	3.21	3.21	3.49
27	3.34	3.34	3.63
28	3.48	3.48	3.78
29	3.63	3.63	3.94
30	3.78	3.78	4.10
31	3.93	3.93	4.27
32	4.10	4.10	4.45
33	4.27	4.27	4.63
34	4.44	4.44	4.82
35	4.62	4.62	5.02
36	4.81	4.81	5.22
37	5.01	5.01	5.43
38	5.21	5.21	5.66
39	5.43	5.43	5.88
40	5.65	5.65	6.12
41	5.88	5.88	6.37
42	6.11	6.11	6.63
43	6.36	6.36	6.90
44	6.62	6.62	7.17



Table 3: P2APLS67 – Alpha Added Pension by Lump Sum factors for normal pension age of 67 (continued)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
45	6.89	6.89	7.46
46	7.17	7.17	7.76
47	7.46	7.46	8.07
48	7.76	7.76	8.40
49	8.07	8.07	8.73
50	8.40	8.40	9.08
51	8.74	8.74	9.45
52	9.09	9.09	9.82
53	9.46	9.46	10.21
54	9.84	9.84	10.62
55	10.24	10.24	11.04
56	10.66	10.66	11.48
57	11.09	11.09	11.94
58	11.54	11.54	12.42
59	12.02	12.02	12.92
60	12.52	12.52	13.45
61	13.04	13.04	14.00
62	13.59	13.59	14.57
63	14.17	14.17	15.18
64	14.79	14.79	15.83
65	15.45	15.45	16.51
66	16.15	16.15	17.23
67	16.24	16.24	17.34
68	15.69	15.69	16.79
69	15.13	15.13	16.23
70	14.58	14.58	15.67
71	14.02	14.02	15.11
72	13.46	13.46	14.55
73	12.90	12.90	13.98
74	12.34	12.34	13.42
75	12.07	12.07	13.13



Table 4: P2APLS68 – Alpha Added Pension by Lump Sum factors for normal pension age of 68 (*Table 717 in consolidated factor spreadsheet*)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
16	2.00	2.00	2.18
17	2.08	2.08	2.27
18	2.17	2.17	2.37
19	2.26	2.26	2.47
20	2.35	2.35	2.57
21	2.45	2.45	2.68
22	2.55	2.55	2.79
23	2.66	2.66	2.90
24	2.77	2.77	3.02
25	2.88	2.88	3.15
26	3.00	3.00	3.28
27	3.13	3.13	3.41
28	3.26	3.26	3.55
29	3.39	3.39	3.70
30	3.53	3.53	3.85
31	3.68	3.68	4.01
32	3.83	3.83	4.18
33	3.99	3.99	4.35
34	4.15	4.15	4.53
35	4.32	4.32	4.71
36	4.50	4.50	4.90
37	4.68	4.68	5.10
38	4.87	4.87	5.31
39	5.07	5.07	5.52
40	5.27	5.27	5.74
41	5.49	5.49	5.97
42	5.71	5.71	6.21
43	5.94	5.94	6.46
44	6.18	6.18	6.72



Table 4: P2APLS68 – Alpha Added Pension by Lump Sum factors for normal pension age of 68 (continued)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
45	6.43	6.43	6.99
46	6.69	6.69	7.27
47	6.96	6.96	7.56
48	7.24	7.24	7.86
49	7.53	7.53	8.17
50	7.83	7.83	8.50
51	8.14	8.14	8.83
52	8.47	8.47	9.18
53	8.80	8.80	9.55
54	9.16	9.16	9.92
55	9.52	9.52	10.31
56	9.91	9.91	10.72
57	10.31	10.31	11.14
58	10.72	10.72	11.59
59	11.16	11.16	12.05
60	11.61	11.61	12.53
61	12.09	12.09	13.03
62	12.60	12.60	13.56
63	13.13	13.13	14.12
64	13.69	13.69	14.71
65	14.29	14.29	15.33
66	14.93	14.93	15.99
67	15.61	15.61	16.70
68	15.69	15.69	16.79
69	15.13	15.13	16.23
70	14.58	14.58	15.67
71	14.02	14.02	15.11
72	13.46	13.46	14.55
73	12.90	12.90	13.98
74	12.34	12.34	13.42
75	12.07	12.07	13.13



