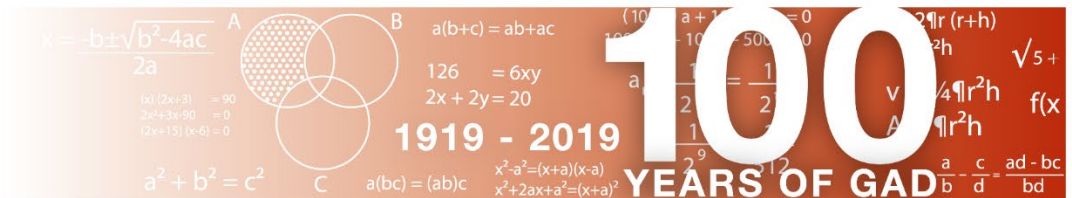




Government
Actuary's
Department



Principal Civil Service Pension Scheme (Northern Ireland)

Factors for Buy Out of Actuarial Reduction
for classic, classic plus, premium and nuvos
members

Date: 1 August 2019





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1 Summary

- 1.1 This note is addressed to the Northern Ireland Department of Finance (DoF) as scheme manager of the Principal Civil Service Pension Scheme (Northern Ireland) (PCSPS (NI)).
- 1.2 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.
- 1.3 The method and tables in this note should be used to calculate the cost of buying out the full actuarial reduction.
- 1.4 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.
- 1.5 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).
- 1.6 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 (Northern Ireland): Factors for buy out actuarial reduction for classic, classic plus, premium and nuvos members” dated 24 April 2015.

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

Assumptions

- 1.8 ARBO factors are the responsibility of the DoF under rules 3.55(iii) of the 1972 section, C.1.15A(2) of the 2002 section and E.15A(3) of the 2007 section.
- 1.9 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.
- 1.10 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 section 5.

Cases not covered by this note

- 1.11 This note does not apply for PCSPS(NI) members who both early retire before age 55 and whose deemed date for pension increases occurs before the date of early retirement. These should be treated on a case by case basis.



- 1.12 We do not anticipate any other special cases not covered by this note. However, if any do occur they should be referred to GAD.
- 1.13 This note does not apply to benefits in the **alpha** scheme for which separate guidance is provided.

Implementation and Review

- 1.14 The factors contained in this guidance will apply from 1 April 2019. The DoF has determined this implementation date. This guidance will apply with immediate effect upon receipt of the respective guidance.
- 1.15 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 (NI). Any questions concerning the application of the guidance should in the first instance be referred to the DoF.
- 1.16 In line with best practice and in order to make sure that the 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.
- 1.17 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.
- 1.18 Any special cases that are not covered by this guidance should be treated on a case by case basis.

Third Party Reliance

- 1.19 This guidance has been prepared for the use of the 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 the DoF and the scheme administrator's website but must not otherwise be reproduced, distributed or communicated in whole or in part to any person without GAD's prior written permission.
- 1.20 Other than the 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 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
- 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. The relevant tables are taken from our guidance note *Principal Civil Service Pension Scheme (Northern Ireland) Early and late retirement factors* using table 2: P1ER60LS1 for NPA 60 members, and table 6: P1ER65LS1 for NPA 65 members.
- 2.4 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.



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 NPA 60 **premium** member
 - Table 2 for a NPA 65 **premium** member 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. Their pension is payable unreduced from age 60. 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.



4 Example

Member details:

| | |
|--|----------------|
| • Scheme section | Classic |
| • 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 |

$$\begin{aligned}
 \bullet \text{ ARBO cost} &= P \times F_x + (LS - (LS \times ERF(LS)_x)) \\
 &= £5,600.00 \times 1.70 + (16,800.00 - (16,800 \times 0.960)) \\
 &= £10,192.00
 \end{aligned}$$

* The relevant factor is taken from our guidance note *Principal Civil Service Pension Scheme (Northern Ireland) Early and late retirement factors* table 2: P1ER60LS1.



5 Limitations of this guidance

- 5.1 This guidance should not be used for any purpose other than those set out in this guidance.
- 5.2 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.
- 5.3 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.
- 5.4 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.
- 5.5 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.
- 5.6 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 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: P1ARBO60 (Table 726 in the consolidated factors spreadsheet) – **classic** or **premium** members with an NPA of 60.
- Table 2: P1ARBO65FS (Table 727 in the consolidated factors spreadsheet) – **classic** or **premium** members with NPA of 65.
- Table 3: P1ARBO65NUV (Table 728 in the consolidated factors spreadsheet) – **nuvos** members (excluding pension credit members).
- Table 4: P1ARBO60NUV (Table 729 in the consolidated factors spreadsheet) – **nuvos** pension credit members.



Table 1: P1ARBO60 (Table 726 in the consolidated factors spreadsheet) - ARBO factors for classic or premium members with an NPA of 60

