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1 Summary

- 1.1 This note is addressed to the Northern Ireland Department of Finance (DoF NI) as scheme manager of the Principal Civil Service Pension Scheme (Northern Ireland) (PCSPS(NI)).
- 1.2 This note provides advice on the following:
- Early retirement factors (in normal health) for:
 - **classic** and **premium** members with a normal pension age (NPA) of 60 years
 - **classic** and **premium** members with a NPA of more than 60 years (sometimes known as personal pension ages)
 - **nuvos** members
 - Age addition and late payment supplement factors to be used to increase added pension accrued in **classic**, **classic plus** and **premium**.
 - Age addition factors for **nuvos** scheme benefits and added pensions. These are used to increase the pensions of members in active service after NPA.
 - Late payment supplement factors for **nuvos** scheme benefits and added pensions. These are used to increase the pensions of members retiring after NPA from deferred status.
- 1.3 Members of **classic plus** have accrued some of their benefits in **classic** and some in **premium**. The **classic** and **premium** factors in this note should be applied as described to the appropriate tranche of the **classic plus** members' benefits.
- 1.4 There are no increases on late retirement in **classic**, **classic plus** or **premium**, except in respect of added pension.
- 1.5 The actuarially reduced pension and lump sum on early retirement are based on the preserved pension and lump sum before the addition of any deferred revaluation and pension increase (except for Nuvos members where the preserved pension should be after the addition of any deferred revaluation and pension increases). Late payment supplements for Nuvos members are based on the preserved pension after the addition of any deferred revaluation and pension increases.
- 1.6 The factors provided in this note have been prepared in light of our advice to the DoF NI dated 30 October 2018 and its instructions following that advice.



Implementation and review

- 1.7 Early retirement factors for **classic** main scheme benefits are the responsibility of the Scheme Actuary of PCSPS(NI) under rule 3.10a of the 1972 Section of the Rules.

The remaining factors are the responsibility of the Department after consultation with the Scheme Actuary.

Factor	Rule assigning Responsibility
Early Retirement Classic Plus / Premium	2002 Section, Rule D.3(4)
Early Retirement Nuvos	2007 Section, Rule C.5(8)(b)
Age Addition Classic	1972 Section, Rule 14.10(6)
Age Addition, Classic Plus and Premium	2002 Section, Rule C1.8(6)
Age Addition Nuvos	2007 Section, Rule C.2(6)
Late Payment Supplement Nuvos	2007 section, Rule C.4(12)(b)

- 1.8 The factors contained in this guidance will apply from 1 April 2019. This implementation date has been determined by DoF NI. This guidance will apply with immediate effect.
- 1.9 This guidance is intended to supersede any factors or advice previously issued which rely on input from the GAD. In particular, this guidance supersedes the previous guidance dated 20 April 2015.
- 1.10 Factors have been updated but the calculation methodology remains unchanged except for Nuvos members where the factors and methodology have changed to reflect the use of cost neutral factors.
- 1.11 This guidance does not apply to benefits in the **alpha** scheme (also known as Civil Servants and Others Pension Scheme (Northern Ireland)). Separate advice is provided for the **alpha** scheme.



1.12 The following factors are provided in Appendices A to C:

Factor table number	Scheme	Description
Table 1: P1ER60PEN1 (Consolidated spreadsheet table number 405)	Classic and Premium NPA 60 members Nuvos Pension Credit members retiring before age 60	Early retirement direct from service and/or over age 55 Unisex factors Factors for calculating the actuarially reduced pension.
Table 2: P1ER60LS1 (Consolidated spreadsheet table number 406)	Classic NPA 60 members	Early retirement direct from service and deferred status over age 55 Unisex factors Factors for calculating the actuarially reduced lump sum.
Table 3: P1ER60PEN2 (Consolidated spreadsheet table number 407)	Classic and Premium NPA 60 members	Early retirement from deferment and under 55 Unisex factors Factors for calculating the actuarially reduced pension.
Table 4: P1ER60LS2 (Consolidated spreadsheet table number 408)	Classic NPA 60 members	Early retirement from deferment and under 55 Unisex factors Factors for calculating the actuarially reduced lump sum.
Table 5: P1ER65PEN1 (Consolidated spreadsheet table number 409)	Classic and Premium NPA 65 members	Early retirement direct from service or deferred status over age 55 Unisex factors Factors for calculating the actuarially reduced pension.
Table 6: P1ER65LS1 (Consolidated spreadsheet table number 410)	Classic NPA 65 members	Early retirement direct from service and/or over age 55 Unisex factors Factors for calculating the actuarially reduced lump sum.
Table 7: P1ER65PEN2 (Consolidated spreadsheet table number 411)	Classic and Premium NPA 65 members	Early retirement from deferment and under 55 Unisex factors



		Factors for calculating the actuarially reduced pension.
Table 8: P1ER65LS2 (Consolidated spreadsheet table number 412)	Classic NPA 65 members	Early retirement from deferment and under 55 Unisex factors Factors for calculating the actuarially reduced lump sum.
Table 9: P1ER65NUV (Consolidated spreadsheet table number 413)	Nuvos	Early retirement from Nuvos scheme Unisex factors
Table 10: P1AANUV1 (Consolidated spreadsheet table number 421)	Nuvos	Age addition factors – for use with all descriptions of pension where a contingent spouse's pension is payable Unisex factors
Table 11: P1AANUV2 (Consolidated spreadsheet table number 422)	Nuvos	Age addition factors – for use with pension where no contingent spouse's pension is payable e.g. contributed (self only) pension Unisex factors
Table 12: P1LPSNUV1 (Consolidated spreadsheet table number 423)	Nuvos	Late payment supplement factors – for use where member's and contingent partner's pension will receive a LPS Unisex factors
Table 13: P1LPSNUV2 (Consolidated spreadsheet table number 424)	Nuvos	Late payment supplement factors - for use where the LPS applies only to the member's pension e.g. contributed (self only) pension Unisex factors

- 1.13 Details of the principal assumptions underlying the factor tables in this guidance are set out in Appendix D.
- 1.14 Examples of using the factors are in Section 6.
- 1.15 Limitations of the factors and guidance provided are in Section 7.
- 1.16 Any special cases that are not covered by this guidance should be treated on a case by case basis.



- 1.17 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) Pension Scheme. Any questions concerning the application of the guidance should, in the first instance, be referred to DoF NI.
- 1.18 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.
- 1.19 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

- 1.20 This guidance has been prepared for the use of DoF NI 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 NI 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 DoF NI 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.

Scheme regulations

- 1.22 The Regulations to which this document relates, and the corresponding factors provided, are as follows:

Factor type	Section name and statutory reference (*)	Title of Regulation
Early retirement – early payment reduction	(Classic) Section II: 3.10a, 3.10ab and 3.10b	Termination of pensionable service on resignation or option out of the scheme
	(Premium & Classic Plus) Section I: D3 (4)	Early payment of pensions with actuarial reduction
	L11 (2)	Retirement benefits: early retirement with actuarial reduction



	<p>(Nuvos) Section III: C4 (10 & 11) C5 (8b)</p> <p>C6</p> <p>E14 (3b) E15 (3b)</p>	<p>Effect of active member becoming deferred member</p> <p>Effect of members becoming entitled to pensions: general</p> <p>Effect of members becoming entitled to pensions under rule E.4</p> <p>Club transfer pension</p> <p>Linked service pension</p>
<p>Late retirement - age addition (late retirement from active)</p>	<p>(Classic) Section II: 14.10(6)</p> <p>14.12(9)</p> <p>(Premium and Classic Plus) Section I: C1.8</p> <p>C1.10</p> <p>C1.11</p> <p>(Nuvos) Section III: C.2 (6) C.4</p> <p>C.5 (7)</p> <p>C.6 (12)</p>	<p>Pension accounts for civil servants who have bought contributed pension and lump sum</p> <p>Effect of pension account of civil servant resigning or opting out of the scheme</p> <p>Pension accounts for active members who have bought contributed pension</p> <p>Effect on pension account of active member becoming deferred member</p> <p>Effect on pension account of member becoming entitled to pension</p> <p>Pension accounts for active members</p> <p>Effect of active member becoming deferred member</p> <p>Effect of members becoming entitled to pensions: general</p> <p>Effect of members becoming entitled to pensions under rule E.4</p>
<p>Late retirement - late payment supplement (late retirement from deferred)</p>	<p>(Nuvos only) Section III: C.4 (12b)</p>	<p>Effect of active member becoming deferred member</p>

