



## Principal Civil Service Pension Scheme (PCSPS)

Actuarial reduction buy out (ARBO) - all members except those retiring before age 55 whose deemed date for pension increases occurs before the date of early retirement.

Factors and guidance

Date: 9 August 2019





## Contents

<b>1</b>	<b>Summary</b>	<b>1</b>
<b>2</b>	<b>Classic and Classic Plus members</b>	<b>4</b>
<b>3</b>	<b>Premium and Nuvos</b>	<b>5</b>
<b>4</b>	<b>Example</b>	<b>6</b>
	<b>Appendix A: Factor tables</b>	<b>7</b>
	<b>Appendix B: Assumptions underlying factors</b>	<b>12</b>
	<b>Appendix C: Limitations of this guidance</b>	<b>13</b>



## 1 Summary

- 1.1 This note is addressed to the Cabinet Office as scheme manager of the PCSPS (the 'Principal Civil Service Pension Scheme' or the 'Scheme').
- 1.2 The purpose of this note is to provide Cabinet Office with the method and tables to be used to calculate the cost of buying out the full actuarial reduction for a member taking early retirement.
- 1.3 Scheme members who are eligible to take actuarially reduced early retirement have the option to pay a lump sum to the scheme and then receive an unreduced pension and lump sum.
- 1.4 This note does not apply to benefits in the **alpha** scheme (or Civil Servants and Others Pension Scheme). We have provided separate advice for the **alpha** scheme in our note *Civil Servants and Others Pension Scheme: Factors for actuarial reduction buy out (ARBO) for alpha members*.
- 1.5 In the remainder of this note, the lump sum payment required to buy out the actuarial reduction is referred to as the actuarial reduction buy out (ARBO) cost. The ARBO cost should be calculated before the member commutes pension for lump sum.
- 1.6 The ARBO cost for added pensions will be calculated in the same way as for main scheme benefits (and using the same tables as determined by paragraphs 2.1 and/or 3.1).
- 1.7 This guidance is intended to supersede any advice previously issued, for the purposes of ARBO calculations. 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 actuarial reduction buy out (ARBO) - all members except those retiring before age 55 whose deemed date for pension increases occurs before the date of early retirement." dated 26 June 2015.

- 1.8 The factors in this note have been updated but the calculation methodology remains unchanged.

### Relevant scheme rules

- 1.9 The PCSPS rules on actuarial reduction buy out are set out below. The rules state that the factors covered by this note are to be prepared by the Minister for the Civil Service, after consulting the scheme actuary.

- |              |   |
|--------------|---|
| 1972 Section | – rule 3.51 (final salary benefits)                       |
|              | – rule 14.18A (added pension benefits)                    |
|              | – rule 12.4 (pension credit member benefits)              |
| 2002 Section | – rule D.3A ( <b>premium</b> final salary benefits)       |
|              | – rule L.11A ( <b>classic plus</b> final salary benefits) |
|              | – rule C1.15A (added pension benefits)                    |



2007 Section – rule E.15A (all benefits)

### **Assumptions**

- 1.10 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.
- 1.11 Details of the principal assumptions underlying the factor tables in this guidance are set out in Appendix B. Some important limitations are set out in Appendix C.

### **Cases not covered by this note**

- 1.12 This note does not apply to PCSPS members who retire before age 55 whose deemed date for pension increases occurs before the date of early retirement. For such members, refer to the latest version of our guidance note *PCSPS: Factors for actuarial reduction buy out (ARBO) when retirement age is less than 55 and the deemed date for pension increases occurs before the date of early retirement*.
- 1.13 Calculations for members whose NPA is not age 60 or 65 years should be referred to GAD.
- 1.14 We do not anticipate any other special cases not covered by this note (or the guidance note referenced in section 1.13 above). However, if any do occur they should be referred to GAD.

### **Implementation and Review**

- 1.15 The factors contained in this guidance will apply from 1 May 2019. This implementation date has been determined by the Cabinet Office. This guidance will apply with immediate effect.
- 1.16 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.
- 1.17 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.
- 1.18 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.
- 1.19 Any special cases that are not covered by this guidance should be treated on a case by case basis.



