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Overview

1. This note is addressed to the Cabinet Office as scheme manager of the Civil Servants and Others Pension Scheme ('CSOPS' or **alpha** scheme). The **alpha** scheme was established by The Public Service (Civil Servants and Others) Pensions Regulations 2014 (SI 2014/1964) ("the Regulations") and came into force on 1 April 2015.
2. The purpose of the note is to provide TPSE with factors to be used to calculate the Late Payment Supplement (LPS) for benefits accruing in the **alpha** scheme, and accompanying guidance to demonstrate how these factors should be applied to members' benefits.
3. A LPS is applied to the pension of deferred members who don't begin receiving their pension until after their NPA¹ or effective pension age (EPA²). LPS factors are different from 'Age Addition' factors, which are used to increase the benefits of members who continue in active service after their NPA/EPA. We will provide updated Age Addition factors and guidance for **alpha** members separately.
4. This guidance only relates to benefits in the **alpha** scheme. Benefits in the **classic**, **premium**, **nuvos** or **classic plus** schemes should be treated separately, in accordance with the relevant guidance for those schemes.
5. The factors provided in this note have been prepared in light of our advice to the Cabinet Office dated 30 October 2018 and its instructions following that advice.

Implementation and review

6. We understand the LPS factors are the responsibility of the scheme manager after having taken advice from the scheme actuary.
7. The factors contained in this guidance will apply from 1 May 2019. This implementation date has been determined by Cabinet Office. This guidance will apply with immediate effect.
8. This guidance is intended to supersede any factors or advice previously issued which rely on input from GAD. In particular, this guidance supersedes the previous guidance "Civil Servants and Others Pension Scheme (CSOPS): Late Payment Supplement factors – Factors and guidance for the alpha scheme" dated 30 June 2015.
9. Factors have been updated but the calculation methodology remains unchanged.

¹ Normal pension age is defined as a member's state pension age (or 65, if that is higher) in the alpha section. For the purpose of this note, a member's expected NPA in the alpha section is the same as their state pension age as defined by legislation at the point when benefits are paid.

² EPA means effective pension age and relates to someone who purchased an effective pension age option. Please also refer to paragraph 14.



10. The guidance and examples in this note describe how the LPS factors should be applied and reflect our understanding of the way that administration systems have been programmed to calculate LPSs.

11. Appendix A sets out the unisex factor tables to be used to calculate the LPS for benefits accruing in the **alpha** scheme. The tables starts at age 60 (rather than 65) so that they include factors for members who have purchased an EEPA option. There are two tables:

Table 1: P2LPS1 (Consolidated spreadsheet table number 419) – to be used where the LPS applies to the member's pension and the contingent partner's pension. The following "descriptions of pension" (as defined in the scheme regulations) will be increased using this table:

- Standard earned pension
- Transferred pension
- Earned pension attributable to an effective pension age option
- Earned pension attributable to an enhanced effective pension age option
- Club transfer earned pension
- Added (all beneficiaries) pension

Table 2: P2LPS2 (Consolidated spreadsheet table number 420) – to be used where the LPS applies only to the member's pension. The following "descriptions of pension" (as defined in the scheme regulations) will be increased using this table:

- Added (self only) pension

12. Appendix B sets out some worked examples of applying the factors.

13. Appendix C provides details of the principal assumptions underlying the factor tables in this guidance.

14. References to EPA in this note are also applicable to EEPA (enhanced effective pension age). We provided a separate EPA and EEPA guidance note "*CSOPS: enhanced effective pension age (EPA) and effective pension age (EPA) options for alpha members*" dated 30 June 2015, as subsequently amended.

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 Civil Servants and Others Pension Scheme. Any questions concerning the application of the guidance should, in the first instance, be referred to Cabinet Office.



16. 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.
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.