* References are to:

- Section I: The 2002 Section: The Principal Civil Service Pension Scheme (Northern Ireland)
- Section II: The 1972 Section: The Principal Civil Service Pension Scheme (Northern Ireland)
- Section III: The 2007 Section: The Principal Civil Service Pension Scheme (Northern Ireland)



2 Early Retirement – classic, premium and nuvos

- 2.1 Early payment reduction factors are used to reduce benefits of members in normal health who wish to retire before their normal pension age (NPA). This note does not apply to those who retire with an ill-health pension.
- 2.2 The methodology used to calculate the early payment reduction is different depending on which of the following two circumstances applies to the member in question:
- Early retirement direct from service and/or over age 55 (described in paragraphs 2.5 and 2.6).
 - Early retirement from deferment under age 55 described in paragraphs 2.7 and 2.8.
- 2.3 The following points should be noted:
- Reduced benefits should be calculated before the commutation option is exercised. Paragraphs 2.6 and 2.8 apply only to lump sums accrued automatically in the **classic** scheme. They do not apply to lump sums which arise from members exercising the commutation option.
 - The early retirement reduction applied to the member's pension does not apply to the contingent dependant benefits which may be payable in the future.
- 2.4 Minimum retirement ages (in normal health) in the PCSPS(NI) are as follows:
- **classic, premium** – 50 years (for some members it will be 55 years)
 - **nuvos** – 55 years

Early retirement direct from service and/or over age 55

- 2.5 The formula below sets out how to reduce the member's pension on early retirement when the member retires directly from active service and/or over age 55 at retirement date.

$$\text{Early retirement pension} = \text{Unreduced pension} \times \text{Factor}$$

Where;

Unreduced pension is the member's pension at retirement (before pension increases applied). Except for Nuvos member's, where **Unreduced pension** is the member's pension at early retirement, which was eligible to be paid unreduced from the member's NPA, including the relevant in-service or deferred revaluation to the early retirement date.



Factor is the factor appropriate to the member's age in years and complete months (ignoring part months) at retirement, taken from the appropriate table in Appendix A. The appropriate table will depend on the member's scheme and NPA as follows:

- **classic** and **premium** members with an NPA of 60 – Table 1 (P1ER60PEN1)
- **classic** and **premium** members with an NPA of 65 and linked service benefits of **nuvos** members – Table 3 (P1ER65PEN1)
- scheme benefits (excluding linked service benefits) for **nuvos** members – Table 9 (P1ER65NUV)

- 2.6 In the **classic** scheme members accrue an automatic lump sum alongside their pension. This should be reduced as follows when the member retires directly from active service and deferment over age 55 at retirement date:

$$\text{Early retirement lump sum} = \text{Unreduced lump sum} \times \text{Factor}$$

Where;

Unreduced lump sum is the member's lump sum at retirement (before pension increases applied).

Factor is the factor appropriate to the member's age in years and complete months (ignoring part months) at retirement taken from the following table in Appendix A:

- **classic** members with an NPA of 60 – Table 2 (P1ER60LS1)
- **classic** members with an NPA of 65 – Table 4 (P1ER65LS1)

Early retirement from deferment and under age 55

- 2.7 The formula below sets out how to reduce the member's pension on early retirement when the member retires from deferment and is under age 55 at retirement date.

$$\text{Early retirement pension} = \text{Unreduced pension} \times \frac{1}{(Ax/PI) + F}$$

Where;

Unreduced pension is the member's pension at retirement (before pension increases applied).

Ax is the factor for a member aged x (in years and complete months) at retirement, from the following table in Appendix A:

- **classic** and **premium** members with an NPA of 60 – Table 3 (P1ER60PEN2)



- **classic** and **premium** members with an NPA of 65 – Table 7 (P1ER65PEN2)

PI is the pension increase multiplier for the period from the beginning date of the preserved award to the date from which the reduced pension is payable.

F is:

- 1.265 for **classic** and **premium** members with an NPA of 60
- 1.643 for **classic** and **premium** members with an NPA of 65

- 2.8 In the **classic** scheme members accrue an automatic lump sum alongside their pension. This should be reduced as follows when the member retires from deferment and is under age 55 at retirement date:

$$\text{Early retirement lump sum} = \text{Unreduced lump sum} \times \frac{1}{(Bx/PI) + Cx}$$

Where;

Unreduced lump sum is the member's lump sum at retirement (before pension increases applied).

Bx and **Cx** are the factors for a member aged x (in years and complete months) at retirement, taken from the following table in Appendix A:

- **classic** members with an NPA of 60 - Table 4 (P1ER60LS2)
- **classic** members with an NPA of 65 - Table 8 (P1ER65LS2)

PI is the pension increase multiplier for the period from the beginning date of the preserved award to the date from which the reduced pension is payable.

- 2.9 The minimum retirement age in **nuvos** is 55, so there should not be any cases of early retirement from deferment under age 55 in the **nuvos** scheme.

Miscellaneous

Pension credits (as a result of Pension Sharing on Divorce)

- 2.10 Pension Credit pensions should be reduced on early retirement as described above. Note that Pension Credit members in the **nuvos** scheme may receive their pension unreduced from age 60 (not age 65). The reductions applied for **nuvos** Pension Credit members retiring before age 60 should be those set out in Table 1 (P1ER60PEN1). No reductions should apply for **nuvos** Pension Credit members retiring after age 60.

Pension debits (as a result of Pension Sharing on Divorce)

- 2.11 Pension Debit pensions should be treated in the same way as a deferred member's pension. Therefore they should be reduced on early retirement as described above.



Added Pension

- 2.12 On early retirement, added pension should be reduced in line with the main Scheme benefits for the various sections, as detailed above.

Scheme pays debits

- 2.13 This note does not cover the adjustments to apply to scheme pays debits on early or late retirement. Separate guidance is provided on scheme pays debits in PCSPS (NI).

Eligibility for actuarially reduced early retirement

- 2.14 Actuarially reduced early retirement is not allowed if the reduced benefits in respect of service given on or after 6 April 1978 and on or before 5 April 1997 are expected to be less than a member's guaranteed minimum pension (GMP) at GMP payment age (65 for males and 60 for females).

GMP tests in the PCSPS(NI) are the subject of a separate guidance document.



3 Late retirement – classic, premium and nuvos scheme

Nuvos

- 3.1 In the **nuvos** scheme, there is a different process for increasing the pension on late retirement depending on whether the member is still in active service or is a deferred member.
- 3.2 Members are awarded an **age addition** on each scheme anniversary (1 April) that the member remains in active service while over NPA. An age addition (assumed age addition) is also awarded on the date that the member leaves active service, if they are over NPA. The process is covered in section 4.
- 3.3 Members are awarded a **late payment supplement (LPS)** as a one-off increase at the point that they retire if they are retiring from deferred status and are over NPA. The process is covered in section 5.
- 3.4 A **nuvos** member who leaves active service after NPA but does not retire immediately can receive an age addition in respect of the period up to leaving active service and also a late payment supplement in respect of the period from their leaving date to their eventual retirement date.
- 3.5 A **nuvos** Pension Credit member who retires late will not be awarded a LPS. Instead backdated payments will be made to the Pension Credit member to reflect payment(s) from (i) age 60 or (ii) the date of the pension sharing order if the Pension Credit member is already over age 60 at that time.

Classic and Premium

- 3.6 There are no late retirement increases awarded to pensions in the **classic, classic plus** or **premium** schemes, except in respect of added pension.
- 3.7 This note does not cover the adjustments to apply to scheme pays debits on early or late retirement. Separate guidance is provided on scheme pays debits in PCSPS (NI).