### **Third Party Reliance**

- 1.20 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 Cabinet Office and 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.
- 1.21 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 Classic and Classic Plus members

- 2.1 The ARBO cost, for a **classic** or **classic plus** member retiring before NPA, should be calculated as:

$$Cost = P \times F_x + (LS - (LS \times ERF(LS)_x))$$

where:

- $x$  = member's age at retirement date in years and complete months
- $P$  = unreduced pension at retirement date (including added and transfer in pension)
- $F_x$  = relevant factor for a member aged  $x$ , taken from:
- Table 1 for a member with NPA 60
  - Table 2 for a member with NPA 65<sup>1</sup>
- $LS$  = unreduced lump sum at retirement date
- $ERF(LS)_x$  = lump sum early retirement factor for a member aged  $x$

- 2.2 The ARBO cost should be calculated before the member commutes pension for lump sum.
- 2.3 The lump sum early retirement factor,  $ERF(LS)_x$ , is the actuarial reduction factor that would apply to the member's lump sum, if they received actuarially reduced benefits and did not take up the buy out option.
- 2.4 The relevant tables are taken from the latest version of our guidance note *Principal Civil Service Pension Scheme: Early and late retirement factors* with NPA 60 members using table 2: P1ER60LS1 and NPA 65 members using table 6: P1ER65LS1.
- 2.5 Pension credit members in **classic** and **classic plus** have the option to buy out the actuarial reduction. The ARBO cost should be calculated as described in paragraph 2.1.

---

<sup>1</sup> We understand that there are a small number of **classic** members with an NPA of 65.



### 3 Premium and Nuvos

- 3.1 The ARBO cost, for a member retiring early who is a **premium** or **nuvos** member, should be calculated as:

$$Cost = P \times F_x$$

where:

- $x$  = member's age at retirement date in years and complete months
- $P$  = unreduced pension at retirement date (including added and transfer in pension)
- $F_x$  = relevant factor for a member aged  $x$ , taken from:
- Table 1 for a NPA60 **premium** member
  - Table 2 for a NPA 65 **premium** member<sup>2</sup> or linked service benefits for a **nuvos** member
  - Table 3 for a **nuvos** member (excluding pension credit members)
  - Table 4 for a **nuvos** pension credit member

- 3.2 The ARBO cost should be calculated before the member commutes pension for lump sum.
- 3.3 Pension credit members in **premium** have the option to buy out the actuarial reduction. The ARBO cost should be calculated as described in paragraph 3.1 for a **premium** member.
- 3.4 Pension credit members in **nuvos** have the option to buy out the actuarial reduction. We understand that their pension is payable unreduced from age 60.
- 3.5 Different factors are required to calculate the ARBO cost for **nuvos** pension credit members compared to those used for normal **nuvos** members. The appropriate factors are described in paragraph 3.1.

---

<sup>2</sup> We understand that there are a small number of **premium** members with an NPA of 65.



## 4 Example

### Member details:

• Scheme section	<b>classic</b>
• Normal Pension age (NPA)	60 years
• Date of birth	18/08/1962
• Unreduced pension at retirement date	£5,600
• Lump sum (unreduced)	£16,800
• Retirement date	14/12/2020

### Calculations:

• Age at retirement (in years and complete months)	58 years 3 months
• Table to use	Table 1 (P1ARBO60)
• Factor for buy out of pension ( $F_x$ )	1.70
• ERF for Lump sum $ERF(LS)_x$	0.960*

$$\bullet \text{ ARBO cost} = P \times F_x + (LS - (LS \times ERF(LS)_x))$$

$$= £5,600.00 \times 1.70 + (16,800.00 - (16,800.00 \times 0.960))$$

$$= £10,192.00$$

\* The relevant factor is taken from the latest version of our guidance note  
*Principal Civil Service Pension Scheme: Early and late retirement factors table 2:*  
P1ER60LS1.