Scheme regulations

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

Factor Table Titles/Reference Numbers	Statutory References (*)
P2LPS1 – Late payment supplement factors across various NPAs for use where member's and contingent partner's pension will receive a LPS	Reg 2: "Late Payment Supplement"
P2LPS2 – Late payment supplement factors across various NPAs for use with added (self only) pension	Reg 2: "Late Payment Supplement"

* References are to: SI 2014/1964: The Public Service (Civil Servants and Others) Pension Regulations 2014

Third party reliance

19. This guidance has been prepared for the use of Cabinet Office and the scheme administrators for the purposes of demonstrating the application of the factors covered by this guidance only. This guidance may be published on the Cabinet Office and the scheme administrator's website but must not otherwise be reproduced, distributed or communicated in whole or in part to any other person without GAD's prior written permission.
20. Other than the Cabinet Office and the scheme administrators, no person or third party is entitled to place any reliance on the contents of this guidance, except to any extent explicitly stated herein. GAD has no liability to any person or third party for any action taken or for any failure to act, either in whole or in part, on the basis of this guidance, whether or not GAD has agreed to the disclosure of its advice to the third party.

Cases not covered by this note

21. We do not envisage any special cases not covered by this note. However, if any do occur they should be referred to GAD.



Guidance on application of LPS factors

22. These factors are used to increase the benefits of deferred members who retire after their NPA/EPA. Cabinet Office has confirmed that a LPS will also be awarded in cases where members leave service on or after NPA/EPA and then delay claiming a pension. The process for calculating the LPS is slightly different depending on whether the member left service before or after NPA/EPA, as described in the boxes below paragraph 25. References to EPA in this note are also applicable to EEPA.
23. 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.
24. The formulae below set out the two stage process for calculating the LPS. Where a member has different pension ages for different tranches of their pension (e.g. because they have purchased an EPA/EEPA option on some of their benefits), the LPS should be calculated separately for each tranche. The formulae below show how the LPS would be calculated if the member had purchased an EPA or EEPA on some of their pension (with the remainder of their pension payable from the member's NPA).

Stage 1 – Calculate the LPS factor for each different pension age

LPS_{NPA} percentage =

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

LPS_{(E)EPA} percentage =

$$\mathbf{[(Factor\ at\ late\ retirement\ age) \div (Factor\ at\ (E)EPA^*)] - 1}$$

Where;

Factors are taken from the appropriate table, as explained in paragraph 11. Late retirement age, NPA and (E)EPA should be ages in complete years and months, with part months ignored.

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



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

$$LPS_{NPA} =$$

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

$$LPS_{(E)EPA} =$$

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

$$\text{Total LPS} = LPS_{NPA} + LPS_{(E)EPA}$$

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 / (E)EPA the pension at retirement should additionally include any age addition awarded in respect of the member's post-NPA / post-(E)EPA active service.

25. Example 1 in Appendix B shows how to calculate the LPS for a member with standard earned pension only. Example 2 shows how to calculate the LPS if the member has a combination of standard earned pension and earned pension attributable to an EPA option. Example 6 shows how to calculate the LPS for a member who leaves active service after NPA and then delays claiming their pension.

26. 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 P2LPS1, the contingent partner's pension should also receive a LPS increase. Where the LPS is calculated using factor table P2LPS2, the relevant contingent partner's pension should not receive a LPS increase. See paragraph 11 for further details.



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

27. On late retirement, pension debits should be increased to reflect that the debit will be in effect for a shorter period than expected.
28. If the debit occurred before the member's NPA, then it should be treated as a (negative) standard 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.
29. 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.
30. 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.
31. Example 3 in Appendix B 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

32. Scheme pays debits should be increased if the member retires after their NPA. Full details of the appropriate factors and their application will be provided in separate guidance regarding Scheme Pays within the alpha scheme. The factors and guidance in this note should not be used to increase scheme pays debits.

Added pension

33. LPSs for added pension will be calculated differently depending on whether the added pension is 'all beneficiaries' or 'self only'.
34. LPSs for added (all beneficiaries) pension are calculated using Table P2LPS1 in the same way as for standard 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 4 in Appendix B shows how to calculate a LPS for added (all beneficiaries) pension.
35. LPSs for added (self only) pension are calculated using Table P2LPS2. It should be assumed that the added (self only) pension is payable from the member's NPA. There is no contingent partner's pension attached to added (self only) pension. Example 5 in Appendix B shows how to calculate a LPS for added (self only) pension.