Table 5: P2APPC65 – Alpha Added Pension by Periodical Contribution factors for normal pension age of 65 (*Table 718 in consolidated factor spreadsheet*)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
16	2.49	2.49	2.67
17	2.59	2.59	2.79
18	2.70	2.70	2.92
19	2.82	2.82	3.04
20	2.94	2.94	3.16
21	3.05	3.05	3.30
22	3.18	3.18	3.43
23	3.32	3.32	3.57
24	3.45	3.45	3.73
25	3.60	3.60	3.88
26	3.75	3.75	4.04
27	3.91	3.91	4.21
28	4.06	4.06	4.38
29	4.24	4.24	4.57
30	4.41	4.41	4.76
31	4.60	4.60	4.96
32	4.79	4.79	5.16
33	4.99	4.99	5.37
34	5.19	5.19	5.60
35	5.41	5.41	5.83
36	5.63	5.63	6.06
37	5.87	5.87	6.32
38	6.10	6.10	6.57
39	6.36	6.36	6.84
40	6.61	6.61	7.13
41	6.89	6.89	7.41
42	7.18	7.18	7.72
43	7.46	7.46	8.03
44	7.77	7.77	8.35



Table 5: P2APPC65 – Alpha Added Pension by Periodical Contribution factors for normal pension age of 65 (continued)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
45	8.09	8.09	8.70
46	8.43	8.43	9.05
47	8.76	8.76	9.42
48	9.12	9.12	9.80
49	9.50	9.50	10.20
50	9.89	9.89	10.62
51	10.30	10.30	11.05
52	10.72	10.72	11.49
53	11.16	11.16	11.96
54	11.62	11.62	12.44
55	12.09	12.09	12.95
56	12.59	12.59	13.47
57	13.12	13.12	14.03
58	13.67	13.67	14.60
59	14.24	14.24	15.20
60	14.84	14.84	15.84
61	15.48	15.48	16.50
62	16.16	16.16	17.20
63	16.86	16.86	17.94
64	17.62	17.62	18.72
65	17.73	17.73	18.86
66	17.18	17.18	18.31
67	16.63	16.63	17.75
68	16.06	16.06	17.19
69	15.49	15.49	16.62
70	14.93	14.93	16.04
71	14.35	14.35	15.47
72	13.78	13.78	14.90
73	13.21	13.21	14.31
74	12.63	12.63	13.74
75	12.36	12.36	13.44



Table 6: P2APPC66 – Alpha Added Pension by Periodical Contribution factors for normal pension age of 66 (*Table 719 in consolidated factor spreadsheet*)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
16	2.33	2.33	2.52
17	2.44	2.44	2.63
18	2.53	2.53	2.74
19	2.64	2.64	2.86
20	2.74	2.74	2.98
21	2.87	2.87	3.10
22	2.98	2.98	3.22
23	3.10	3.10	3.36
24	3.24	3.24	3.50
25	3.37	3.37	3.64
26	3.51	3.51	3.80
27	3.65	3.65	3.96
28	3.81	3.81	4.13
29	3.97	3.97	4.29
30	4.14	4.14	4.47
31	4.31	4.31	4.66
32	4.48	4.48	4.85
33	4.67	4.67	5.05
34	4.86	4.86	5.25
35	5.06	5.06	5.47
36	5.27	5.27	5.69
37	5.49	5.49	5.93
38	5.71	5.71	6.17
39	5.95	5.95	6.42
40	6.18	6.18	6.69
41	6.44	6.44	6.95
42	6.71	6.71	7.24
43	6.97	6.97	7.53
44	7.26	7.26	7.83



Table 6: P2APPC66 – Alpha Added Pension by Periodical Contribution factors for normal pension age of 66 (continued)

Age	Males Member's pension factor	Females Member's pension factor	Unisex Member + spouse
45	7.56	7.56	8.15
46	7.86	7.86	8.49
47	8.19	8.19	8.82
48	8.52	8.52	9.18
49	8.87	8.87	9.55
50	9.22	9.22	9.94
51	9.60	9.60	10.34
52	9.99	9.99	10.75
53	10.40	10.40	11.18
54	10.82	10.82	11.63
55	11.26	11.26	12.10
56	11.72	11.72	12.59
57	12.21	12.21	13.10
58	12.72	12.72	13.63
59	13.25	13.25	14.19
60	13.80	13.80	14.77
61	14.38	14.38	15.38
62	15.00	15.00	16.02
63	15.65	15.65	16.71
64	16.34	16.34	17.42
65	17.08	17.08	18.18
66	17.18	17.18	18.31
67	16.63	16.63	17.75
68	16.06	16.06	17.19
69	15.49	15.49	16.62
70	14.93	14.93	16.04
71	14.35	14.35	15.47
72	13.78	13.78	14.90
73	13.21	13.21	14.31
74	12.63	12.63	13.74
75	12.36	12.36	13.44



