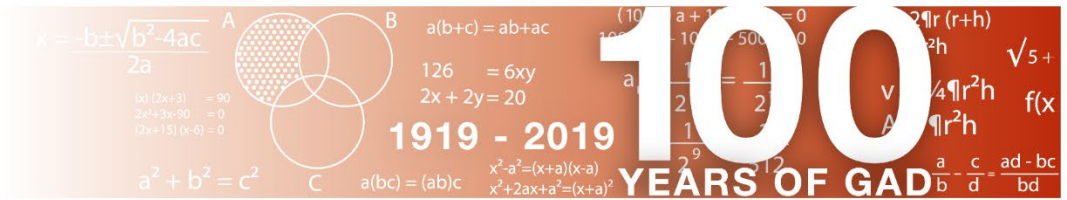




Government
Actuary's
Department



Principal Civil Service Pension Scheme (PCSPS)

Cash equivalent transfer values (CETVs) for
classic, classic plus, premium and **nuvos**
members including added pension benefits

Factors and guidance

Date: 14 October 2019



Contents

1	Introduction	1
2	Instructions: classic, classic plus and premium sections – NPA 60 and NPA 65 (excluding additional pension)	4
3	Instructions: nuvos section	6
4	Instructions: classic, classic plus and premium – added pension benefits	7
5	Example for Classic, Classic plus and Premium Sections – main scheme CETV calculation	8
6	Example for Nuvos Section	9
7	Example calculation – Classic Member with added pension benefits	10
8	Limitations of this guidance	11
	Appendix A: Factor tables	12
	Appendix B: Assumptions underlying factors	24

1 Introduction

- 1.1 This note is addressed to the Cabinet Office as scheme manager of the Principal Civil Service Pension Scheme (PCSPS or ‘the scheme’).
- 1.2 The purpose of this note is to provide tables to calculate the cash equivalent transfer value of a member’s deferred PCSPS benefit. This note also provides additional guidance and factors to calculate the cash equivalent transfer value (CETV) for members who have acquired added pension benefits while a member of a final salary section of the PCSPS (classic, classic plus and premium).
- 1.3 A cash equivalent may be paid by the scheme to another pension scheme calculated in accordance with the following scheme rules:
- Section II: 6.10(i) for **classic** members;
 - Section I: F.5(1) and F.5(2) for **premium** and **classic plus** members; and
 - Section III: G.5 for **nuvos** members.
- 1.4 The factors provided in this Note have been prepared in light of our advice to the Cabinet Office dated 30 October 2018 and its instructions following that advice.
- 1.5 This guidance is intended to supersede any factors or advice previously issued, for the purposes of cash equivalent transfer value calculations in relation to PCSPS benefits (including added pension), carried out from 29 October 2018. No advice or factors issued in the past should be used for cases after this date. In particular, this guidance supersedes:
- “Principal Civil Service Pension Scheme (PCSPS): Factors for cash equivalent transfer values (CETVs) for classic, classic plus, premium and nuvos members” dated 22 June 2015;
- “Addendum to note “Factors for cash equivalent transfer values (CETVs) for classic, classic plus, premium and nuvos members” – Factors for CETVs in respect of added pension benefits for PCSPS – classic, classic plus and premium members” dated 4 February 2016;
- “Addendum to GAD guidance note “Factors for cash equivalent transfer values (CETVs) for classic, classic plus, premium and nuvos members” dated 23 March 2016; and
- “Addendum to GAD guidance note “Factors for CETVs in respect of added pension benefits for PCSPS - classic, classic plus and premium members” dated 23 March 2016.
- 1.6 The factor tables are provided in Appendix A. A summary of the assumptions underlying the CETV factors is given in Appendix B.
- ### Exclusions and Scope
- 1.7 A member may have benefits in both PCSPS and CSOPS (the alpha scheme). The CETV for the member’s PCSPS and alpha section benefits should be calculated separately using the relevant guidance.

- 1.8 A member may also have deferred Additional Pension. The CETVs for the member's standard PCSPS benefits and Additional Pension should be calculated separately using the relevant guidance set out in this document.
- 1.9 This guidance only relates to benefits in the PCSPS – i.e. **classic, classic plus, premium** and **nuvos**. Separate guidance applies to the Civil Service and Others Pension Scheme (or **alpha** scheme).
- 1.10 These tables should not be used to calculate the amount of a Club transfer value.
- 1.11 The guidance and examples in this note describe how CETV factors should be applied and reflect our understanding of the way that administration systems have been programmed to calculate a CETV.
- 1.12 In previous factors and guidance, an adjustment was applied to GMP to reflect the inflationary increases on the GMP, which were the responsibility of the State Scheme after GMP Payment Age. Following the requirement to equalise GMPs as set out in our letter "GMP Equalisation: Calculations involving actuarial factors" dated 20 August 2019, the GMP adjustment factor has been removed from the calculation methodology for all members reaching State Pension age on or after 6 April 2016 with effect from the date of receipt of this guidance note.
- 1.13 Our understanding of the usual transitional arrangements is that quotes are made using factors effective at that time. Therefore, where calculations are carried out before the date of receipt of this guidance note we would expect the following to apply:
- If the member replies within the guarantee period and before the implementation date, the original quote is honoured including the adjustment applied to GMP.
 - If the member replies within the guarantee period but after implementation date, the approach most beneficial to member are used.
 - If the member replies outside of the guarantee period, the CETV is recalculated. No adjustment is made in respect of GMP.
- 1.14 Any current cases where a CETV is required for a member with GMP reaching State Pension age before 6 April 2016 should be referred to GAD.