Limitations of this guidance

36. This guidance should not be used for any purpose other than those set out in this guidance.
37. 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.
38. 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.
39. This guidance only covers the actuarial principles around the calculation and application of late payment supplement factors. Any legal advice in this area should be sought from an appropriately qualified person or source.
40. Scheme managers and administrators should satisfy themselves that late payment supplement calculations and benefit awards comply with all legislative requirements including, but not limited to, tax and contracting-out requirements.
41. This guidance is based on the Regulations in force at the time of writing. It is possible that future changes to the Regulations might create inconsistencies between this guidance and the Regulations. If users of this guidance believe there to be any such inconsistencies, they should bring this to the attention of Cabinet Office and GAD. Under no circumstances should this guidance take precedence over the Regulations. Administrators should ensure that they comply with all relevant Regulations.



Appendix A – Factor table

Table 1: P2LPS1 – Late Payment Supplement factors across various NPAs (Unisex) – for use where member's and contingent partner's pension will receive a LPS (see paragraph 11)

Age (complete years and months, ignoring part months)																					
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
months																					
0	0.776	0.814	0.856	0.900	0.949	1.000	1.055	1.115	1.180	1.252	1.329	1.415	1.510	1.615	1.730	1.851	1.991	2.146	2.318	2.508	2.708
1	0.779	0.818	0.859	0.904	0.953	1.005	1.060	1.120	1.186	1.258	1.336	1.423	1.519	1.624	1.740	1.863	2.004	2.161	2.334	2.524	
2	0.782	0.821	0.863	0.908	0.957	1.009	1.065	1.126	1.192	1.265	1.343	1.431	1.527	1.634	1.750	1.874	2.017	2.175	2.349	2.541	
3	0.785	0.825	0.867	0.912	0.962	1.014	1.070	1.131	1.198	1.271	1.350	1.439	1.536	1.643	1.760	1.886	2.030	2.189	2.365	2.558	
4	0.789	0.828	0.871	0.916	0.966	1.018	1.075	1.137	1.204	1.278	1.357	1.447	1.545	1.653	1.770	1.898	2.043	2.203	2.381	2.575	
5	0.792	0.831	0.874	0.921	0.970	1.023	1.080	1.142	1.210	1.284	1.365	1.455	1.554	1.663	1.780	1.909	2.056	2.218	2.397	2.591	
6	0.795	0.835	0.878	0.925	0.974	1.028	1.085	1.148	1.216	1.290	1.372	1.463	1.562	1.672	1.790	1.921	2.069	2.232	2.413	2.608	
7	0.798	0.838	0.882	0.929	0.979	1.032	1.090	1.153	1.222	1.297	1.379	1.470	1.571	1.682	1.800	1.933	2.082	2.246	2.429	2.625	
8	0.801	0.842	0.885	0.933	0.983	1.037	1.095	1.159	1.228	1.303	1.386	1.478	1.580	1.691	1.811	1.944	2.095	2.261	2.444	2.641	
9	0.805	0.845	0.889	0.937	0.987	1.041	1.100	1.164	1.234	1.309	1.393	1.486	1.588	1.701	1.821	1.956	2.107	2.275	2.460	2.658	
10	0.808	0.849	0.893	0.941	0.991	1.046	1.105	1.170	1.240	1.316	1.401	1.494	1.597	1.711	1.831	1.968	2.120	2.289	2.476	2.675	
11	0.811	0.852	0.897	0.945	0.996	1.050	1.110	1.175	1.246	1.322	1.408	1.502	1.606	1.720	1.841	1.980	2.133	2.303	2.492	2.692	



Table 2: P2LPS2 – Late Payment Supplement factors across various NPAs (Unisex) - for use with added (self only) pension (see paragraph 11)