4 Age addition - nuvos scheme

- 4.1 Members of **nuvos** who continue in active service after their NPA will have their benefits increased for late payment. This is done by an 'age addition' that is added to the member's account on each scheme anniversary (1 April) where the member remains in active service after NPA. An age addition (assumed age addition) is also awarded on the date that the member leaves active service, where this is after NPA.
- 4.2 In order to calculate the appropriate age addition for a scheme year, a percentage is applied to the 'opening balance' of the relevant description of accrued pension for the **previous** scheme year.
- 4.3 Where the age addition is awarded on a date other than a scheme anniversary (i.e. because they have left active service during a scheme year), the (assumed) age addition should be the amount which would have been awarded at the following scheme anniversary, allowing for the proportion of the scheme year that the member was an active member who had reached NPA. Therefore, the 'opening balance for the previous scheme year' referred to in paragraph 4.2 is actually the opening balance for the current scheme year.
- 4.4 For example, to calculate an age addition to be applied on 01/04/2017 a percentage is applied to the opening balance of pension for the year 2016-17, not the opening balance for the year 2017-18. The opening balance for 2016-17 can be thought of as the balance at 31 March 2016.
- 4.5 Similarly an age addition awarded on 25/07/2017 would be calculated by applying a percentage to the opening balance of pension for the year 2017-18.
- 4.6 The 'opening balance' is as defined in rule C.2(5) of the **nuvos** scheme rules. The opening balance on a given scheme anniversary includes the opening balance at the previous scheme anniversary, indexation on the opening balance (at the previous scheme anniversary), earned pension applicable over the previous scheme year and any age addition awarded on the previous scheme anniversary.
- 4.7 The age addition is added to the member's account on the scheme anniversary but after the indexation has been determined on the opening balance for that year. So at 01/04/2017 the indexation on the opening balance at that date is determined first and added to the account and then the age addition amount (based on the opening balance for the previous scheme year) is added.
- 4.8 The age addition percentage applicable to the member's relevant opening balance is derived from unisex factors. Factors are taken from tables P1AANUV1 and P1AANUV2 in Appendix B. Table P1AANUV2 is used to calculate the age addition percentage for pension where no contingent spouse's pension is payable e.g. contributed (self only) pension. Table P1AANUV1 is used to calculate the age addition percentage for all other descriptions of accrued pension where a contingent spouse's pension is payable.



4.9 For the member's first age addition after passing NPA the appropriate factors are based on the member's age at the first scheme anniversary after NPA and the member's NPA.

4.10 The percentage used to calculate the first age addition is derived:

Age addition percentage =

$$\frac{[(\text{Factor at age at first scheme anniversary after NPA}) \div (\text{Factor at age at NPA})] - 1}{- 1}$$

Where;

Age addition percentage is applied to the opening balance (of the relevant accrued pension) for the previous scheme year.

Factors are taken from:

- table 10 P1AANUV1 for all other descriptions of accrued pension where a contingent spouse's pension is payable,
- table 11 P1AANUV2 for pension where no contingent spouse's pension is payable e.g. contributed(self only) pension,

and the member's age is that at the relevant date in complete years and months with part months ignored.

4.11 For subsequent age additions the appropriate factors are based on the member's age at current scheme anniversary and the member's age at previous scheme anniversary.

4.12 The percentage used to calculate subsequent age additions is derived:

Age addition percentage =

$$\frac{[(\text{Factor at age at current scheme anniversary}) \div (\text{Factor at age at previous scheme anniversary})] - 1}{- 1}$$

Where;

Age addition percentage is applied to the opening balance (of the relevant accrued pension) for the previous scheme year.

Factors are taken from:

- table 10 P1AANUV1 for all other descriptions of accrued pension where a contingent spouse's pension is payable,



- table 11 P1AANUV2 for pension where no contingent spouse's pension is payable e.g. contributed (self only) pension,

and the member's age is that at the relevant date in complete years and months with part months ignored.

- 4.13 Where a member who is over their NPA leaves active service part way through a scheme year (either to become a deferred member or to retire) then an *assumed* age addition is added to the member's account at retirement/leaving date to reflect the period between the previous scheme anniversary and date of leaving/retirement. There will also be an assumed age addition if a member passes NPA and at a later date within the same scheme year leaves or retires.
- 4.14 The assumed age addition is calculated similarly to the age addition described above, except that the appropriate factors are based on the member's age at deferment or retirement and the greater of member's NPA or age at previous scheme anniversary.
- 4.15 The percentage used to calculate the assumed age addition is derived:

Assumed age addition percentage =

$[(\text{Factor at age at date of leaving/retirement}) \div (\text{Factor at age at previous scheme anniversary or NPA if later})] - 1$

Where;

Assumed age addition percentage is applied to the opening balance (of the relevant accrued pension) for the current scheme year (i.e. this is the same opening balance as would have been used had the member remained in service until the next 1 April).

Factors are taken from:

- Table 11 (P1AANUV2) for pension where no contingent spouse's pension is payable e.g. contributed (self only) pension,
- Table 10 (P1AANUV1) for all other descriptions of accrued pension where a contingent spouse's pension is payable,

and the member's age is that at the relevant date in complete years and months with part months ignored.

- 4.16 A member who leaves active service after NPA but does not retire immediately receives an age addition in respect of service up to leaving active service and also a late payment supplement in respect of the period from their leaving date to their eventual retirement date.



4.17 The following points should be noted:

- a. Age additions and assumed age additions are calculated before the commutation option is exercised.
- b. The age additions and assumed age additions applied to the member's pension should also apply to the contingent partner's pension (where one is payable).

Pension Credits (as a result of Pension Sharing on Divorce)

4.18 Pension Credit pensions should not receive any increase on late retirement.

Pension Debits (as a result of Pension Sharing on Divorce)

4.19 Pension Debit pensions should be treated in the same way as a deferred member's pension. Therefore on late retirement they should be increased by a late payment supplement, not an age addition. Please refer to section 5.

Scheme pays debits

4.20 This note does not cover the adjustments to apply to scheme pays debits on early or late retirement. Separate guidance is provided on scheme pays debits in PCSPS (NI).

Added Pension

4.21 Added pension should receive age additions as described in paragraphs 4.13 to 4.17. Note that different factors are used to calculate the age addition for contributed (all beneficiaries) pension (table 10, P1AANUV1) and contributed (self only) pension (table 11, P1AANUV2).

4.22 Example 5 in section 6 includes a member who has purchased contributed (self only) pension.



5 Late payment supplements - nuvos scheme

- 5.1 A late payment supplement (LPS) is awarded as an increase to the benefits of deferred members of the **nuvos** scheme who retire after their NPA. LPS will be awarded in cases where members leave service on or after NPA and then delay claiming a pension until after NPA. The process for calculating the LPS is slightly different depending on whether the member left service before or after NPA, as described in the boxes below paragraph 5.5.
- 5.2 The LPS is awarded as a one-off increase on the date of the member's retirement. This differs from age additions, which are awarded each year that the member remains in active service after NPA.
- 5.3 The LPS is determined by applying the appropriate LPS factors to each description of pension at the point of retirement, where the pension includes any inflation increases awarded between the date that the member left service and the date at which they retire.
- 5.4 Appendix C sets out the unisex factor tables to be used to calculate the LPS for benefits accruing in the **nuvos** scheme. There are two tables:

Table 12: P1LPSNUV1 – to be used where the LPS applies to the member's pension and the contingent partner's pension. For example:

- earned pension
- Non-Club transferred pension
- Contributed (all beneficiaries) pension

Table 13: P1LPSNUV2 – to be used where the LPS applies only to the member's pension e.g. contributed (self only) pension

- 5.5 The formulae below sets out the two stage process for calculating the LPS.



Stage 1 – Calculate the LPS factor

LPS_{NPA} percentage =

$[(\text{Factor at late retirement age}) \div (\text{Factor at NPA}^*)] - 1$

Where;

Factors are taken from the appropriate table, as explained in section 5.4. Late retirement age, NPA should be ages in complete years and months, with part months ignored.

*where the member leaves active service after NPA, the factor at leaving age should be used instead of the factor at NPA.

Stage 2 – Calculate the LPS using the LPS percentages calculated in Stage 1

LPS_{NPA} =

$(LPS_{NPA} \text{ percentage}) \times (\text{Pension at retirement which was payable from NPA})$

$\text{Total LPS} = LPS_{NPA}$

Where:

Pension at retirement is before the commutation option is exercised and includes any inflation increases awarded between the member leaving service and the date of retirement.

Where the member leaves active service after NPA the pension at retirement should additionally include any age addition awarded in respect of the member's post-NPA active service.

5.6 Example 7 in section 6 shows how to calculate the LPS for a member with earned pension only. Example 10 shows how to calculate the LPS for a member who leaves active service after NPA and then delays claiming their pension.

5.7 The following points should be noted:

- The LPS should be added before the commutation option is exercised.
- Where the LPS is calculated using factor Table 12 (P1LPSNUV1), the contingent partner's pension should also receive a LPS increase. Where the LPS is calculated using factor Table 13 (P1LPSNUV2), the contingent partner's pension should not receive a LPS increase. See paragraph 5.4 for further details.