Added Pension CETVs

- 1.15 Where a member had both added pension and main scheme benefits, the applicable CETVs for added pension and main scheme benefits should be calculated separately using the appropriate tables found in this note.
- 1.16 This note should not be used to calculate a CETV where added pension benefits are payable from any age other than 60.
- 1.17 Added pension benefits payable from age 65 for a nuvos member should be included with the scheme pension when calculating the CETV as set out in section 3.

Implementation and Review

- 1.18 We understand cash equivalent transfer value factors are the responsibility of the Minister. The factors contained in this guidance will apply from 29 October 2018. This guidance will apply with immediate effect.
- 1.19 This guidance has been written for pension administrators and assumes some knowledge of general pension terminology, and some familiarity with retirement calculations for the PCSPS Pension Scheme. Any questions concerning the application of the guidance should, in the first instance, be referred to the Cabinet Office.
- 1.20 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.
- 1.21 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

- 1.22 This guidance has been prepared 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. This guidance may be published on the 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.
- 1.23 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: classic, classic plus and premium sections – NPA 60 and NPA 65 (excluding additional pension)

- 2.1 The formulae for calculating CETVs for **classic**, **classic plus** and **premium** sections (i.e. values of non-Club transfers out) are set out in paragraph 2.6.
- 2.2 The factors should be selected according to the member's age last birthday, sex and normal pension age (NPA).
- 2.3 To calculate the value of the benefits, the deferred pension, deferred lump sum (if any) and deferred survivor's pension should be calculated (excluding added pension). Each element is multiplied by the relevant factor from Appendix A.
- 2.4 The linked service benefits of a **nuvos** member should be valued as **premium** benefits with NPA of 65 years. The formulae to use is set out in paragraph 2.6.
- 2.5 National Insurance (NI) modification adjustment may apply for some **classic** or **classic plus** members.
- 2.6 For calculating CETVs, the following formula should be used:

$$\text{CETV} = P \times F_x^P + S \times F_x^S + LS \times F_x^{LS} - NI \times F_x^{NI}$$

where:

P = member's annual deferred pension at the relevant date

S = partner's annual pension at the relevant date

LS = **Classic** member's lump sum at the relevant date

NI = **Classic** member's NI modification at the relevant date

F_x^P = member's pension factor for a member aged x last birthday at the relevant date

F_x^S = partner's pension factor for a member aged x last birthday at the relevant date

F_x^{LS} = lump sum factor for a member aged x last birthday at the relevant date

F_x^{NI} = NI modification factor for a member aged x last birthday at the relevant date

- 2.7 The previous version of this guidance note included calculation methodology to allow administrators to value the accrued GMP, typically for use in cases where the value of the GMP was to be quoted separately or liability for the GMP was to be retained within the PCSPS scheme. Factor table P1GMPPR was provided for this purpose. We understand that there is no longer a requirement to provide the value of the GMP on transfer values and therefore we have not included the calculation methodology or factors in this guidance. Please contact GAD if a GMP value is required for a particular case.

CETVs for personal pension ages

- 2.8 Some members may have a normal pension age between 60 and 65 years – i.e., their 'personal pension age' (PPA). If a CETV is required for a member with a PPA, please refer the case to GAD, via the Cabinet Office, to obtain appropriate CETV factors.

3 Instructions: nuvos section

- 3.1 The formulae for calculating CETVs for **nuvos** benefits (i.e. values of non-Club transfers out) are set out in paragraph 3.4. Linked service benefits of a **nuvos** member should be valued in line with paragraph 2.4 above.
- 3.2 The factors should be selected according to the member's age last birthday, sex, normal pension age (NPA) and for the revaluation factor the number of 1 Aprils falling between the calculation date and Normal Pension Age (NPA).
- 3.3 To calculate the value of the benefits, the deferred pension and deferred survivor's pension should be calculated. Each element is multiplied by the relevant factor from Appendix A, and the result multiplied by the appropriate revaluation factor.
- 3.4 For calculating CETVs in all cases for a member with **nuvos** benefits, the following formula should be used:

$$\text{CETV} = (P \times F_x^p + S \times F_x^s + LS \times F_x^{LS}) \times F_y^{\text{Reval}}$$

where:

- P = member's annual **nuvos** deferred pension at the relevant date
- S = partner's annual **nuvos** pension at the relevant date
- F_x^p = member's pension factor for a member aged x last birthday at the relevant date
- F_x^s = partner's pension factor for a member aged x last birthday at the relevant date
- F_y^{Reval} = revaluation factor for a member with y 1 Aprils before NPA as at relevant date

- 3.5 The previous version of this guidance noted that there may be cases where the value of the GMP was to be quoted separately or liability for the GMP was to be retained within the PCSPS scheme. We understand that there is no longer a requirement to provide the value of the GMP on transfer values. Please contact GAD if a GMP value is required for a particular case.