Age (complete years and months, ignoring part months)																					
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
months																					
0	0.766	0.806	0.849	0.895	0.945	1.000	1.058	1.120	1.189	1.265	1.349	1.441	1.542	1.655	1.778	1.916	2.068	2.236	2.423	2.631	2.861
1	0.770	0.810	0.853	0.899	0.950	1.005	1.063	1.126	1.196	1.272	1.356	1.449	1.552	1.665	1.790	1.928	2.082	2.252	2.441	2.650	
2	0.773	0.813	0.857	0.904	0.955	1.010	1.068	1.132	1.202	1.279	1.364	1.458	1.561	1.675	1.801	1.941	2.096	2.267	2.458	2.669	
3	0.776	0.817	0.861	0.908	0.959	1.014	1.073	1.138	1.208	1.286	1.372	1.466	1.570	1.685	1.813	1.954	2.110	2.283	2.475	2.688	
4	0.780	0.820	0.864	0.912	0.964	1.019	1.079	1.143	1.215	1.293	1.379	1.475	1.580	1.696	1.824	1.966	2.124	2.299	2.492	2.708	
5	0.783	0.824	0.868	0.916	0.968	1.024	1.084	1.149	1.221	1.300	1.387	1.483	1.589	1.706	1.836	1.979	2.138	2.314	2.510	2.727	
6	0.786	0.828	0.872	0.920	0.973	1.029	1.089	1.155	1.227	1.307	1.395	1.492	1.598	1.716	1.847	1.992	2.152	2.330	2.527	2.746	
7	0.790	0.831	0.876	0.925	0.977	1.034	1.094	1.161	1.234	1.314	1.403	1.500	1.608	1.727	1.858	2.004	2.166	2.345	2.544	2.765	
8	0.793	0.835	0.880	0.929	0.982	1.038	1.100	1.166	1.240	1.321	1.410	1.509	1.617	1.737	1.870	2.017	2.180	2.361	2.562	2.784	
9	0.796	0.838	0.884	0.933	0.986	1.043	1.105	1.172	1.246	1.328	1.418	1.517	1.626	1.747	1.881	2.030	2.194	2.376	2.579	2.804	
10	0.799	0.842	0.888	0.937	0.991	1.048	1.110	1.178	1.253	1.335	1.426	1.526	1.636	1.758	1.893	2.042	2.208	2.392	2.596	2.823	
11	0.803	0.845	0.891	0.941	0.995	1.053	1.115	1.184	1.259	1.342	1.433	1.534	1.645	1.768	1.904	2.055	2.222	2.408	2.614	2.842	



Appendix B – Worked examples

Worked example 1 – Member with standard earned pension only:

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

- Age when left active service: 55 years (*not used in calculations*)
- Normal Pension Age (NPA): 66 years 2 months (*complete years and months, part months ignored*)
- Age at late retirement date: 69 years 8 months (*complete years and months, part months ignored*)
- Standard earned pension (at late retirement date), including all inflation increases awarded between leaving and retirement: £6,000 pa

LPSs for standard earned pension are calculated using table P2LPS1.

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

$$[(\text{Factor for 69 years 8 months}) \div (\text{Factor for 66 years 2 months}) - 1]$$

$$\text{i.e. } [(1.303 \div 1.065) - 1] = 0.223$$

Therefore, the Late Payment Supplement will be 22.3% of the member's pension at retirement:

$$\begin{aligned} \text{Late Payment Supplement} &= 22.3\% * \text{£6,000 pa} \\ &= \text{£1,338.00 pa} \end{aligned}$$

So the total pension payable to the member is:

$$\text{£6,000 pa} + \text{£1,338 pa} = \text{£7,338.00 pa}$$

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. £2,751.75 pa if member died immediately after retirement.



Worked example 2: Member with EPA option on part of their pension

Consider a member who purchased an Effective Pension Age (EPA) option on some of their benefits.

- Age when left active service: 55 years (*not used in calculations*)
- Normal Pension Age (NPA): 66 years 2 months (*complete years and months, part months ignored*)
- Effective Pension Age (EPA): 65 years 2 months (*complete years and months, part months ignored*)
- Age at late retirement date: 69 years 8 months (*complete years and months, part months ignored*)
- Standard earned pension (at late retirement date), including all inflation increases awarded between leaving and retirement: £4,000 pa
- Earned pension attributable to an EPA option (at late retirement date), including all inflation increases awarded between leaving and retirement: £2,000 pa

LPSs for standard earned pension and pension attributable to an EPA option are both increased using table P2LPS1.

A different LPS percentage will be applied to the two tranches of pension.