Pension Credits (as a result of Pension Sharing on Divorce)

- 5.8 Pension Credit pensions should not receive any increase on late retirement.

Pension Debits (as a result of Pension Sharing on Divorce)

- 5.9 On late retirement, pension debits must be increased to reflect that the debit will be in effect for a shorter period than expected.
- 5.10 If the debit occurred before the member's NPA, then it should be treated as a (negative) earned pension (i.e. payable from NPA) for the purposes of determining the LPS increase which should be applied to the debit. The debit at retirement should be calculated in accordance with the formulae above.
- 5.11 Pension debits apply to the contingent partner's pension, as well as the member's pension. The LPS applied to the pension debit should also be applied to the contingent partner's pension.
- 5.12 If the debit occurred after NPA, then the case should be referred to GAD to advise on the appropriate increase to apply to the debit.
- 5.13 Example 8 in section 6 shows how to calculate a LPS for a member who has a pension debit as a result of Pension Sharing on Divorce.

Scheme pays debits

- 5.14 This note does not cover the adjustments to apply to scheme pays debits on early or late retirement. Separate guidance is provided on scheme pays debits in PCSPS (NI).

Added Pension

- 5.15 LPSs for added pension will be calculated differently depending on whether the added pension is contributed 'all beneficiaries' or contributed 'self only'.
- 5.16 LPSs for added pension (all beneficiaries) are calculated using Table 12 (P1LPSNUV1) in the same way as for earned pension (i.e. assuming the added pension is payable from the member's NPA). The contingent partner's pension will also be increased by 37.5% of the LPS applied to the member's pension. Example 9 in Appendix B shows how to calculate a LPS for contributed (all beneficiaries) pension.
- 5.17 LPSs for contributed pension (self only) are calculated using Table 13 (P1LPSNUV2). It should be assumed that the contributed (self only) pension is payable from the member's NPA. There is no contingent partner's pension attached to contributed (self only) pension.



6 Examples

Example 1 – Early retirement over age 55 – Classic member

Member details:

- Scheme section – **Classic (NPA 60)**
- Age at early retirement – **56 years 4 months** (ignoring part months)
- Unreduced pension at retirement (before pension increases applied) - **£5,000**
- Unreduced lump sum at retirement (before pension increases applied) - **£15,000**

Calculation:

- Early retirement pension = Unreduced pension x Factor
- Factor is taken from Table 1 (P1ER60PEN1)
- Factor = 0.841
- Early retirement pension = £5,000 x 0.841
= **£4,205.00**
- Any pension increases will then need to be added, as appropriate.

- Early retirement lump sum = Unreduced lump sum x Factor
- Factor is taken from Table 2 (P1ER60LS1)
- Factor = 0.918
- Early retirement lump sum = £15,000 x 0.918
= **£13,770.00**
- Any pension increases will then need to be added, as appropriate.



Example 2 – Early retirement over age 55 – Premium NPA 65 member

Member details:

- Scheme section – **Premium (NPA 65)**
- Age at early retirement – **59 years 11 months** (ignoring part months)
- Unreduced pension at retirement (before pension increases applied) - **£10,000**

Calculation:

- Early retirement pension = Unreduced pension x Factor
- Factor is taken from Table 5 (P1ER65PEN1)
- Factor = 0.765
- Early retirement pension = £10,000 x 0.765
= **£ 7,650.00**
- Any pension increases will then need to be added, as appropriate.



Example 3 – Early retirement from deferment under age 55 – Classic member

Member details:

- Scheme section – **Classic (NPA 60)**
- Age at early retirement – **51 years 7 months** (ignoring part months)
- Unreduced pension at retirement (before pension increases applied) - **£6,000**
- Unreduced lump sum at retirement (before pension increases applied) - **£18,000**
- Deferment Date - **12/04/2009**
- Retirement Date – **04/12/2019**

Calculation:

- Early retirement pension = Unreduced pension $\times \frac{1}{(Ax / PI) + F}$
- Factor **Ax** is taken from Table 3 (P1ER60PEN2) = 0.189
- Factor **PI** is taken from PI tables published by HMT = 1.2273 (2019 PI table using deferment date of 12/04/2009)
- Factor **F** is taken from paragraph 2.7 = 1.265

$$\begin{aligned} \text{Early retirement pension} &= \text{£6,000} \times \frac{1}{(0.189 / 1.2273) + 1.265} \\ &= \text{£4,228.34} \end{aligned}$$

- The pension is put into payment without the addition of any pension increases, with appropriate adjustment made when the member reaches age 55.

- Early retirement lump sum = Unreduced lump sum $\times \frac{1}{(Bx / PI) + Cx}$
- Factor **Bx** is taken from Table 4 (P1ER60LS2) = 0.167
- Factor **Cx** is taken from Table 4 (P1ER60LS2) = 1.053
- As above Factor **PI** = 1.2273

- Early retirement lump sum = £18,000 $\times \frac{1}{(0.167 / 1.2273) + 1.053}$
= **£15,137.87**

- The lump sum is paid without the addition of any pension increases, with an appropriate retrospective increase made when the member reaches age 55.



Example 4 – Early retirement – Nuvos member

Member details:

- Scheme section – **Nuvos** (NPA 65)
- Age at early retirement – **58 years 11 months** (ignoring part months)
- Unreduced pension at retirement (including pension increases applied) - **£10,000**
- Dependant pension at early retirement date - £3,750

Calculation:

- Early retirement pension = Unreduced pension x Factor
- Member is retiring at age 58 years and 11 months.
- Factor is taken from Table 9 (P1ER65NUV)
- Factor = 0.729
- Early retirement pension = £10,000 x 0.729
= **£ 7,290.00**
- The dependant pension is not reduced and therefore remains £3,750



Example 5: Nuvos member - age addition with contributed (self only) pension

Consider a member retiring from active service after NPA with details as follows:

- Date of birth: 01/09/1955
- NPA: reached at 01/09/2020 (i.e. when member is age 65 years)
- Retirement date: 15/08/2021 (i.e. when member is aged 65 years 11 complete months)
- Member has earned pension and contributed (self only) pension

The age addition is calculated using Table 10 (P1AANUV1) for the earned pension and Table 11 (P1AANUV2) for the contributed (self only) pension.

The **first age addition** will occur on the first scheme anniversary after the NPA, i.e. 01/04/2021, when the member will be 65 years 7 months.

The percentage which will be applied to the earned pension will be given by;

$$[(\text{Factor for 65 years 7 months}) \div (\text{Factor for 65 years 0 months}) - 1],$$

$$\text{i.e. } [(1.034 \div 1.000) - 1] = 0.0340.$$

The percentage which will be applied to the contributed (self only) pension will be given by;

$$[(\text{Factor for 65 years 7 months}) \div (\text{Factor for 65 years 0 months}) - 1],$$

$$\text{i.e. } [(1.037 \div 1.000) - 1] = 0.0370.$$

The age addition amount is 3.40% of the member's opening balance attributable to earned pension for the previous scheme year (i.e. the balance at 31 March 2020) and 3.70% of the member's opening balance attributable to contributed (self only) pension for the previous scheme year (i.e. the balance at 31 March 2020). The age addition amount is added to the member's account on 01/04/2021, after the indexation of the opening balance at that date.

The final **assumed age addition** occurs on the date of the member's retirement, and is calculated based on the member's age at retirement. At retirement the member will be 65 years 11 (complete) months.

The percentage which will be applied to the earned pension will be given by;

$$[(\text{Factor for 65 years 11 months}) \div (\text{Factor for 65 years 7 months}) - 1],$$

$$\text{i.e. } [(1.053 \div 1.034) - 1] = 0.0184.$$

The percentage which will be applied to the contributed (self only) pension will be given by;

$$[(\text{Factor for 65 years 11 months}) \div (\text{Factor for 65 years 7 months}) - 1],$$



i.e. $[(1.058 \div 1.037) - 1] = 0.0203$.

The assumed age addition is the addition in respect of the part-year of active service which would have been awarded at the next 1 April if the member had not retired. Therefore, it is 1.84% of the member's opening balance attributable to earned pension at 31 March 2021 (which would have been the opening balance for the previous scheme year had the addition been awarded at the next 1 April) and 2.03% of the member's opening balance attributable to contributed (self-only) pension at 31 March 2021. The assumed age addition is added to the member's account at retirement.