4 Instructions: classic, classic plus and premium – added pension benefits

- 4.1 The formula for calculating part of the CETV in respect of the added pension benefits payable from age 60 acquired while a member of the **classic**, **classic plus** or **premium** sections of PCSPS (i.e. values of non-Club transfers out) are set out in paragraph 4.4.
- 4.2 The factors should be selected according to the member's age last birthday, sex, and for the revaluation factor the number of 1 Aprils falling between the calculation date and Normal Pension Age (NPA of 60 years).
- 4.3 To calculate the value of the benefits, the added pension at calculation date (or relevant date) should be calculated. The pension is multiplied by the relevant factor, and the result multiplied by the appropriate revaluation factor.
- 4.4 For calculating the part of the CETV, "CETV_Added_Pension" in respect of added pension benefits, the following formula should be used:

$$CETV_Added_Pension = (P \times F_x^p) \times F_y^{Reval}$$

where:

P = member's annual **added pension** at the relevant date

F_x^p = member's pension factor for a member aged x last birthday at the relevant date. The factor is obtained from **Table P1CETVAPC** (for classic members) or **Table P1CETVAPP** (for classic plus and premium members) in **Appendix A**.

F_y^{Reval} = revaluation factor for a member with y 1 Aprils before NPA (age 60) as at relevant date from **Table P1CETVAPREVAL** in **Appendix A**

- 4.5 The members overall CETV is the above combined with the result of the calculation under the PCSPS CETV note, "CETV_main_pension".

$$CETV = CETV_main_pension + CETV_Added_Pension$$

CETVs for personal pension ages

- 4.6 Some members may have a normal pension age between 60 and 65 years – i.e. their 'personal pension age' (PPA). If a CETV is required for a member with a PPA, please refer the case to GAD, via the Cabinet Office, to obtain appropriate CETV factor.

5 Example for Classic, Classic plus and Premium Sections – main scheme CETV calculation

Example 1: Active male member – Classic section NPA 60

• Date of birth	31/12/1961
• Sex	Male
• Normal Pension age	60
• Amount of deferred pension	£5,600
• Amount of deferred survivor pension	£2,800
• Amount of lump sum	£16,800
• Amount of NI modification	£0
• Calculation date	01/12/2019
• Relevant table	P1CETV60
• Age last birthday	57
• Pension factor	18.99
• Survivor's pension factor	1.97
• Lump sum factor	0.94
• NI modification factor	13.15

$$\text{CETV} = (£5,600.00 \times 18.99) + (£2,800.00 \times 1.97) + (£16,800.00 \times 0.94) - (£0.00 \times 13.15) \\ = £127,652.$$

6 Example for Nuvos Section

Example 1: Female member

• Date of birth	01/10/1961
• Sex	Female
• Amount of deferred pension	£5,600
• Amount of deferred survivor pension	£2,100
• Calculation date	01/01/2020
• Relevant table	P1CETVN
• Age last birthday	58
• Number of 1 Aprils to NPA	7
• Pension factor	13.17
• Survivor's pension factor	1.79
• revaluation factor	1.15

$$\begin{aligned} \text{CETV} &= [(\text{£}5,600.00 \times 13.17) + (\text{£}2,100.00 \times 1.79)] \times 1.15 \\ &= \text{£}89,137.65 \end{aligned}$$

7 Example calculation – Classic Member with added pension benefits

Examples are illustrative only and are valuing added pension only.

Example 1: Active male member – Classic section NPA 60

• Date of birth	31/12/1970
• Sex	Male
• Normal Pension age	60
• Amount of added pension	£5,600 pa
• Amount of survivor's added pension	£2,800 [not required for calculation]
• Amount of lump sum	£16,800 [not required for calculation]
• CETV calculated from member's main scheme benefits in the classic section:	£255,653.21 [For illustration]
• Calculation date	01/12/2019
• Relevant table	P1CETVAPC
• Age last birthday	48
• Number of 1 Aprils to NPA (60 years)	11
• Pension factor	14.75
Revaluation factor	1.24 [from Table Revaluation factors]

$$\begin{aligned}\text{CETV for added pension} &= (£5,600 \times 14.75) \times 1.24 \\ &= £102,424\end{aligned}$$

The £102,424.00 CETV calculated above for the added pension is then added to the CETV calculated for the member's main scheme benefits in the Classic section.

$$\text{Total CETV payable} = £255,653.21 + £102,424.00 = £358,077.21$$

8 Limitations of this guidance

- 8.1 This guidance should not be used for any purpose other than those set out in this guidance.
- 8.2 The factors contained in this guidance are subject to regular review. Scheme managers and administrators need to ensure that they are using the latest factors, as relevant, when processing cases.
- 8.3 Advice provided by GAD must be taken in context and is intended to be considered in its entirety. Individual sections, if considered in isolation, may be misleading, and conclusions reached by a review of some sections on their own may be incorrect. GAD does not accept responsibility for advice that is altered or used selectively. Clarification should be sought if there is any doubt about the intention or scope of advice provided by GAD.
- 8.4 This guidance only covers the actuarial principles around the calculation and application of cash equivalent transfer value factors. Any legal advice in this area should be sought from an appropriately qualified person or source.
- 8.5 Scheme managers and administrators should satisfy themselves that cash equivalent transfer value calculations and benefit awards comply with all legislative requirements including, but not limited to, tax and contracting-out requirements.
- 8.6 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 Cabinet Office and GAD. Under no circumstances should this guidance take precedence over the Regulations. Administrators should ensure that they comply with all relevant Regulations.

