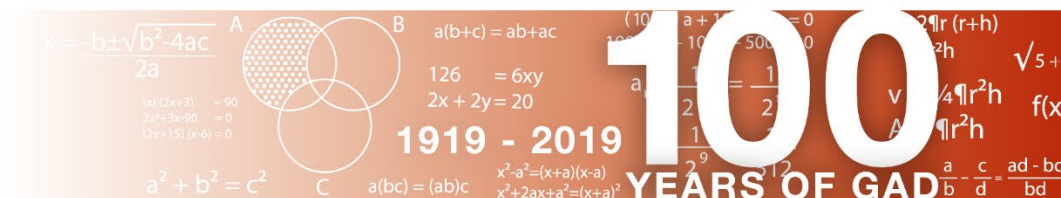




Government
Actuary's
Department



Public Service (Civil Servants and Others) Pension Scheme (Northern Ireland) (Alpha Scheme)

Actuarial Reduction buy out (ARBO) for alpha
members
Factors and guidance

Date: 1 August 2019





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1 Introduction

- 1.1 This note is addressed to the Northern Ireland Department of Finance (DoF) as scheme manager of the **alpha** scheme. The **alpha** scheme was established by The Public Service (Civil Servants and Others) Pensions Regulations (Northern Ireland) 2014 ("the Regulations") and came into force on 1 April 2015.
- 1.2 **Alpha** 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.
- 1.3 The purpose of this note is to provide tables to be used to calculate the cost of buying out the full actuarial reduction that will apply to a member who wishes to take their pension benefits in the **alpha** scheme before pension age.
- 1.4 Under regulation 82 of the regulations, **alpha** members who take their benefits early have the option of buying out the actuarial reduction.
- 1.5 Regulation 82(7) states that:

The cost of buying out the early payment reduction is an amount determined by the scheme manager after consulting the scheme actuary.

This guidance note contains our advice, as scheme actuary, to the scheme manager on calculating that cost.

- 1.6 In the remainder of this note, the lump sum payment required to buy out the actuarial reduction is referred to as the actuarial buy out (ARBO) cost.
- 1.7 This note does not apply to benefits in the **classic**, **classic plus**, **premium** or **nuvos** sections of the Principal Civil Service Pension Scheme (Northern Ireland). To calculate the ARBO cost for members of the classic, classic plus, premium or nuvos sections, please refer to the latest version of the guidance note below:
- Principal Civil Service Pension Scheme (Northern Ireland): Factors for Buy Out of Actuarial Reduction for classic, classic plus, premium and nuvos members.
- 1.8 The factors provided in this note have been prepared in light of our advice to the DoF dated 30 October 2018 and its instructions following that advice.
- 1.9 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:
- "Public Service (Civil Servants and Others) Pension Scheme (Northern Ireland): Factors for Actuarial reduction buy out (ARBO) for alpha members" dated 24 April 2015.



- 1.10 The factors in this note have been updated but the calculation methodology remains unchanged.
- 1.11 Details of the principal assumptions underlying the factor are set out in Appendix B. Some important limitations are set out in section 4

Implementation and Review

- 1.12 The factors contained in this guidance will apply from 1 April 2019. This implementation date has been determined by the DoF. This guidance will apply with immediate effect upon receipt of the respective guidance.
- 1.13 This guidance has been written for pension administrators and assumes some basic knowledge of general pension terminology, and some familiarity with retirement calculations for the CSOPS(NI). Any questions concerning the application of this guidance should, in the first, instance, be referred to the DoF.
- 1.14 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.
- 1.15 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 credible and material information comes to light.
- 1.16 Any special cases that are not covered by this guidance should be treated on a case by case basis.

Third Party Reliance

- 1.17 This guidance has been prepared for the use of DoF 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 DoF and scheme administrator's websites 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 DoF 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 Members who wish to take their scheme benefits before their normal pension age (NPA)¹ or, if applicable, their effective pension age (EPA) may be entitled to actuarially reduced benefits on early retirement.
- 2.2 Tables are provided for the range of pension ages which apply to members who join the **alpha** scheme at inception.
- 2.3 The factors should be selected according to the member's age (in years and complete months) and pension age. If a member has a non-integer pension age then more than one factor is required and these factors are interpolated to obtain the actual factor to use.
- 2.4 To calculate the value of the ARBO, the member's annual pension should be calculated. This is multiplied by the relevant factor from Appendix A.
- 2.5 To calculate the ARBO cost for a member retiring early from the alpha scheme, the following formula should be used:

$$ARBO = P \times F_x^P$$

where:

P = member's unreduced pension at the relevant date

F_x^P = relevant factor for a member aged x (in years and complete months), taken from Tables 1 to 5 depending on the member's pension age P (NPA or EPA, as appropriate).