The contingent partner's pension, where payable, will be 37.5% of the member's pension (including any age additions awarded to the member). For contributed (self only) pension there is no partner's pension payable.



Example 6 – Nuvos member - age addition – numerical example

Member details:

- Scheme section – **Nuvos** (NPA 65)
- Date of birth – **20/10/1955**
- Date member reaches NPA – **20/10/2020 (i.e. when member is age 65)**
- Retirement date – **05/08/2022 (i.e. when member is aged 66 years and 11 complete months)**
- Member remains in active service until date of late retirement.

Calculation:

Opening balance for 2020-21	£8,000.00	A	<i>i.e. balance as at 31/3/2020</i>
Relevant CPI figure	2.50%	B	
Indexation amount	£200.00	C	<i>(= A x B) added to member's account on 1/4/2020.</i>
Age addition	£0	D	<i>member is still below NPA at 1/4/2020.</i>
Pension accrued in 2020-21	£500.00	E	
Opening balance for 2021-22	£8,700.00	F	<i>i.e. balance as at 31/3/2021. (= A + C + D + E)</i>
Relevant CPI figure	2.00%	G	
Indexation amount	£174.00	H	<i>(= F x G) added to member's account on 1/4/2021.</i>



Age addition factor at age at 1/4/2021	1.034	J	Age 65 years, 7 months factor from Table 10 (P1AANUV1)
Age addition factor at NPA	1.000	K	Age 65 years, 0 months factor from Table 10 (P1AANUV1)
Age addition percentage increase	0.034	L	= $J / K - 1$, rounded to 4 decimal places
Age addition	£272.00	M	(= $A \times L$) added to member's account on 1/4/2021.
Pension accrued in 2021-22	£520.00	N	
Opening balance for 2022-23	£9,666.00	P	<i>i.e. balance as at 31/3/2022 (= F + H + M + N)</i>
Relevant CPI figure	1.50%	Q	
			(= $P \times Q$) added to member's account on 1/4/2022 (rounded to nearest £0.01)
Indexation amount	£144.99	R	
Age addition factor at age at 1/4/2022	1.097	S	Age 66 years, 7 months factor from Table 10 (P1AANUV1)
Age addition percentage increase	0.0609	T	= $S / J - 1$, rounded to 4 decimal places
Age addition	£529.83	U	(= $F \times T$) added to member's account on 1/4/2022.
Pension accrued in 2022-23	£270.00	V	
Age addition factor at age at retirement	1.119	W	Age 66 years, 11 months factor from Table 10 (P1AANUV1)
Age addition percentage increase	0.0201	X	= $W / S - 1$, rounded to 4 decimal places
Assumed age addition	£194.29	Y	(= $P \times X$) added to member's account on retirement
			(= $P + R + U + V + Y$). The pension will be increased to allow for indexation between 1/4/2022 and retirement at the next scheme anniversary when the relevant CPI figure is known.
Pension at retirement in August 2022	£10,805.11	Z	



Example 7 – Late payment supplement – Nuvos member with earned pension only

Member details:

- Scheme section – **Nuvos** (NPA 65)
- Age when left active service – **58 years 2 months** (not used in calculations below)
- Age at late retirement – **74 years 5 months** (ignoring part months)
- Unreduced pension at retirement (including all inflation increases awarded between leaving and retirement) - **£10,000**

Calculation:

- Late payment supplements (LPSs) for earned pension are calculated using the methodology described in paragraph 5.4 and the factors set out in Table 12 (P1LPSNUV1).

- Member is retiring 9 years and 5 complete months after NPA.

- The LPS percentage will be:

$$[(\text{Factor for 74 years 5 months}) \div (\text{Factor for 65 years}) - 1],$$

$$\text{i.e. } [(1.794 \div 1.000) - 1] = 0.794.$$

Therefore, the LPS will be 79.4% of the member's pension at retirement:

$$\begin{aligned} \text{LPS} &= 79.4\% * £10,000 \\ &= £7,940.00 \end{aligned}$$

- So the total pension (including LPS) payable to the member is:

$$£10,000 \text{ pa} + £7,940 \text{ pa} = \mathbf{£17,940.00}$$

- On the death of the member, a surviving partner would be entitled to 37.5% of the member's pension (including the LPS) – i.e. £6727.50 pa if the member died immediately after retirement.



Worked example 8 – Late payment supplement - Nuvos member with a pension debit as a result of pension sharing on divorce:

The member has a pension debit as well as earned pension with further information as follows:

- Age when left active service: 55 years (*not used in calculations*)
- Normal Pension Age (NPA): 65 years (*complete years and months, part months ignored*)
- Age at late retirement date: 69 years 8 months (*complete years and months, part months ignored*)
- Earned pension (at late retirement date), including all inflation increases awarded between leaving and retirement: £6,000 pa
- Pension debit (at late retirement date), including all increases up to retirement: £1,000 pa

LPSs for earned pension and pension debits are calculated using Table 12 (P1LPSNUV1).

The LPS percentage which will be applied at retirement (to both the earned pension and pension debit) will be:

$$[(\text{Factor for 69 years 8 months}) \div (\text{Factor for 65 years}) - 1],$$

$$\text{i.e. } [(1.307 \div 1.000) - 1] = 0.307.$$

The same LPS percentage (30.7%) will be applied to the member's earned pension and to the pension debit.

$$\begin{aligned} \text{LPS on standard earned pension} &= 30.7\% \times \text{£}6,000.00 \text{ pa} \\ &= \text{£}1,842.00 \text{ pa} \end{aligned}$$

$$\begin{aligned} \text{LPS on pension debit} &= 30.7\% \times \text{£}1,000 \text{ pa} \\ &= \text{£}307.00 \text{ pa} \end{aligned}$$

$$\begin{aligned} \text{Total earned pension (with LPS)} &= \text{£}6,000.00 \text{ pa} + \text{£}1,842.00 \text{ pa} \\ &= \text{£}7,842.00 \text{ pa} \end{aligned}$$

$$\begin{aligned} \text{Total pension debit (with LPS)} &= \text{£}1,000.00 \text{ pa} + \text{£}307.00 \text{ pa} \\ &= \text{£}1,307.00 \text{ pa} \end{aligned}$$

So the pension payable to the member is:



£7,842.00 pa - £1,307.00 pa = £6,535.00 pa

Pension debits also apply to surviving partner's pensions. Therefore, a surviving partner would be entitled to 37.5% of the pension payable to the member at their death – i.e. £2,450.63 pa if the member died immediately after retiring.



Worked example 9 – Late payment supplement – Nuvos member with contributed (all beneficiaries) pension:

The member has contributed (all beneficiaries) Pension as well as earned pension with further information as follows:

- Age when left active service: 55 years (*not used in calculations*)
- Normal Pension Age (NPA): 65 years (*complete years and months, part months ignored*)
- Age at late retirement date: 69 years 8 months (*complete years and months, part months ignored*)
- Earned pension (at late retirement date), including all inflation increases awarded between leaving and retirement: £6,000 pa
- Contributed (all beneficiaries) pension (at late retirement date), including all inflation increases up to retirement: £1,000 pa

LPSs for earned pension and contributed (all beneficiaries) pension are both calculated using Table 12 (P1LPSNUV1).

The LPS percentage which will be applied at retirement will be:

$[(\text{Factor for 69 years 8 months}) \div (\text{Factor for 65 years}) - 1]$,

i.e. $[(1.307 \div 1.000) - 1] = 0.307$.

The same LPS percentage (30.7%) will be applied to the member's earned pension and the contributed (all beneficiaries) pension.

LPS on earned pension = $30.7\% \times £6,000.00 \text{ pa}$
= £1,842.00 pa

LPS on contributed (all beneficiaries) pension = $30.7\% \times £1,000 \text{ pa}$
= £307.00 pa

Total LPS = £1,842.00 pa + £307.00 pa
= £2,149.00 pa

So the total pension payable to the member is:

£6,000 pa + £1,000 pa + £2,149.00 pa = £9,149.00 pa

On the death of the member, a surviving partner would be entitled to 37.5% of the member's total pension (including the LPS) – i.e. 37.5% of £9,149.00 pa = £3,430.88 pa if the member died immediately after retiring.