Appendix A: Factor tables

List of Tables

- Table P1CETV60 (Table 207 in consolidated factors spreadsheet): CETV factors for normal pension age of 60 – classic, classic plus and premium
- Table P1CETV65 (Table 208 in consolidated factors spreadsheet): CETV factors for normal pension age of 65 – classic, classic plus and premium
- Table P1CETVN (Table 209 in consolidated factors spreadsheet): CETV factors for normal pension age of 65 – nuvos
- Table Revaluation factors (Table 001 in consolidated factors spreadsheet): Non-club revaluation factors
- Table P1CETVAPC (Table 211 in the consolidated factors spreadsheet): CETV factors for added pension benefits – classic
- Table P1CETVAPP (Table 212 in the consolidated factors spreadsheet): CETV factors for added pension benefits – classic plus and premium

Table P1CETV60 (Table 207 in consolidated factors spreadsheet)
CETV factors for normal pension age of 60 – classic, classic plus and premium

Age	Male				Female			
	Member's pension factor	Deduction for NI modification	Lump Sum	Partner's pension factor	Member's pension factor	Deduction for NI modification	Lump sum	Partner's pension factor
17	7.88	4.34	0.36	0.87	7.88	4.63	0.36	0.87
18	8.05	4.46	0.37	0.93	8.05	4.76	0.37	0.93
19	8.22	4.58	0.38	0.97	8.22	4.89	0.38	0.97
20	8.40	4.71	0.39	0.99	8.40	5.03	0.39	0.99
21	8.58	4.84	0.40	1.02	8.58	5.17	0.40	1.02
22	8.76	4.98	0.41	1.04	8.76	5.31	0.41	1.04
23	8.95	5.11	0.42	1.07	8.95	5.46	0.42	1.07
24	9.15	5.26	0.43	1.09	9.15	5.61	0.43	1.09
25	9.35	5.40	0.44	1.12	9.35	5.77	0.44	1.12
26	9.55	5.55	0.45	1.15	9.55	5.93	0.45	1.15
27	9.75	5.70	0.46	1.17	9.75	6.09	0.46	1.17
28	9.97	5.86	0.47	1.20	9.97	6.26	0.47	1.20
29	10.18	6.02	0.49	1.23	10.18	6.44	0.49	1.23
30	10.40	6.19	0.50	1.26	10.40	6.62	0.50	1.26
31	10.63	6.36	0.51	1.28	10.63	6.80	0.51	1.28
32	10.86	6.54	0.52	1.31	10.86	6.99	0.52	1.31
33	11.10	6.72	0.53	1.34	11.10	7.18	0.53	1.34
34	11.34	6.91	0.55	1.37	11.34	7.38	0.55	1.37
35	11.59	7.10	0.56	1.40	11.59	7.59	0.56	1.40
36	11.84	7.30	0.57	1.43	11.84	7.80	0.57	1.43
37	12.10	7.50	0.59	1.46	12.10	8.02	0.59	1.46
38	12.37	7.71	0.60	1.48	12.37	8.24	0.60	1.48
39	12.64	7.93	0.62	1.51	12.64	8.47	0.62	1.51
40	12.92	8.15	0.63	1.54	12.92	8.71	0.63	1.54
41	13.21	8.37	0.64	1.57	13.21	8.95	0.64	1.57
42	13.50	8.61	0.66	1.60	13.50	9.20	0.66	1.60
43	13.80	8.85	0.68	1.62	13.80	9.46	0.68	1.62
44	14.11	9.10	0.69	1.65	14.11	9.73	0.69	1.65

Table P1CETV60 (Table 207 in consolidated factors spreadsheet) - CETV factors for normal pension age of 60 – classic, classic plus and premium (continued)