The LPS percentage which will be applied to the standard earned pension will be:

$$[(\text{Factor for 69 years 8 months}) \div (\text{Factor for 66 years 2 months}) - 1]$$

$$\text{i.e. } [(1.303 \div 1.065) - 1] = 0.223$$

The LPS factor which will be applied to the pension attributable to an EPA option will be:

$$[(\text{Factor for 69 years 8 months}) \div (\text{Factor for 65 years 2 months}) - 1]$$

$$\text{i.e. } [(1.303 \div 1.009) - 1] = 0.291$$

Therefore, the Late Payment Supplement will be 22.3% of the standard earned pension and 29.1% of the pension attributable to an EPA option.

$$\begin{aligned} \text{LPS on standard earned pension} &= 22.3\% \times \text{£}4,000 \text{ pa} \\ &= \text{£}892.00 \text{ pa} \end{aligned}$$



LPS on pension with EPA = $29.1\% \times \text{£}2,000 \text{ pa}$
= $\text{£}582.00 \text{ pa}$

Total LPS = $\text{£}892.00 \text{ pa} + \text{£}582.00 \text{ pa}$
= $\text{£}1474.00 \text{ pa}$

So the total pension payable to the member is:

$\text{£}6,000 \text{ pa} + \text{£}1,474.00 \text{ pa} = \text{£}7474.00 \text{ pa}$

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. $\text{£}2,802.75 \text{ pa}$ if member died immediately after retirement.



Worked example 3 – Member with a pension debit as a result of Pension Sharing on Divorce:

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

- Age when left active service: 55 years (*not used in calculations*)
- Normal Pension Age (NPA): 66 years 2 months (*complete years and months, part months ignored*)
- Age at late retirement date: 69 years 8 months (*complete years and months, part months ignored*)
- Standard 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 standard earned pension and pension debits are calculated using table P2LPS1.

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

$$[(\text{Factor for 69 years 8 months}) \div (\text{Factor for 66 years 2 months}) - 1]$$

$$\text{i.e. } [(1.303 \div 1.065) - 1] = 0.223$$

The same LPS percentage (22.3%) will be applied to the member's standard earned pension and to the pension debit.

$$\text{LPS on standard earned pension} = 22.3\% \times \text{£}6,000.00 \text{ pa}$$

$$= \text{£}1,338.00 \text{ pa}$$

$$\text{LPS on pension debit} = 22.3\% \times \text{£}1,000 \text{ pa}$$

$$= \text{£}223.00 \text{ pa}$$

$$\text{Total standard earned pension (with LPS)} = \text{£}6,000.00 \text{ pa} + \text{£}1,338.00 \text{ pa}$$

$$= \text{£}7,338.00 \text{ pa}$$

$$\text{Total pension debit (with LPS)} = \text{£}1,000.00 \text{ pa} + \text{£}223.00 \text{ pa}$$

$$= \text{£}1,223.00 \text{ pa}$$



So the pension payable to the member is:
 $\text{£}7,338.00 \text{ pa} - \text{£}1,223.00 \text{ pa} = \text{£}6,115.00 \text{ pa}$

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. $\text{£}2,293.13 \text{ pa}$ if the member died immediately after retiring.



Worked example 4 – Member with Added (all beneficiaries) Pension:

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

- Age when left active service: 55 years (*not used in calculations*)
- Normal Pension Age (NPA): 66 years 2 months (*complete years and months, part months ignored*)
- Age at late retirement date: 69 years 8 months (*complete years and months, part months ignored*)
- Standard earned pension (at late retirement date), including all inflation increases awarded between leaving and retirement: £6,000 pa
- Added (all beneficiaries) Pension (at late retirement date), including all inflation increases up to retirement: £1,000 pa

LPSs for standard earned pension and Added (all beneficiaries) Pension are both calculated using table P2LPS1.

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

$$[(\text{Factor for 69 years 8 months}) \div (\text{Factor for 66 years 2 months}) - 1]$$

$$\text{i.e. } [(1.303 \div 1.065) - 1] = 0.223$$

The same LPS percentage (22.3%) will be applied to the member's standard earned pension and the added (all beneficiaries) pension.

$$\begin{aligned} \text{LPS on standard earned pension} &= 22.3\% \times \text{£}6,000.00 \text{ pa} \\ &= \text{£}1,338.00 \text{ pa} \end{aligned}$$

$$\begin{aligned} \text{LPS on added (all beneficiaries) pension} &= 22.3\% \times \text{£}1,000 \text{ pa} \\ &= \text{£}223.00 \text{ pa} \end{aligned}$$

$$\begin{aligned} \text{Total LPS} &= \text{£}1,338.00 \text{ pa} + \text{£}223.00 \text{ pa} \\ &= \text{£}1,561.00 \text{ pa} \end{aligned}$$

So the total pension payable to the member is:

$$\text{£}6,000 \text{ pa} + \text{£}1,000 \text{ pa} + \text{£}1,561.00 \text{ pa} = \text{£}8,561.00 \text{ pa}$$

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 £8,561.00 pa = £3,210.38 pa if the member died immediately after retiring.