Worked example 10 – Late payment supplement – Nuvos member with earned pension only who leaves active service after NPA and delays claiming their pension:

The member's entire pension amount is in respect of the same pension age with further information as follows:

- Age when left active service: 67 years 5 months
- Normal Pension Age (NPA): 65 years (*complete years and months, part months ignored*)
- Age at late retirement date: 69 years 8 months (*complete years and months, part months ignored*)
- Earned pension (at late retirement date), including all inflation increases awarded between leaving and retirement and any age addition awarded: £6,000 pa

LPSs for earned pension are calculated using Table 12 (P1LPSNUV1).

The member left active service after NPA. Therefore, the LPS percentage which will be applied at retirement will be calculated using their age at leaving active service, not their NPA:

$[(\text{Factor for 69 years 8 months}) \div (\text{Factor for 67 years 5 months}) - 1]$,

i.e. $[(1.307 \div 1.144) - 1] = 0.142$.

Therefore, the Late Payment Supplement will be 14.2% of the member's pension at retirement:

$$\begin{aligned}\text{Late Payment Supplement} &= 14.2\% * \text{£6,000 pa} \\ &= \text{£852.00 pa}\end{aligned}$$

So the total pension payable to the member is:

$$\text{£6,000 pa} + \text{£852 pa} = \text{£6,852.00 pa}$$

On the death of the member, a surviving partner would be entitled to 37.5% of the member's pension (including the LPS) – i.e. £2,569.50 pa if member died immediately after retirement.



7 Limitations of this guidance

- 7.1 This guidance should not be used for any purpose other than those set out in this guidance.
- 7.2 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.
- 7.3 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.
- 7.4 This guidance only covers the actuarial principles around the calculation and application of early retirement, late retirement, age addition and late payment supplement factors. Any legal advice in this area should be sought from an appropriately qualified person or source.
- 7.5 Scheme managers and administrators should satisfy themselves that early retirement, late retirement, age addition and late payment supplement calculations and benefit awards comply with all legislative requirements including, but not limited to, tax and contracting-out requirements.
- 7.6 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 NI 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: Early payment reduction factors

Table 1: P1ER60PEN1 – Early retirement direct from service and/or over age 55

Classic and Premium NPA 60 members

Factors for calculating the actuarially reduced pension

Age at early retirement (in years and complete months)											
	50	51	52	53	54	55	56	57	58	59	60
months											
0	0.648	0.672	0.699	0.727	0.758	0.792	0.828	0.867	0.909	0.954	1.000
1	0.650	0.674	0.701	0.730	0.761	0.795	0.831	0.870	0.912	0.958	
2	0.652	0.677	0.703	0.732	0.764	0.798	0.835	0.874	0.916	0.962	
3	0.654	0.679	0.706	0.735	0.767	0.801	0.838	0.877	0.920	0.966	
4	0.656	0.681	0.708	0.738	0.769	0.804	0.841	0.881	0.924	0.970	
5	0.658	0.683	0.711	0.740	0.772	0.807	0.844	0.884	0.927	0.974	
6	0.660	0.685	0.713	0.743	0.775	0.810	0.847	0.888	0.931	0.978	
7	0.662	0.688	0.715	0.745	0.778	0.813	0.851	0.891	0.935	0.982	
8	0.664	0.690	0.718	0.748	0.781	0.816	0.854	0.895	0.939	0.986	
9	0.666	0.692	0.720	0.750	0.783	0.819	0.857	0.898	0.942	0.990	
10	0.668	0.694	0.722	0.753	0.786	0.822	0.860	0.902	0.946	0.994	
11	0.670	0.696	0.725	0.756	0.789	0.825	0.864	0.905	0.950	0.998	



Table 2: P1ER60LS1 Early retirement direct from service and deferred status over age 55

Classic NPA 60 members

Factors for calculating the actuarially reduced lump sum

Age at early retirement (in years and complete months)											
	50	51	52	53	54	55	56	57	58	59	60
months											
0	0.790	0.809	0.828	0.848	0.868	0.889	0.910	0.932	0.955	0.978	1.000
1	0.791	0.810	0.830	0.850	0.870	0.891	0.912	0.934	0.957	0.979	
2	0.793	0.812	0.831	0.851	0.872	0.893	0.914	0.936	0.958	0.981	
3	0.794	0.813	0.833	0.853	0.873	0.894	0.916	0.938	0.960	0.983	
4	0.796	0.815	0.835	0.855	0.875	0.896	0.918	0.940	0.962	0.985	
5	0.798	0.817	0.836	0.856	0.877	0.898	0.919	0.942	0.964	0.987	
6	0.799	0.818	0.838	0.858	0.879	0.900	0.921	0.943	0.966	0.989	
7	0.801	0.820	0.840	0.860	0.880	0.902	0.923	0.945	0.968	0.991	
8	0.802	0.822	0.841	0.861	0.882	0.903	0.925	0.947	0.970	0.993	
9	0.804	0.823	0.843	0.863	0.884	0.905	0.927	0.949	0.972	0.995	
10	0.805	0.825	0.845	0.865	0.886	0.907	0.929	0.951	0.974	0.997	
11	0.807	0.826	0.846	0.867	0.887	0.909	0.930	0.953	0.976	0.999	



Table 3: P1ER60PEN2 – Early retirement from deferment and under 55

Classic and Premium NPA 60 members

Factors for calculating the actuarially reduced pension

Age at early retirement (in years and complete months)						
A	50	51	52	53	54	55
months						
0	0.279	0.222	0.166	0.110	0.054	0.000
1	0.274	0.218	0.161	0.105	0.049	
2	0.269	0.213	0.157	0.100	0.044	
3	0.265	0.208	0.152	0.096	0.040	
4	0.260	0.203	0.147	0.091	0.035	
5	0.255	0.199	0.143	0.086	0.030	
6	0.250	0.194	0.138	0.082	0.026	
7	0.246	0.189	0.133	0.077	0.021	
8	0.241	0.185	0.128	0.072	0.016	
9	0.236	0.180	0.124	0.068	0.012	
10	0.232	0.175	0.119	0.063	0.007	
11	0.227	0.171	0.114	0.058	0.002	



Table 4: P1ER60LS2 – Early retirement from deferment and under 55

Classic NPA 60 members

Factors for calculating the actuarially reduced lump sum

Age at early retirement (in years and complete months)						
B	50	51	52	53	54	55
months						
0	0.246	0.196	0.146	0.096	0.047	0.000
1	0.242	0.192	0.142	0.092	0.043	
2	0.238	0.187	0.138	0.088	0.039	
3	0.233	0.183	0.134	0.084	0.035	
4	0.229	0.179	0.129	0.080	0.031	
5	0.225	0.175	0.125	0.076	0.027	
6	0.221	0.171	0.121	0.072	0.023	
7	0.217	0.167	0.117	0.068	0.018	
8	0.212	0.163	0.113	0.064	0.014	
9	0.208	0.158	0.109	0.059	0.010	
10	0.204	0.154	0.105	0.055	0.006	
11	0.200	0.150	0.101	0.051	0.002	
C	50	51	52	53	54	55
months						
0	1.021	1.041	1.062	1.083	1.105	0.000
1	1.022	1.043	1.064	1.085	1.107	
2	1.024	1.044	1.065	1.087	1.108	
3	1.026	1.046	1.067	1.088	1.110	
4	1.027	1.048	1.069	1.090	1.112	
5	1.029	1.050	1.071	1.092	1.114	
6	1.031	1.051	1.072	1.094	1.116	
7	1.032	1.053	1.074	1.096	1.118	
8	1.034	1.055	1.076	1.097	1.119	
9	1.036	1.057	1.078	1.099	1.121	
10	1.038	1.058	1.079	1.101	1.123	
11	1.039	1.060	1.081	1.103	1.125	



Table 5: P1ER65PEN1 – Early retirement direct from service or deferred status over age 55