## Appendix A: Factor tables

### List of Tables

- Table 1: P1ARBO60 (Table 706 in consolidated factors spreadsheet) – **classic** or **premium** members with an NPA of 60.
- Table 2: P1ARBO65FS (Table 707 in consolidated factors spreadsheet) – **classic** or **premium** members with NPA of 65.
- Table 3: P1ARBO65NUV (Table 708 in consolidated factors spreadsheet) – **nuvos** members (excluding pension credit members).
- Table 4: P1ARBO60NUV (Table 709 in consolidated factors spreadsheet) – **nuvos** pension credit members.



**Table 1: P1ARBO60 (Table 706 in consolidated factors spreadsheet) - ARBO factors for classic or premium members with an NPA of 60**

<b>Age at early retirement</b>											
<b>months</b>	<b>50</b>	<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>55</b>	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>
<b>0</b>	8.59	7.88	7.13	6.35	5.53	4.68	3.79	2.88	1.94	0.99	0.00
<b>1</b>	8.53	7.82	7.07	6.28	5.46	4.60	3.71	2.80	1.86	0.90	
<b>2</b>	8.47	7.76	7.00	6.22	5.39	4.53	3.64	2.72	1.78	0.82	
<b>3</b>	8.41	7.69	6.94	6.15	5.32	4.46	3.56	2.65	1.70	0.74	
<b>4</b>	8.35	7.63	6.87	6.08	5.25	4.38	3.49	2.57	1.62	0.66	
<b>5</b>	8.29	7.57	6.81	6.01	5.18	4.31	3.41	2.49	1.54	0.57	
<b>6</b>	8.24	7.51	6.74	5.94	5.11	4.23	3.33	2.41	1.46	0.49	
<b>7</b>	8.18	7.44	6.68	5.88	5.03	4.16	3.26	2.33	1.38	0.41	
<b>8</b>	8.12	7.38	6.61	5.81	4.96	4.09	3.18	2.26	1.30	0.33	
<b>9</b>	8.06	7.32	6.55	5.74	4.89	4.01	3.11	2.18	1.23	0.25	
<b>10</b>	8.00	7.26	6.48	5.67	4.82	3.94	3.03	2.10	1.15	0.16	
<b>11</b>	7.94	7.20	6.42	5.60	4.75	3.86	2.95	2.02	1.07	0.08	

**Note:**

These factors should not be used for members who retire before age 55 and whose deemed date for pension increases occurs before the date of early retirement.



**Table 2: P1ARBO65FS (Table 707 in consolidated factors spreadsheet) - ARBO factors for classic or premium members with an NPA of 65**

months	Age at early retirement															
	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
0	12.19	11.57	10.92	10.23	9.51	8.76	7.98	7.18	6.36	5.52	4.66	3.77	2.87	1.94	0.98	0.00
1	12.14	11.51	10.86	10.17	9.45	8.69	7.91	7.11	6.29	5.45	4.58	3.70	2.79	1.86	0.90	
2	12.08	11.46	10.80	10.11	9.39	8.63	7.84	7.04	6.22	5.37	4.51	3.62	2.71	1.78	0.82	
3	12.03	11.40	10.74	10.05	9.32	8.56	7.78	6.97	6.15	5.30	4.44	3.55	2.63	1.70	0.74	
4	11.98	11.35	10.69	9.99	9.26	8.50	7.71	6.90	6.08	5.23	4.36	3.47	2.56	1.62	0.65	
5	11.93	11.30	10.63	9.93	9.20	8.43	7.64	6.84	6.01	5.16	4.29	3.40	2.48	1.54	0.57	
6	11.88	11.24	10.57	9.87	9.14	8.37	7.58	6.77	5.94	5.09	4.22	3.32	2.40	1.46	0.49	
7	11.83	11.19	10.52	9.81	9.07	8.30	7.51	6.70	5.87	5.02	4.14	3.24	2.32	1.38	0.41	
8	11.77	11.13	10.46	9.75	9.01	8.24	7.44	6.63	5.80	4.94	4.07	3.17	2.25	1.30	0.33	
9	11.72	11.08	10.40	9.69	8.95	8.17	7.38	6.56	5.73	4.87	3.99	3.09	2.17	1.22	0.25	
10	11.67	11.02	10.35	9.63	8.88	8.11	7.31	6.49	5.66	4.80	3.92	3.02	2.09	1.14	0.16	
11	11.62	10.97	10.29	9.57	8.82	8.04	7.24	6.43	5.59	4.73	3.85	2.94	2.01	1.06	0.08	