Age	Male				Female			
	Member's pension factor	Deduction for NI modification	Lump Sum	Partner's pension factor	Member's pension factor	Deduction for NI modification	Lump Sum	Partner's pension factor
45	14.42	9.36	0.71	1.68	14.42	10.00	0.71	1.68
46	14.75	9.62	0.73	1.71	14.75	10.28	0.73	1.71
47	15.08	9.89	0.74	1.73	15.08	10.57	0.74	1.73
48	15.42	10.17	0.76	1.76	15.42	10.87	0.76	1.76
49	15.77	10.46	0.78	1.79	15.77	11.18	0.78	1.79
50	16.14	10.76	0.80	1.81	16.14	11.50	0.80	1.81
51	16.51	11.07	0.82	1.84	16.51	11.83	0.82	1.84
52	16.89	11.39	0.84	1.86	16.89	12.17	0.84	1.86
53	17.28	11.72	0.86	1.89	17.28	12.52	0.86	1.89
54	17.69	12.05	0.88	1.91	17.69	12.88	0.88	1.91
55	18.11	12.41	0.90	1.93	18.11	13.25	0.90	1.93
56	18.54	12.77	0.92	1.95	18.54	13.63	0.92	1.95
57	18.99	13.15	0.94	1.97	18.99	14.03	0.94	1.97
58	19.45	13.54	0.97	1.99	19.45	14.44	0.97	1.99
59	19.94	13.94	0.99	2.00	19.94	14.87	0.99	2.00
60	19.92	14.37	1.00	2.02	19.92	15.31	1.00	2.02
61	19.40	14.81	1.00	2.04	19.40	15.77	1.00	2.04
62	18.87	15.26	1.00	2.06	18.87	16.25	1.00	2.06
63	18.33	15.74	1.00	2.07	18.33	16.74	1.00	2.07
64	17.79	16.24	1.00	2.09	17.79	17.26	1.00	2.09
65	17.25	16.27	1.00	2.10	17.25	17.30	1.00	2.10
66	16.70	15.81	1.00	2.11	16.70	16.85	1.00	2.11
67	16.14	15.33	1.00	2.12	16.14	16.39	1.00	2.12
68	15.58	14.85	1.00	2.13	15.58	15.92	1.00	2.13
69	15.01	14.36	1.00	2.13	15.01	15.45	1.00	2.13
70	14.44	13.86	1.00	2.14	14.44	14.96	1.00	2.14
71	13.86	13.36	1.00	2.13	13.86	14.47	1.00	2.13
72	13.28	12.85	1.00	2.13	13.28	13.97	1.00	2.13
73	12.70	12.34	1.00	2.12	12.70	13.47	1.00	2.12
74	12.12	11.83	1.00	2.11	12.12	12.96	1.00	2.11
75	11.54	11.33	1.00	2.09	11.54	12.45	1.00	2.09

Table P1CETV65 (Table 208 in consolidated factors spreadsheet) - CETV factors for normal pension age of 65 – classic, classic plus and premium

Age	Male				Female			
	Member's pension factor	Deduction for NI modification	Lump Sum	Partner's pension factor	Member's pension factor	Deduction for NI modification	Lump sum	Partner's pension factor
17	6.22	4.34	0.32	0.88	6.22	4.63	0.32	0.88
18	6.35	4.46	0.33	0.94	6.35	4.76	0.33	0.94
19	6.48	4.58	0.34	0.98	6.48	4.89	0.34	0.98
20	6.62	4.71	0.35	1.01	6.62	5.03	0.35	1.01
21	6.76	4.84	0.36	1.03	6.76	5.17	0.36	1.03
22	6.90	4.98	0.36	1.06	6.90	5.31	0.36	1.06
23	7.04	5.11	0.37	1.08	7.04	5.46	0.37	1.08
24	7.19	5.26	0.38	1.11	7.19	5.61	0.38	1.11
25	7.34	5.40	0.39	1.14	7.34	5.77	0.39	1.14
26	7.50	5.55	0.40	1.16	7.50	5.93	0.40	1.16
27	7.66	5.70	0.41	1.19	7.66	6.09	0.41	1.19
28	7.82	5.86	0.42	1.22	7.82	6.26	0.42	1.22
29	7.98	6.02	0.43	1.25	7.98	6.44	0.43	1.25
30	8.15	6.19	0.44	1.28	8.15	6.62	0.44	1.28
31	8.33	6.36	0.45	1.30	8.33	6.80	0.45	1.30
32	8.50	6.54	0.46	1.33	8.50	6.99	0.46	1.33
33	8.68	6.72	0.47	1.36	8.68	7.18	0.47	1.36
34	8.87	6.91	0.49	1.39	8.87	7.38	0.49	1.39
35	9.05	7.10	0.50	1.42	9.05	7.59	0.50	1.42
36	9.25	7.30	0.51	1.45	9.25	7.80	0.51	1.45
37	9.44	7.50	0.52	1.48	9.44	8.02	0.52	1.48
38	9.65	7.71	0.53	1.51	9.65	8.24	0.53	1.51
39	9.85	7.93	0.55	1.54	9.85	8.47	0.55	1.54
40	10.06	8.15	0.56	1.57	10.06	8.71	0.56	1.57
41	10.28	8.37	0.57	1.60	10.28	8.95	0.57	1.60
42	10.50	8.61	0.59	1.63	10.50	9.20	0.59	1.63
43	10.73	8.85	0.60	1.65	10.73	9.46	0.60	1.65
44	10.96	9.10	0.62	1.68	10.96	9.73	0.62	1.68

Table P1CETV65 (Table 208 in consolidated factors spreadsheet) - CETV factors for normal pension age of 65 – classic, classic plus and premium (continued)