- 2.6 Where a member wishes to buy out the actuarial reduction on a pension with several different pension ages (e.g. because some of the pension has an EPA while the rest is payable from NPA), the calculation described in paragraph 2.7 should be done separately for the member's pension attributable to each pension age and then the answers should be added together to give the total ARBO cost.
- 2.7 The ARBO cost should be calculated before the member commutes pension for lump sum.

¹ Normal pension age in the alpha section is defined as a member's state pension age, or 65, if that is higher. For the purpose of this note, state pension age is as defined in legislation on the calculation date.



3 Example

Male member with an EPA on some of their pension

- Date of birth 18/08/1960
- Normal Pension age (NPA) 66 years 5 months
- Effective Pension Age (EPA) 65 years 5 months
- Pension attributable to NPA (unreduced) £5,600
- Pension attributable to EPA (unreduced) £1,000
- Calculation date 15/04/2019

- Age (in years and complete months) 58 years 7 months
- Factor for buyout of NPA pension 7.01333
- Factor for buyout of EPA pension 6.20167

- ARBO for NPA pension $= £5,600.00 * 7.0133$
 $= £39,274.65$
- ARBO for EPA pension $= £1,000.00 * 6.20167$
 $= £6,201.67$

- Total ARBO $= £39,274.65 + £6,201.67 = £45,449.32$

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

Factor at NPA 66 years 5 months

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



4 Limitations of this guidance

- 4.1 This guidance should not be used for any purpose other than those set out in this guidance.
- 4.2 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.
- 4.3 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.
- 4.4 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.
- 4.5 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.
- 4.6 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 DoF 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 1: P2ARBO65 (Table 722 in the consolidated factors spreadsheet) - Alpha ARBO factors for pension age of 65.
- Table 2: P2ARBO66 (Table 723 in the consolidated factors spreadsheet) - Alpha ARBO factors for pension age of 66.
- Table 3: P2ARBO67 (Table 724 in the consolidated factors spreadsheet) - Alpha ARBO factors for pension age of 67.
- Table 4: P2ARBO68 (Table 725 in the consolidated factors spreadsheet) - Alpha ARBO factors for pension age of 68.



**Table 1: P2ARBO65 (Table 722 in the consolidated factors spreadsheet) - Alpha
ARBO factors for pension age of 65**

Age at early retirement											
months	55	56	57	58	59	60	61	62	63	64	65
0	8.75	7.97	7.17	6.35	5.51	4.65	3.77	2.87	1.94	0.98	0.00
1	8.68	7.90	7.10	6.28	5.44	4.58	3.70	2.79	1.86	0.90	
2	8.62	7.84	7.03	6.21	5.37	4.51	3.62	2.71	1.78	0.82	
3	8.55	7.77	6.97	6.14	5.30	4.43	3.54	2.63	1.70	0.74	
4	8.49	7.70	6.90	6.07	5.23	4.36	3.47	2.56	1.62	0.65	
5	8.42	7.64	6.83	6.00	5.16	4.29	3.39	2.48	1.54	0.57	
6	8.36	7.57	6.76	5.93	5.08	4.21	3.32	2.40	1.46	0.49	
7	8.29	7.50	6.69	5.86	5.01	4.14	3.24	2.32	1.38	0.41	
8	8.23	7.44	6.62	5.79	4.94	4.07	3.17	2.25	1.30	0.33	
9	8.16	7.37	6.56	5.72	4.87	3.99	3.09	2.17	1.22	0.25	
10	8.10	7.30	6.49	5.65	4.80	3.92	3.02	2.09	1.14	0.16	
11	8.03	7.24	6.42	5.58	4.73	3.84	2.94	2.01	1.06	0.08	