Worked example 5: Member with earned pension attributable to an EPA option, added (self only) pension and no standard earned pension

Consider a member who purchased an Effective Pension Age (EPA) option and also purchased added (self only) pension. They have no standard earned pension.

- Age when left active service: 55 years (*not used in calculations*)
- Normal Pension Age (NPA): 66 years 2 months (*complete years and months, part months ignored*)
- Effective Pension Age (EPA): 65 years 2 months (*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 attributable to an EPA option (at late retirement date), including all inflation increases awarded between leaving and retirement: £2,000 pa
- Added (self only) pension (at late retirement date), including all inflation increases up to retirement: £1,000 pa

LPSs for earned pension attributable to an EPA option are calculated using table P2LPS1.

LPSs for added (self only) pension are calculated using table P2LPS2.

The LPS percentage which will be applied to the earned pension attributable to an EPA option will be:

$$[(\text{Factor for 69 years 8 months}) \div (\text{Factor for 65 years 2 months}) - 1]$$

$$\text{i.e. } [(1.303 \div 1.009) - 1] = 0.291$$

The LPS percentage which will be applied to the added (self only) pension will be:

$$[(\text{Factor for 69 years 8 months}) \div (\text{Factor for 66 years 2 months}) - 1]$$

$$\text{i.e. } [(1.321 \div 1.068) - 1] = 0.237$$

Therefore, the Late Payment Supplement will be 29.1% of the earned pension attributable to an EPA option and 23.7% of the added (self only) pension.

$$\text{LPS on pension with EPA} = 29.1\% \times \text{£}2,000.00 \text{ pa}$$

$$= \text{£}582.00 \text{ pa}$$

$$\text{LPS on added (self only) pension} = 23.7\% \times \text{£}1,000.00 \text{ pa}$$

$$= \text{£}237.00 \text{ pa}$$



$$\begin{aligned}\text{Total LPS} &= \text{£}582.00 \text{ pa} + \text{£}237.00 \text{ pa} \\ &= \text{£}819.00 \text{ pa}\end{aligned}$$

So the total pension payable to the member is:

$$\text{£}2,000.00 \text{ pa} + \text{£}1,000.00 \text{ pa} + \text{£}819.00 \text{ pa} = \text{£}3,819.00 \text{ pa}$$

On the death of the member, a surviving partner would be entitled to 37.5% of the member's earned pension attributable to an EPA option (including the LPS on that pension). There is no partner's pension payable in respect of added (self only) pension, including in respect of any LPS awarded on the added (self only) pension. Therefore, if the member died immediately after retirement, the partner's pension would be:

$$\begin{aligned}&= 37.5\% \times (\text{£}2,000.00 + \text{£}582.00) \\ &= \text{£}968.25\end{aligned}$$



Worked example 6 – Member with standard 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): 66 years 2 months (*complete years and months, part months ignored*)
- Age at late retirement date: 69 years 8 months (*complete years and months, part months ignored*)
- Standard 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 standard earned pension are calculated using table P2LPS1.

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. $[(1.303 \div 1.142) - 1] = 0.141$

Therefore, the Late Payment Supplement will be 14.1% of the member's pension at retirement:

$$\begin{aligned}\text{Late Payment Supplement} &= 14.1\% * \text{£}6,000 \text{ pa} \\ &= \text{£}846.00 \text{ pa}\end{aligned}$$

So the total pension payable to the member is:

$$\text{£}6,000 \text{ pa} + \text{£}846 \text{ pa} = \text{£}6,846.00 \text{ pa}$$

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. £2,567.25 pa if member died immediately after retirement.



Appendix C: 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: 104% of S2NMA (M) and 104% 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