Age	Male				Female			
	Member's pension factor	Deduction for NI modification	Lump Sum	Partner's pension factor	Member's pension factor	Deduction for NI modification	Lump Sum	Partner's pension factor
45	11.20	9.36	0.63	1.71	11.20	10.00	0.63	1.71
46	11.45	9.62	0.64	1.74	11.45	10.28	0.64	1.74
47	11.70	9.89	0.66	1.77	11.70	10.57	0.66	1.77
48	11.96	10.17	0.68	1.79	11.96	10.87	0.68	1.79
49	12.22	10.46	0.69	1.82	12.22	11.18	0.69	1.82
50	12.49	10.76	0.71	1.85	12.49	11.50	0.71	1.85
51	12.77	11.07	0.73	1.88	12.77	11.83	0.73	1.88
52	13.06	11.39	0.74	1.90	13.06	12.17	0.74	1.90
53	13.35	11.72	0.76	1.93	13.35	12.52	0.76	1.93
54	13.66	12.05	0.78	1.95	13.66	12.88	0.78	1.95
55	13.97	12.41	0.80	1.97	13.97	13.25	0.80	1.97
56	14.30	12.77	0.82	2.00	14.30	13.63	0.82	2.00
57	14.63	13.15	0.84	2.02	14.63	14.03	0.84	2.02
58	14.98	13.54	0.86	2.03	14.98	14.44	0.86	2.03
59	15.34	13.94	0.88	2.05	15.34	14.87	0.88	2.05
60	15.72	14.37	0.90	2.06	15.72	15.31	0.90	2.06
61	16.10	14.81	0.92	2.07	16.10	15.77	0.92	2.07
62	16.51	15.26	0.94	2.08	16.51	16.25	0.94	2.08
63	16.93	15.74	0.97	2.09	16.93	16.74	0.97	2.09
64	17.37	16.24	0.99	2.09	17.37	17.26	0.99	2.09
65	17.31	16.27	1.00	2.10	17.31	17.30	1.00	2.10
66	16.74	15.81	1.00	2.11	16.74	16.85	1.00	2.11
67	16.16	15.33	1.00	2.12	16.16	16.39	1.00	2.12
68	15.59	14.85	1.00	2.13	15.59	15.92	1.00	2.13
69	15.01	14.36	1.00	2.13	15.01	15.45	1.00	2.13
70	14.44	13.86	1.00	2.14	14.44	14.96	1.00	2.14
71	13.86	13.36	1.00	2.13	13.86	14.47	1.00	2.13
72	13.28	12.85	1.00	2.13	13.28	13.97	1.00	2.13
73	12.70	12.34	1.00	2.12	12.70	13.47	1.00	2.12
74	12.12	11.83	1.00	2.11	12.12	12.96	1.00	2.11
75	11.54	11.33	1.00	2.09	11.54	12.45	1.00	2.09

Table P1CETVN (Table 209 in consolidated factors spreadsheet) - CETV factors for normal pension age of 65 - nuvos

Age	Male		Female	
	Member's pension factor	Partner's pension factor	Member's pension factor	Partner's pension factor
17	2.43	0.35	2.43	0.35
18	2.53	0.38	2.53	0.38
19	2.63	0.40	2.63	0.40
20	2.74	0.42	2.74	0.42
21	2.85	0.44	2.85	0.44
22	2.97	0.46	2.97	0.46
23	3.10	0.48	3.10	0.48
24	3.22	0.50	3.22	0.50
25	3.36	0.52	3.36	0.52
26	3.50	0.54	3.50	0.54
27	3.64	0.57	3.64	0.57
28	3.79	0.59	3.79	0.59
29	3.95	0.62	3.95	0.62
30	4.12	0.64	4.12	0.64
31	4.29	0.67	4.29	0.67
32	4.46	0.70	4.46	0.70
33	4.65	0.73	4.65	0.73
34	4.84	0.76	4.84	0.76
35	5.05	0.79	5.05	0.79
36	5.26	0.82	5.26	0.82
37	5.48	0.86	5.48	0.86
38	5.71	0.89	5.71	0.89
39	5.94	0.93	5.94	0.93
40	6.19	0.96	6.19	0.96
41	6.45	1.00	6.45	1.00
42	6.73	1.04	6.73	1.04
43	7.01	1.08	7.01	1.08
44	7.30	1.12	7.30	1.12

Table P1CETVN (Table 209 in consolidated factors spreadsheet) - CETV factors for normal pension age of 65 - nuvos (continued)

Age	Male		Female	
	Member's pension factor	Partner's pension factor	Member's pension factor	Partner's pension factor
45	7.61	1.16	7.61	1.16
46	7.94	1.21	7.94	1.21
47	8.27	1.25	8.27	1.25
48	8.62	1.29	8.62	1.29
49	8.99	1.34	8.99	1.34
50	9.37	1.39	9.37	1.39
51	9.77	1.44	9.77	1.44
52	10.19	1.49	10.19	1.49
53	10.63	1.54	10.63	1.54
54	11.09	1.59	11.09	1.59
55	11.58	1.64	11.58	1.64
56	12.08	1.69	12.08	1.69
57	12.61	1.74	12.61	1.74
58	13.17	1.79	13.17	1.79
59	13.76	1.84	13.76	1.84
60	14.38	1.89	14.38	1.89
61	15.03	1.93	15.03	1.93
62	15.71	1.98	15.71	1.98
63	16.44	2.03	16.44	2.03
64	17.20	2.07	17.20	2.07
65	17.31	2.10	17.31	2.10
66	16.74	2.11	16.74	2.11
67	16.16	2.12	16.16	2.12
68	15.59	2.13	15.59	2.13
69	15.01	2.13	15.01	2.13
70	14.44	2.14	14.44	2.14
71	13.86	2.13	13.86	2.13
72	13.28	2.13	13.28	2.13
73	12.70	2.12	12.70	2.12
74	12.12	2.11	12.12	2.11
75	11.54	2.09	11.54	2.09