Classic and Premium NPA 65 members

Factors for calculating the actuarially reduced pension

Age at early retirement (in years and complete months)																
	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
months																
0	0.501	0.519	0.539	0.561	0.584	0.610	0.637	0.666	0.698	0.732	0.768	0.808	0.851	0.897	0.947	1.000
1	0.502	0.521	0.541	0.563	0.586	0.612	0.640	0.669	0.701	0.735	0.772	0.811	0.854	0.901	0.952	
2	0.504	0.522	0.543	0.565	0.588	0.614	0.642	0.672	0.704	0.738	0.775	0.815	0.858	0.905	0.957	
3	0.505	0.524	0.545	0.567	0.591	0.617	0.644	0.674	0.706	0.741	0.778	0.818	0.862	0.910	0.961	
4	0.507	0.526	0.546	0.569	0.593	0.619	0.647	0.677	0.709	0.744	0.782	0.822	0.866	0.914	0.966	
5	0.508	0.527	0.548	0.571	0.595	0.621	0.649	0.680	0.712	0.747	0.785	0.826	0.870	0.918	0.970	
6	0.510	0.529	0.550	0.572	0.597	0.623	0.652	0.682	0.715	0.750	0.788	0.829	0.874	0.922	0.975	
7	0.511	0.531	0.552	0.574	0.599	0.626	0.654	0.685	0.718	0.753	0.791	0.833	0.878	0.926	0.979	
8	0.513	0.532	0.554	0.576	0.601	0.628	0.657	0.687	0.721	0.756	0.795	0.836	0.881	0.930	0.984	
9	0.514	0.534	0.555	0.578	0.603	0.630	0.659	0.690	0.723	0.759	0.798	0.840	0.885	0.935	0.989	
10	0.516	0.536	0.557	0.580	0.605	0.632	0.662	0.693	0.726	0.762	0.801	0.843	0.889	0.939	0.993	
11	0.518	0.537	0.559	0.582	0.608	0.635	0.664	0.695	0.729	0.765	0.804	0.847	0.893	0.943	0.998	



Table 6: P1ER65LS1 – Early retirement direct from service and/or over age 55

Classic NPA 65 members

Factors for calculating the actuarially reduced lump sum

Age at early retirement (in years and complete months)																
	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
months																
0	0.701	0.718	0.735	0.753	0.771	0.790	0.809	0.828	0.848	0.868	0.889	0.910	0.932	0.955	0.978	1.000
1	0.703	0.720	0.737	0.755	0.773	0.791	0.810	0.830	0.850	0.870	0.891	0.912	0.934	0.957	0.979	
2	0.704	0.721	0.738	0.756	0.774	0.793	0.812	0.831	0.851	0.872	0.893	0.914	0.936	0.958	0.981	
3	0.706	0.722	0.740	0.758	0.776	0.794	0.813	0.833	0.853	0.873	0.894	0.916	0.938	0.960	0.983	
4	0.707	0.724	0.741	0.759	0.777	0.796	0.815	0.835	0.855	0.875	0.896	0.918	0.940	0.962	0.985	
5	0.708	0.725	0.743	0.761	0.779	0.798	0.817	0.836	0.856	0.877	0.898	0.919	0.942	0.964	0.987	
6	0.710	0.727	0.744	0.762	0.780	0.799	0.818	0.838	0.858	0.879	0.900	0.921	0.943	0.966	0.989	
7	0.711	0.728	0.746	0.764	0.782	0.801	0.820	0.840	0.860	0.880	0.902	0.923	0.945	0.968	0.991	
8	0.713	0.730	0.747	0.765	0.783	0.802	0.822	0.841	0.861	0.882	0.903	0.925	0.947	0.970	0.993	
9	0.714	0.731	0.749	0.767	0.785	0.804	0.823	0.843	0.863	0.884	0.905	0.927	0.949	0.972	0.995	
10	0.715	0.733	0.750	0.768	0.787	0.805	0.825	0.845	0.865	0.886	0.907	0.929	0.951	0.974	0.997	
11	0.717	0.734	0.752	0.770	0.788	0.807	0.826	0.846	0.867	0.887	0.909	0.930	0.953	0.976	0.999	



Table 7: P1ER65PEN2 – Early retirement from deferment and under 55

Classic and Premium NPA 65 members

Factors for calculating the actuarially reduced pension

Age at early retirement (in years and complete months)						
A	50	51	52	53	54	55
months						
0	0.355	0.283	0.212	0.140	0.069	0.000
1	0.349	0.277	0.206	0.134	0.063	
2	0.343	0.271	0.200	0.128	0.057	
3	0.337	0.265	0.194	0.122	0.051	
4	0.331	0.259	0.188	0.116	0.045	
5	0.325	0.253	0.182	0.110	0.039	
6	0.319	0.247	0.176	0.104	0.033	
7	0.313	0.241	0.170	0.098	0.027	
8	0.307	0.235	0.164	0.092	0.021	
9	0.301	0.229	0.158	0.086	0.015	
10	0.295	0.224	0.152	0.080	0.009	
11	0.289	0.218	0.146	0.074	0.003	



Table 8: P1ER65LS2 – Early retirement from deferment and under 55

Classic NPA 65 members

Factors for calculating the actuarially reduced lump sum

Age at early retirement (in years and complete months)						
B	50	51	52	53	54	55
months						
0	0.277	0.220	0.164	0.109	0.053	0.000
1	0.272	0.216	0.160	0.104	0.048	
2	0.267	0.211	0.155	0.099	0.044	
3	0.263	0.206	0.150	0.095	0.039	
4	0.258	0.202	0.146	0.090	0.035	
5	0.253	0.197	0.141	0.085	0.030	
6	0.249	0.192	0.136	0.081	0.025	
7	0.244	0.188	0.132	0.076	0.021	
8	0.239	0.183	0.127	0.072	0.016	
9	0.235	0.178	0.122	0.067	0.012	
10	0.230	0.174	0.118	0.062	0.007	
11	0.225	0.169	0.113	0.058	0.002	
C	50	51	52	53	54	55
months						
0	1.149	1.172	1.195	1.219	1.244	0.00
1	1.151	1.174	1.197	1.221	1.246	
2	1.153	1.176	1.199	1.223	1.248	
3	1.155	1.178	1.201	1.225	1.250	
4	1.157	1.180	1.203	1.228	1.252	
5	1.159	1.182	1.205	1.230	1.254	
6	1.160	1.184	1.207	1.232	1.256	
7	1.162	1.186	1.209	1.234	1.258	
8	1.164	1.188	1.211	1.236	1.260	
9	1.166	1.190	1.213	1.238	1.262	
10	1.168	1.192	1.215	1.240	1.265	
11	1.170	1.193	1.217	1.242	1.267	



Table 9: P1ER65NUV – Early retirement factors for Nuvos members

Factors for calculating the actuarially reduced pension

Age at early retirement (complete years and months, ignoring part months)												
	54	55	56	57	58	59	60	61	62	63	64	65
months												
0	0.584	0.610	0.637	0.666	0.698	0.732	0.768	0.808	0.851	0.897	0.947	1.00
1	0.586	0.612	0.640	0.669	0.701	0.735	0.772	0.811	0.854	0.901	0.952	
2	0.588	0.614	0.642	0.672	0.704	0.738	0.775	0.815	0.858	0.905	0.957	
3	0.591	0.617	0.644	0.674	0.706	0.741	0.778	0.818	0.862	0.910	0.961	
4	0.593	0.619	0.647	0.677	0.709	0.744	0.782	0.822	0.866	0.914	0.966	
5	0.595	0.621	0.649	0.680	0.712	0.747	0.785	0.826	0.870	0.918	0.970	
6	0.597	0.623	0.652	0.682	0.715	0.750	0.788	0.829	0.874	0.922	0.975	
7	0.599	0.626	0.654	0.685	0.718	0.753	0.791	0.833	0.878	0.926	0.979	
8	0.601	0.628	0.657	0.687	0.721	0.756	0.795	0.836	0.881	0.930	0.984	
9	0.603	0.630	0.659	0.690	0.723	0.759	0.798	0.840	0.885	0.935	0.989	
10	0.605	0.632	0.662	0.693	0.726	0.762	0.801	0.843	0.889	0.939	0.993	
11	0.608	0.635	0.664	0.695	0.729	0.765	0.804	0.847	0.893	0.943	0.998	



Appendix B: Age addition factors

Table 10: P1AANUV1 – Age addition factors in Nuvos - for use with all descriptions of pension where a contingent spouse’s pension is payable