**Table 2: P2ARBO66 (Table 723 in the consolidated factors spreadsheet) - Alpha
ARBO factors for pension age of 66**

Age at early retirement												
months	55	56	57	58	59	60	61	62	63	64	65	66
0	9.50	8.74	7.96	7.16	6.34	5.50	4.65	3.77	2.86	1.93	0.98	0.00
1	9.43	8.67	7.89	7.09	6.27	5.43	4.57	3.69	2.78	1.85	0.90	
2	9.37	8.61	7.82	7.02	6.20	5.36	4.50	3.61	2.71	1.77	0.82	
3	9.31	8.54	7.76	6.95	6.13	5.29	4.43	3.54	2.63	1.70	0.74	
4	9.24	8.48	7.69	6.89	6.06	5.22	4.35	3.46	2.55	1.62	0.65	
5	9.18	8.41	7.62	6.82	5.99	5.15	4.28	3.39	2.48	1.54	0.57	
6	9.12	8.35	7.56	6.75	5.92	5.08	4.21	3.31	2.40	1.46	0.49	
7	9.05	8.28	7.49	6.68	5.85	5.00	4.13	3.24	2.32	1.38	0.41	
8	8.99	8.22	7.42	6.61	5.78	4.93	4.06	3.16	2.24	1.30	0.33	
9	8.93	8.15	7.36	6.55	5.71	4.86	3.99	3.09	2.17	1.22	0.25	
10	8.86	8.09	7.29	6.48	5.64	4.79	3.91	3.01	2.09	1.14	0.16	
11	8.80	8.02	7.23	6.41	5.57	4.72	3.84	2.94	2.01	1.06	0.08	



**Table 3: P2ARBO67 (Table 724 in the consolidated factors spreadsheet) - Alpha
ARBO factors for pension age of 67**

Age at early retirement													
months	55	56	57	58	59	60	61	62	63	64	65	66	67
0	10.22	9.48	8.72	7.94	7.15	6.33	5.49	4.64	3.76	2.86	1.93	0.98	0.00
1	10.16	9.42	8.65	7.88	7.08	6.26	5.42	4.56	3.68	2.78	1.85	0.90	
2	10.10	9.35	8.59	7.81	7.01	6.19	5.35	4.49	3.61	2.70	1.77	0.82	
3	10.04	9.29	8.52	7.74	6.94	6.12	5.28	4.42	3.53	2.63	1.69	0.73	
4	9.97	9.23	8.46	7.68	6.87	6.05	5.21	4.34	3.46	2.55	1.61	0.65	
5	9.91	9.16	8.40	7.61	6.81	5.98	5.14	4.27	3.38	2.47	1.53	0.57	
6	9.85	9.10	8.33	7.54	6.74	5.91	5.07	4.20	3.31	2.39	1.46	0.49	
7	9.79	9.04	8.27	7.48	6.67	5.84	5.00	4.13	3.23	2.32	1.38	0.41	
8	9.73	8.97	8.20	7.41	6.60	5.77	4.92	4.05	3.16	2.24	1.30	0.33	
9	9.66	8.91	8.14	7.35	6.53	5.70	4.85	3.98	3.08	2.16	1.22	0.24	
10	9.60	8.85	8.07	7.28	6.47	5.63	4.78	3.91	3.01	2.09	1.14	0.16	
11	9.54	8.78	8.01	7.21	6.40	5.56	4.71	3.83	2.93	2.01	1.06	0.08	

**Table 4: P2ARBO68 (Table 725 in the consolidated factors spreadsheet)- Alpha
ARBO factors for pension age of 68**

Age at early retirement														
months	55	56	57	58	59	60	61	62	63	64	65	66	67	68
0	10.92	10.20	9.46	8.70	7.93	7.13	6.32	5.48	4.63	3.75	2.85	1.93	0.98	0.00
1	10.86	10.14	9.40	8.64	7.86	7.06	6.25	5.41	4.56	3.68	2.78	1.85	0.90	
2	10.80	10.08	9.33	8.57	7.79	7.00	6.18	5.34	4.48	3.60	2.70	1.77	0.81	
3	10.74	10.01	9.27	8.51	7.73	6.93	6.11	5.27	4.41	3.53	2.62	1.69	0.73	
4	10.68	9.95	9.21	8.44	7.66	6.86	6.04	5.20	4.34	3.45	2.54	1.61	0.65	
5	10.62	9.89	9.14	8.38	7.59	6.79	5.97	5.13	4.26	3.38	2.47	1.53	0.57	
6	10.56	9.83	9.08	8.31	7.53	6.72	5.90	5.06	4.19	3.30	2.39	1.45	0.49	
7	10.50	9.77	9.02	8.25	7.46	6.66	5.83	4.98	4.12	3.23	2.31	1.37	0.41	
8	10.44	9.71	8.95	8.18	7.40	6.59	5.76	4.91	4.04	3.15	2.24	1.29	0.33	
9	10.38	9.64	8.89	8.12	7.33	6.52	5.69	4.84	3.97	3.08	2.16	1.22	0.24	
10	10.32	9.58	8.83	8.05	7.26	6.45	5.62	4.77	3.90	3.00	2.08	1.14	0.16	
11	10.26	9.52	8.76	7.99	7.20	6.39	5.55	4.70	3.82	2.93	2.00	1.06	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: 110% of S2NMA for males and 110% 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