Table Revaluation factors (Table 001 in consolidated factors 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

**Table P1CETVAPC (Table 211 in the consolidated factors spreadsheet):
CETV factors for added pension benefits – classic**

Age	Classic					
	Male			Female		
	Member factor	Partner's pension factor	Member's + spouse factor	Member factor	Partner's pension factor	Member's + spouse factor
17	3.86	0.18	4.04	3.86	0.18	4.04
18	4.02	0.20	4.22	4.02	0.20	4.22
19	4.19	0.21	4.40	4.19	0.21	4.40
20	4.37	0.22	4.59	4.37	0.22	4.59
21	4.56	0.23	4.78	4.56	0.23	4.78
22	4.75	0.24	4.99	4.75	0.24	4.99
23	4.95	0.25	5.20	4.95	0.25	5.20
24	5.16	0.26	5.42	5.16	0.26	5.42
25	5.38	0.27	5.65	5.38	0.27	5.65
26	5.61	0.28	5.89	5.61	0.28	5.89
27	5.85	0.29	6.14	5.85	0.29	6.14
28	6.09	0.31	6.40	6.09	0.31	6.40
29	6.35	0.32	6.67	6.35	0.32	6.67
30	6.62	0.33	6.96	6.62	0.33	6.96
31	6.90	0.35	7.25	6.90	0.35	7.25
32	7.20	0.36	7.56	7.20	0.36	7.56
33	7.50	0.38	7.88	7.50	0.38	7.88
34	7.82	0.39	8.21	7.82	0.39	8.21
35	8.15	0.41	8.56	8.15	0.41	8.56
36	8.50	0.43	8.93	8.50	0.43	8.93
37	8.86	0.44	9.31	8.86	0.44	9.31
38	9.24	0.46	9.70	9.24	0.46	9.70
39	9.64	0.48	10.12	9.64	0.48	10.12
40	10.05	0.50	10.55	10.05	0.50	10.55
41	10.48	0.52	11.00	10.48	0.52	11.00
42	10.93	0.54	11.47	10.93	0.54	11.47
43	11.40	0.56	11.96	11.40	0.56	11.96
44	11.89	0.58	12.47	11.89	0.58	12.47

**Table P1CETVAPC (Table 211 in the consolidated factors spreadsheet):
CETV factors for added pension benefits – classic (continued)**

Classic						
Age	Male			Female		
	Member factor	Partner's pension factor	Member's + spouse factor	Member factor	Partner's pension factor	Member's + spouse factor
45	12.40	0.60	13.00	12.40	0.60	13.00
46	12.94	0.62	13.56	12.94	0.62	13.56
47	13.50	0.64	14.14	13.50	0.64	14.14
48	14.08	0.67	14.75	14.08	0.67	14.75
49	14.69	0.69	15.38	14.69	0.69	15.38
50	15.33	0.71	16.04	15.33	0.71	16.04
51	16.00	0.74	16.74	16.00	0.74	16.74
52	16.70	0.76	17.46	16.70	0.76	17.46
53	17.43	0.79	18.22	17.43	0.79	18.22
54	18.20	0.81	19.01	18.20	0.81	19.01
55	19.00	0.84	19.84	19.00	0.84	19.84
56	19.85	0.87	20.71	19.85	0.87	20.71
57	20.73	0.89	21.62	20.73	0.89	21.62
58	21.66	0.92	22.58	21.66	0.92	22.58
59	22.64	0.94	23.58	22.64	0.94	23.58
60	22.89	0.96	23.85	22.89	0.96	23.85
61	22.37	0.97	23.34	22.37	0.97	23.34
62	21.85	0.98	22.83	21.85	0.98	22.83
63	21.33	0.98	22.31	21.33	0.98	22.31
64	20.79	0.99	21.78	20.79	0.99	21.78
65	20.25	1.00	21.25	20.25	1.00	21.25
66	19.70	1.00	20.70	19.70	1.00	20.70
67	19.14	1.01	20.15	19.14	1.01	20.15
68	18.58	1.01	19.59	18.58	1.01	19.59
69	18.01	1.01	19.02	18.01	1.01	19.02
70	17.44	1.01	18.45	17.44	1.01	18.45
71	16.86	1.01	17.87	16.86	1.01	17.87
72	16.28	1.01	17.29	16.28	1.01	17.29
73	15.70	1.00	16.71	15.70	1.00	16.71
74	15.12	1.00	16.12	15.12	1.00	16.12
75	14.54	0.99	15.53	14.54	0.99	15.53

**Table P1CETVAPP (Table 212 in the consolidated factors spreadsheet)
CETV factors for added pension benefits – classic plus and premium**