Table 7: P2APPC67 – Alpha Added Pension by Periodical Contribution factors for normal pension age of 67 (*Table 720 in consolidated factor spreadsheet*)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
16	2.19	2.19	2.36
17	2.28	2.28	2.48
18	2.38	2.38	2.58
19	2.47	2.47	2.68
20	2.57	2.57	2.79
21	2.68	2.68	2.92
22	2.79	2.79	3.03
23	2.91	2.91	3.16
24	3.03	3.03	3.30
25	3.15	3.15	3.43
26	3.29	3.29	3.57
27	3.42	3.42	3.72
28	3.56	3.56	3.87
29	3.72	3.72	4.03
30	3.87	3.87	4.20
31	4.02	4.02	4.37
32	4.20	4.20	4.56
33	4.37	4.37	4.74
34	4.55	4.55	4.93
35	4.73	4.73	5.14
36	4.92	4.92	5.34
37	5.13	5.13	5.56
38	5.33	5.33	5.79
39	5.56	5.56	6.02
40	5.78	5.78	6.27
41	6.02	6.02	6.52
42	6.26	6.26	6.79
43	6.51	6.51	7.06
44	6.78	6.78	7.34



Table 7: P2APPC67 – Alpha Added Pension by Periodical Contribution factors for normal pension age of 67 (continued)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
45	7.05	7.05	7.64
46	7.34	7.34	7.94
47	7.64	7.64	8.26
48	7.94	7.94	8.60
49	8.26	8.26	8.94
50	8.60	8.60	9.30
51	8.95	8.95	9.67
52	9.31	9.31	10.05
53	9.68	9.68	10.45
54	10.07	10.07	10.87
55	10.48	10.48	11.30
56	10.91	10.91	11.75
57	11.35	11.35	12.22
58	11.81	11.81	12.72
59	12.31	12.31	13.23
60	12.82	12.82	13.77
61	13.35	13.35	14.33
62	13.91	13.91	14.92
63	14.51	14.51	15.54
64	15.14	15.14	16.21
65	15.82	15.82	16.90
66	16.53	16.53	17.64
67	16.63	16.63	17.75
68	16.06	16.06	17.19
69	15.49	15.49	16.62
70	14.93	14.93	16.04
71	14.35	14.35	15.47
72	13.78	13.78	14.90
73	13.21	13.21	14.31
74	12.63	12.63	13.74
75	12.36	12.36	13.44



Table 8: P2APPC68 – Alpha Added Pension by Periodical Contribution factors for normal pension age of 68 (*Table 721 in consolidated factor spreadsheet*)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
16	2.05	2.05	2.23
17	2.13	2.13	2.32
18	2.22	2.22	2.43
19	2.31	2.31	2.53
20	2.41	2.41	2.63
21	2.51	2.51	2.74
22	2.61	2.61	2.86
23	2.72	2.72	2.97
24	2.84	2.84	3.09
25	2.95	2.95	3.22
26	3.07	3.07	3.36
27	3.20	3.20	3.49
28	3.34	3.34	3.63
29	3.47	3.47	3.79
30	3.61	3.61	3.94
31	3.77	3.77	4.11
32	3.92	3.92	4.28
33	4.08	4.08	4.45
34	4.25	4.25	4.64
35	4.42	4.42	4.82
36	4.61	4.61	5.02
37	4.79	4.79	5.22
38	4.99	4.99	5.44
39	5.19	5.19	5.65
40	5.40	5.40	5.88
41	5.62	5.62	6.11
42	5.85	5.85	6.36
43	6.08	6.08	6.61
44	6.33	6.33	6.88



Table 8: P2APPC68 – Alpha Added Pension by Periodical Contribution factors for normal pension age of 68 (continued)

Age	Males	Females	Unisex
	Member's pension factor	Member's pension factor	Member + spouse
45	6.58	6.58	7.16
46	6.85	6.85	7.44
47	7.13	7.13	7.74
48	7.41	7.41	8.05
49	7.71	7.71	8.36
50	8.02	8.02	8.70
51	8.33	8.33	9.04
52	8.67	8.67	9.40
53	9.01	9.01	9.78
54	9.38	9.38	10.16
55	9.75	9.75	10.56
56	10.15	10.15	10.97
57	10.56	10.56	11.40
58	10.97	10.97	11.87
59	11.43	11.43	12.34
60	11.89	11.89	12.83
61	12.38	12.38	13.34
62	12.90	12.90	13.88
63	13.44	13.44	14.46
64	14.02	14.02	15.06
65	14.63	14.63	15.69
66	15.28	15.28	16.37
67	15.98	15.98	17.10
68	16.06	16.06	17.19
69	15.49	15.49	16.62
70	14.93	14.93	16.04
71	14.35	14.35	15.47
72	13.78	13.78	14.90
73	13.21	13.21	14.31
74	12.63	12.63	13.74
75	12.36	12.36	13.44



Table 9: Revaluation factors (*Table 001 in consolidated factor spreadsheet*)

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

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