Age when assessing (assumed) age addition (complete years and months, ignoring part months)																
	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
months																
0	1.000	1.058	1.125	1.198	1.280	1.367	1.467	1.578	1.701	1.838	1.984	2.154	2.344	2.557	2.796	3.051
1	1.005	1.064	1.131	1.205	1.287	1.375	1.476	1.588	1.712	1.850	1.998	2.169	2.362	2.577	2.817	
2	1.010	1.069	1.137	1.212	1.294	1.384	1.485	1.598	1.724	1.862	2.012	2.185	2.380	2.597	2.838	
3	1.014	1.075	1.143	1.219	1.302	1.392	1.495	1.609	1.735	1.874	2.026	2.201	2.397	2.617	2.860	
4	1.019	1.080	1.149	1.225	1.309	1.400	1.504	1.619	1.747	1.887	2.040	2.217	2.415	2.637	2.881	
5	1.024	1.086	1.155	1.232	1.316	1.409	1.513	1.629	1.758	1.899	2.055	2.233	2.433	2.657	2.902	
6	1.029	1.091	1.162	1.239	1.323	1.417	1.522	1.639	1.769	1.911	2.069	2.249	2.451	2.677	2.924	
7	1.034	1.097	1.168	1.246	1.331	1.425	1.532	1.650	1.781	1.923	2.083	2.265	2.468	2.696	2.945	
8	1.039	1.103	1.174	1.253	1.338	1.434	1.541	1.660	1.792	1.935	2.097	2.281	2.486	2.716	2.966	
9	1.043	1.108	1.180	1.259	1.345	1.442	1.550	1.670	1.804	1.947	2.111	2.296	2.504	2.736	2.987	
10	1.048	1.114	1.186	1.266	1.353	1.450	1.559	1.680	1.815	1.959	2.125	2.312	2.522	2.756	3.009	
11	1.053	1.119	1.192	1.273	1.360	1.459	1.569	1.691	1.826	1.972	2.139	2.328	2.539	2.776	3.030	



Table 11: P1AANUV2 – Age addition factors in Nuvos - for use with pension where no contingent spouse’s pension is payable e.g. contributed (self only) pension

Age when assessing (assumed) age addition (complete years and months, ignoring part months)																
	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
months																
0	1.000	1.063	1.137	1.219	1.310	1.412	1.525	1.651	1.792	1.950	2.127	2.325	2.549	2.800	3.083	3.401
1	1.005	1.070	1.144	1.227	1.319	1.421	1.535	1.663	1.805	1.964	2.143	2.344	2.570	2.823	3.109	
2	1.011	1.076	1.151	1.234	1.327	1.430	1.546	1.674	1.818	1.979	2.160	2.363	2.590	2.847	3.136	
3	1.016	1.082	1.158	1.242	1.336	1.440	1.556	1.686	1.831	1.994	2.176	2.381	2.611	2.871	3.162	
4	1.021	1.088	1.165	1.250	1.344	1.449	1.567	1.698	1.844	2.009	2.193	2.400	2.632	2.894	3.189	
5	1.026	1.094	1.172	1.257	1.352	1.459	1.577	1.710	1.858	2.023	2.209	2.418	2.653	2.918	3.215	
6	1.032	1.100	1.178	1.265	1.361	1.468	1.588	1.721	1.871	2.038	2.226	2.437	2.674	2.941	3.242	
7	1.037	1.107	1.185	1.272	1.369	1.478	1.598	1.733	1.884	2.053	2.243	2.456	2.695	2.965	3.268	
8	1.042	1.113	1.192	1.280	1.378	1.487	1.609	1.745	1.897	2.068	2.259	2.474	2.716	2.988	3.295	
9	1.048	1.119	1.199	1.287	1.386	1.496	1.619	1.757	1.910	2.082	2.276	2.493	2.737	3.012	3.321	
10	1.053	1.125	1.206	1.295	1.395	1.506	1.630	1.768	1.923	2.097	2.292	2.511	2.758	3.036	3.348	
11	1.058	1.131	1.212	1.303	1.403	1.515	1.640	1.780	1.937	2.112	2.309	2.530	2.779	3.059	3.374	



Appendix C: Late payment supplement factors

Table 12: P1LPSNUV1 – Late payment supplement factors in Nuvos (Unisex) – for use where member's and contingent partner's pension will receive a LPS

Age (complete years and months, ignoring part months)																
	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
months																
0	1.000	1.056	1.116	1.183	1.256	1.333	1.421	1.518	1.625	1.742	1.866	2.010	2.168	2.344	2.539	2.744
1	1.005	1.061	1.122	1.189	1.262	1.341	1.429	1.527	1.635	1.753	1.878	2.023	2.183	2.360	2.556	
2	1.009	1.066	1.127	1.195	1.269	1.348	1.438	1.536	1.644	1.763	1.890	2.036	2.198	2.376	2.573	
3	1.014	1.071	1.133	1.201	1.275	1.355	1.446	1.545	1.654	1.773	1.902	2.049	2.212	2.393	2.590	
4	1.019	1.076	1.139	1.207	1.281	1.363	1.454	1.554	1.664	1.784	1.914	2.063	2.227	2.409	2.607	
5	1.023	1.081	1.144	1.213	1.288	1.370	1.462	1.563	1.674	1.794	1.926	2.076	2.242	2.425	2.624	
6	1.028	1.086	1.150	1.219	1.294	1.377	1.470	1.572	1.684	1.804	1.938	2.089	2.256	2.441	2.641	
7	1.032	1.091	1.155	1.225	1.301	1.385	1.478	1.580	1.693	1.815	1.950	2.102	2.271	2.457	2.659	
8	1.037	1.096	1.161	1.231	1.307	1.392	1.486	1.589	1.703	1.825	1.962	2.115	2.285	2.474	2.676	
9	1.042	1.101	1.166	1.237	1.314	1.399	1.494	1.598	1.713	1.835	1.974	2.129	2.300	2.490	2.693	
10	1.046	1.106	1.172	1.243	1.320	1.407	1.502	1.607	1.723	1.846	1.986	2.142	2.315	2.506	2.710	
11	1.051	1.111	1.177	1.250	1.327	1.414	1.510	1.616	1.733	1.856	1.998	2.155	2.329	2.522	2.727	



Table 13: P1LPSNUV2 – Late payment supplement factors in Nuvos (Unisex) - for use where the LPS applies only to the member's pension e.g. contributed (self only) pension

Age (complete years and months, ignoring part months)																
	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
months																
0	1.000	1.058	1.122	1.192	1.269	1.354	1.448	1.552	1.666	1.793	1.933	2.088	2.261	2.453	2.666	2.902
1	1.005	1.064	1.128	1.198	1.276	1.362	1.457	1.561	1.677	1.804	1.946	2.103	2.277	2.470	2.685	
2	1.010	1.069	1.134	1.205	1.283	1.370	1.465	1.571	1.687	1.816	1.959	2.117	2.293	2.488	2.705	
3	1.015	1.074	1.140	1.211	1.290	1.378	1.474	1.580	1.698	1.828	1.972	2.132	2.309	2.506	2.725	
4	1.019	1.080	1.145	1.218	1.297	1.385	1.483	1.590	1.708	1.839	1.985	2.146	2.325	2.524	2.744	
5	1.024	1.085	1.151	1.224	1.304	1.393	1.491	1.599	1.719	1.851	1.998	2.160	2.341	2.541	2.764	
6	1.029	1.090	1.157	1.231	1.312	1.401	1.500	1.609	1.729	1.863	2.011	2.175	2.357	2.559	2.784	
7	1.034	1.096	1.163	1.237	1.319	1.409	1.508	1.618	1.740	1.874	2.024	2.189	2.373	2.577	2.803	
8	1.039	1.101	1.169	1.243	1.326	1.417	1.517	1.628	1.750	1.886	2.037	2.204	2.389	2.595	2.823	
9	1.044	1.106	1.175	1.250	1.333	1.425	1.526	1.637	1.761	1.898	2.050	2.218	2.405	2.612	2.843	
10	1.049	1.111	1.180	1.256	1.340	1.432	1.534	1.647	1.771	1.909	2.063	2.232	2.421	2.630	2.862	
11	1.053	1.117	1.186	1.263	1.347	1.440	1.543	1.656	1.782	1.921	2.075	2.247	2.437	2.648	2.882	



Appendix D: Principal assumptions underlying factors

Financial assumptions

Nominal discount rate	4.448%
CPI	2.00%
Long term earnings growth	4.20%
Real discount rate (in excess of CPI)	2.40%
Real discount rate (in excess of general earnings growth)	0.24%

Mortality assumptions

Base mortality tables and adjustments	Member: 110% of S2NMA (M) and 110% of S2NFA (F) (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 unisex factors	50%
Allowance for commutation	Nil