Age	Classic Plus and Premium					
	Male			Female		
	Member factor	Partner's pension factor	Member's + spouse factor	Member factor	Partner's pension factor	Member's + spouse factor
17	3.39	0.14	3.54	3.39	0.14	3.54
18	3.54	0.15	3.69	3.54	0.15	3.69
19	3.68	0.16	3.85	3.68	0.16	3.85
20	3.84	0.17	4.01	3.84	0.17	4.01
21	4.00	0.18	4.18	4.00	0.18	4.18
22	4.17	0.19	4.35	4.17	0.19	4.35
23	4.34	0.19	4.54	4.34	0.19	4.54
24	4.53	0.20	4.73	4.53	0.20	4.73
25	4.72	0.21	4.93	4.72	0.21	4.93
26	4.92	0.22	5.14	4.92	0.22	5.14
27	5.12	0.23	5.35	5.12	0.23	5.35
28	5.34	0.24	5.58	5.34	0.24	5.58
29	5.56	0.25	5.82	5.56	0.25	5.82
30	5.80	0.26	6.06	5.80	0.26	6.06
31	6.04	0.27	6.32	6.04	0.27	6.32
32	6.30	0.29	6.58	6.30	0.29	6.58
33	6.56	0.30	6.86	6.56	0.30	6.86
34	6.84	0.31	7.15	6.84	0.31	7.15
35	7.13	0.32	7.45	7.13	0.32	7.45
36	7.43	0.34	7.77	7.43	0.34	7.77
37	7.75	0.35	8.10	7.75	0.35	8.10
38	8.08	0.36	8.44	8.08	0.36	8.44
39	8.42	0.38	8.80	8.42	0.38	8.80
40	8.78	0.39	9.17	8.78	0.39	9.17
41	9.15	0.41	9.56	9.15	0.41	9.56
42	9.54	0.42	9.97	9.54	0.42	9.97
43	9.95	0.44	10.39	9.95	0.44	10.39
44	10.38	0.46	10.83	10.38	0.46	10.83

Table P1CETVAPP (Table 212 in the consolidated factors spreadsheet)
CETV factors for added pension benefits – classic plus and premium (continued)

Age	Classic Plus and Premium					
	Male			Female		
	Member factor	Partner's pension factor	Member's + spouse factor	Member factor	Partner's pension factor	Member's + spouse factor
45	10.82	0.47	11.30	10.82	0.47	11.30
46	11.29	0.49	11.78	11.29	0.49	11.78
47	11.77	0.51	12.28	11.77	0.51	12.28
48	12.28	0.53	12.81	12.28	0.53	12.81
49	12.81	0.54	13.36	12.81	0.54	13.36
50	13.37	0.56	13.93	13.37	0.56	13.93
51	13.95	0.58	14.53	13.95	0.58	14.53
52	14.56	0.60	15.16	14.56	0.60	15.16
53	15.20	0.62	15.82	15.20	0.62	15.82
54	15.86	0.64	16.51	15.86	0.64	16.51
55	16.56	0.66	17.23	16.56	0.66	17.23
56	17.30	0.68	17.98	17.30	0.68	17.98
57	18.07	0.70	18.78	18.07	0.70	18.78
58	18.89	0.72	19.61	18.89	0.72	19.61
59	19.74	0.74	20.49	19.74	0.74	20.49
60	19.92	0.76	20.68	19.92	0.76	20.68
61	19.40	0.76	20.16	19.40	0.76	20.16
62	18.87	0.77	19.64	18.87	0.77	19.64
63	18.33	0.78	19.11	18.33	0.78	19.11
64	17.79	0.78	18.58	17.79	0.78	18.58
65	17.25	0.79	18.04	17.25	0.79	18.04
66	16.70	0.79	17.49	16.70	0.79	17.49
67	16.14	0.80	16.94	16.14	0.80	16.94
68	15.58	0.80	16.38	15.58	0.80	16.38
69	15.01	0.80	15.81	15.01	0.80	15.81
70	14.44	0.80	15.24	14.44	0.80	15.24
71	13.86	0.80	14.66	13.86	0.80	14.66
72	13.28	0.80	14.08	13.28	0.80	14.08
73	12.70	0.79	13.50	12.70	0.79	13.50
74	12.12	0.79	12.91	12.12	0.79	12.91
75	11.54	0.78	12.33	11.54	0.78	12.33

Appendix B: Assumptions underlying factors

Financial assumptions

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

Mortality assumptions

Base mortality tables	S2NMA and S2NFA
Base table adjustment	Member: 104% of S2NMA for males and 104% of S2NFA for females Dependants: 117% of S2NMA for males and 100% of S2DFA for females (as per 2016 valuation)
Future mortality improvement	Based on ONS principal UK population projections 2016
Year of Use	2020

Other assumptions

Proportion of male members for the purpose of unisexing factors	50%
Age difference between member and partner	Males assumed to be 3 years older than partner and females assumed to be 2 years younger than partner
Proportions partnered	Classic: 68% (male) and 50% (female) at retirement. Non-Classic: 73% (male) and 50% (female) at retirement
Allowance for commutation	Nil except for mandatory lump sum cases