**Note:**

These factors should not be used for members who retire before age 55 and whose deemed date for pension increases occurs before the date of early retirement.



**Table 3: P1ARBO65NUV (Table 708 in consolidated factors spreadsheet) - ARBO factors for nuvos members**

months	Age at early retirement										
	55	56	57	58	59	60	61	62	63	64	65
0	8.76	7.98	7.18	6.36	5.52	4.66	3.77	2.87	1.94	0.98	0.00
1	8.69	7.91	7.11	6.29	5.45	4.58	3.70	2.79	1.86	0.90	
2	8.63	7.84	7.04	6.22	5.37	4.51	3.62	2.71	1.78	0.82	
3	8.56	7.78	6.97	6.15	5.30	4.44	3.55	2.63	1.70	0.74	
4	8.50	7.71	6.90	6.08	5.23	4.36	3.47	2.56	1.62	0.65	
5	8.43	7.64	6.84	6.01	5.16	4.29	3.40	2.48	1.54	0.57	
6	8.37	7.58	6.77	5.94	5.09	4.22	3.32	2.40	1.46	0.49	
7	8.30	7.51	6.70	5.87	5.02	4.14	3.24	2.32	1.38	0.41	
8	8.24	7.44	6.63	5.80	4.94	4.07	3.17	2.25	1.30	0.33	
9	8.17	7.38	6.56	5.73	4.87	3.99	3.09	2.17	1.22	0.25	
10	8.11	7.31	6.49	5.66	4.80	3.92	3.02	2.09	1.14	0.16	
11	8.04	7.24	6.43	5.59	4.73	3.85	2.94	2.01	1.06	0.08	



**Table 4: P1ARBO60NUV (Table 709 in consolidated factors spreadsheet) - ARBO factors for nuvos pension credit members**

<b>Age at early retirement</b>						
<b>months</b>	<b>55</b>	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>65</b>
<b>0</b>	4.68	3.79	2.88	1.94	0.99	0.00
<b>1</b>	4.60	3.71	2.80	1.86	0.90	
<b>2</b>	4.53	3.64	2.72	1.78	0.82	
<b>3</b>	4.46	3.56	2.65	1.70	0.74	
<b>4</b>	4.38	3.49	2.57	1.62	0.66	
<b>5</b>	4.31	3.41	2.49	1.54	0.57	
<b>6</b>	4.23	3.33	2.41	1.46	0.49	
<b>7</b>	4.16	3.26	2.33	1.38	0.41	
<b>8</b>	4.09	3.18	2.26	1.30	0.33	
<b>9</b>	4.01	3.11	2.18	1.23	0.25	
<b>10</b>	3.94	3.03	2.10	1.15	0.16	
<b>11</b>	3.86	2.95	2.02	1.07	0.08	



## Appendix B: Assumptions underlying factors

### Financial assumptions

Nominal discount rate	4.448% pa
CPI	2.00% 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 (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%
Allowance for commutation	Nil



## Appendix C: Limitations of this guidance

- C.1 This guidance should not be used for any purpose other than those set out in this guidance.
- C.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.
- C.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.
- C.4 This guidance only covers the actuarial principles around the calculation and application of ARBO factors. Any legal advice in this area should be sought from an appropriately qualified person or source.
- C.5 Scheme managers and administrators should satisfy themselves that ARBO calculations and benefit awards comply with all legislative requirements including, but not limited to, tax and contracting-out requirements.
- C.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 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.