| months | Age at early retirement | | | | | | | | | | |
|-----------|-------------------------|------|------|------|------|------|------|------|------|------|------|
| | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 0 | 8.59 | 7.87 | 7.13 | 6.35 | 5.53 | 4.68 | 3.79 | 2.88 | 1.94 | 0.99 | 0.00 |
| 1 | 8.53 | 7.81 | 7.06 | 6.28 | 5.46 | 4.60 | 3.71 | 2.80 | 1.86 | 0.90 | |
| 2 | 8.47 | 7.75 | 7.00 | 6.21 | 5.39 | 4.53 | 3.64 | 2.72 | 1.78 | 0.82 | |
| 3 | 8.41 | 7.69 | 6.93 | 6.15 | 5.32 | 4.45 | 3.56 | 2.64 | 1.70 | 0.74 | |
| 4 | 8.35 | 7.63 | 6.87 | 6.08 | 5.25 | 4.38 | 3.48 | 2.57 | 1.62 | 0.66 | |
| 5 | 8.29 | 7.56 | 6.80 | 6.01 | 5.18 | 4.31 | 3.41 | 2.49 | 1.54 | 0.57 | |
| 6 | 8.23 | 7.50 | 6.74 | 5.94 | 5.10 | 4.23 | 3.33 | 2.41 | 1.46 | 0.49 | |
| 7 | 8.17 | 7.44 | 6.67 | 5.87 | 5.03 | 4.16 | 3.26 | 2.33 | 1.38 | 0.41 | |
| 8 | 8.11 | 7.38 | 6.61 | 5.80 | 4.96 | 4.08 | 3.18 | 2.26 | 1.30 | 0.33 | |
| 9 | 8.05 | 7.32 | 6.54 | 5.74 | 4.89 | 4.01 | 3.11 | 2.18 | 1.22 | 0.25 | |
| 10 | 7.99 | 7.25 | 6.48 | 5.67 | 4.82 | 3.94 | 3.03 | 2.10 | 1.14 | 0.16 | |
| 11 | 7.93 | 7.19 | 6.41 | 5.60 | 4.75 | 3.86 | 2.95 | 2.02 | 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 2: P1ARBO65FS (Table 727 in the 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 | 12.18 | 11.56 | 10.90 | 10.22 | 9.50 | 8.75 | 7.97 | 7.17 | 6.35 | 5.51 | 4.65 | 3.77 | 2.87 | 1.94 | 0.98 | 0.00 |
| 1 | 12.12 | 11.50 | 10.85 | 10.16 | 9.44 | 8.68 | 7.90 | 7.10 | 6.28 | 5.44 | 4.58 | 3.70 | 2.79 | 1.86 | 0.90 | |
| 2 | 12.07 | 11.45 | 10.79 | 10.10 | 9.38 | 8.62 | 7.84 | 7.03 | 6.21 | 5.37 | 4.51 | 3.62 | 2.71 | 1.78 | 0.82 | |
| 3 | 12.02 | 11.39 | 10.73 | 10.04 | 9.32 | 8.55 | 7.77 | 6.97 | 6.14 | 5.30 | 4.43 | 3.54 | 2.63 | 1.70 | 0.74 | |
| 4 | 11.97 | 11.34 | 10.68 | 9.98 | 9.25 | 8.49 | 7.70 | 6.90 | 6.07 | 5.23 | 4.36 | 3.47 | 2.56 | 1.62 | 0.65 | |
| 5 | 11.92 | 11.28 | 10.62 | 9.92 | 9.19 | 8.42 | 7.64 | 6.83 | 6.00 | 5.16 | 4.29 | 3.39 | 2.48 | 1.54 | 0.57 | |
| 6 | 11.87 | 11.23 | 10.56 | 9.86 | 9.13 | 8.36 | 7.57 | 6.76 | 5.93 | 5.08 | 4.21 | 3.32 | 2.40 | 1.46 | 0.49 | |
| 7 | 11.81 | 11.18 | 10.51 | 9.80 | 9.06 | 8.29 | 7.50 | 6.69 | 5.86 | 5.01 | 4.14 | 3.24 | 2.32 | 1.38 | 0.41 | |
| 8 | 11.76 | 11.12 | 10.45 | 9.74 | 9.00 | 8.23 | 7.44 | 6.62 | 5.79 | 4.94 | 4.07 | 3.17 | 2.25 | 1.30 | 0.33 | |
| 9 | 11.71 | 11.07 | 10.39 | 9.68 | 8.94 | 8.16 | 7.37 | 6.56 | 5.72 | 4.87 | 3.99 | 3.09 | 2.17 | 1.22 | 0.25 | |
| 10 | 11.66 | 11.01 | 10.34 | 9.62 | 8.88 | 8.10 | 7.30 | 6.49 | 5.65 | 4.80 | 3.92 | 3.02 | 2.09 | 1.14 | 0.16 | |
| 11 | 11.61 | 10.96 | 10.28 | 9.56 | 8.81 | 8.03 | 7.24 | 6.42 | 5.58 | 4.73 | 3.84 | 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 728 in the consolidated factors spreadsheet) - ARBO factors for nuvos members (excluding pension credit members)

| months | Age at early retirement | | | | | | | | | | |
|--------|-------------------------|------|------|------|------|------|------|------|------|------|------|
| | 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 4: P1ARBO60NUV (Table 729 in the consolidated factors spreadsheet) - ARBO factors for nuvos pension credit members

| months | Age at early retirement | | | | | |
|--------|-------------------------|------|------|------|------|------|
| | 55 | 56 | 57 | 58 | 59 | 60 |
| 0 | 4.68 | 3.79 | 2.88 | 1.94 | 0.99 | 0.00 |
| 1 | 4.60 | 3.71 | 2.80 | 1.86 | 0.90 | |
| 2 | 4.53 | 3.64 | 2.72 | 1.78 | 0.82 | |
| 3 | 4.45 | 3.56 | 2.64 | 1.70 | 0.74 | |
| 4 | 4.38 | 3.48 | 2.57 | 1.62 | 0.66 | |
| 5 | 4.31 | 3.41 | 2.49 | 1.54 | 0.57 | |
| 6 | 4.23 | 3.33 | 2.41 | 1.46 | 0.49 | |
| 7 | 4.16 | 3.26 | 2.33 | 1.38 | 0.41 | |
| 8 | 4.08 | 3.18 | 2.26 | 1.30 | 0.33 | |
| 9 | 4.01 | 3.11 | 2.18 | 1.22 | 0.25 | |
| 10 | 3.94 | 3.03 | 2.10 | 1.14 | 0.16 | |
| 11 | 3.86 | 2.95 | 2.02 | 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 |