



Police pension schemes (Scotland) 2015 Scheme

Early payment reduction and option to buy out early payment reduction

Factors and guidance

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1 Introduction

Scope of this guidance note

- 1.1 This note is provided for the Scottish Public Pension Agency (SPPA) as scheme manager of the police pension schemes in Scotland. This note relates to the 2015 scheme and sets out the general method for assessing:
 - the actuarial reduction on early payment of pension (early payment reduction)
 - the cost of buying out the early payment reduction.
- 1.2 This note contains the tables and guidance to be issued by Scottish Ministers following consultation with the scheme actuary referred to in the following sections of the Police Pension Scheme (Scotland) Regulations 2015 (SSI 2015/142):
 - regulation 41 – Actuarial reduction on early payment of pension (early payment reduction)
 - regulation 112 – Option to buy out early payment reduction.
- 1.3 The factors provided in this note have been prepared in light of our advice to SPPA dated 30 October 2018 and its instructions following that advice.

Implementation and review

- 1.4 The factors contained in this guidance will apply from 28 December 2018. This implementation date has been determined by SPPA. This guidance will apply from the date issued on the cover.
- 1.5 This guidance replaces the previous guidance dated 8 May 2015. Factors have been updated but the calculation methodology remains unchanged.
- 1.6 The formulae and factors for calculating the early payment reduction and cost of buying out the early payment reduction are set out in the following sections:
 - Section 2 covers the calculation of the early payment reduction in the 2015 scheme.
 - Section 3 covers the calculation of the cost of buying out the early payment reduction in the 2015 scheme.
 - Section 4 sets out example calculations.
 - Appendix A contains the factors required to determine the early retirement reduction and cost of buying out the early retirement reduction in the 2015 scheme, as follows:



Factor table	Description
Table A1 (Consolidated spreadsheet table number 401)	Early payment reduction factor. Unisex factors. Retirement from active service before NPA - Retirement earned pension
Table A2 (Consolidated spreadsheet table number 402)	Early payment reduction factor Unisex factors. Retirement from active service before NPA – Retirement added pension (self only and all beneficiaries).
Table B (Consolidated spreadsheet table number 403)	Early payment reduction factor Unisex factors. Retirement from deferred status before SPA.
Table C (Consolidated spreadsheet table number 701)	Early payment reduction buy-out factors Unisex factors.

- Appendix B sets out the principal assumptions underlying the factors contained in this guidance.
- Appendix C sets out the limitations of the factors and this guidance.

1.7 This note does not cover the method for adjusting pension debits for early payment, which should be treated in line with the appropriate following guidance,

- Pension sharing debits: *Police pension schemes (Scotland): 2015 scheme: Transfer values and pension sharing on divorce*
- Tax charge debits: *Police pension schemes (Scotland): 2015 scheme: Tax charge debits*

1.8 This note does not apply to retirements on grounds of ill-health, under regulation 92.

1.9 This guidance has been written for pension administrators and assumes some knowledge of general pension terminology, and some familiarity with retirement calculations for the 2015 Scheme. Any questions concerning the application of the guidance should, in the first instance, be referred to SPPA.

1.10 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.



- 1.11 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

- 1.12 This guidance has been prepared for the use of SPPA for the purposes of demonstrating the application of the factors covered by this guidance only. This guidance may be published on SPPA'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.
- 1.13 Other than SPPA, no person or third party is entitled to place any reliance on the contents of this guidance, except to any extent explicitly stated herein. GAD has no liability to any person or third party for any action taken or for any failure to act, either in whole or in part, on the basis of this guidance, whether or not GAD has agreed to the disclosure of its advice to the third party.



2 Early payment reduction

Introduction

- 2.1 An early payment reduction applies to members who retire 'early' in normal health. Early means, for active 2015 scheme members those who retire before Normal Pension Age (NPA) and for deferred 2015 scheme members (including pension credit members) those who retire before reaching their State Pension Age (SPA).¹
- 2.2 This section refers only to benefits reduced in accordance with regulation 41 of the Police Pension Scheme (Scotland) Regulations 2015.
- 2.3 Guidance for calculating the early payment reduction applied to members retiring early from active service is set out in paragraphs 2.7 to 2.10 below.
- 2.4 Guidance for calculating the early payment reduction applied to members retiring early from deferred status is set out in paragraph 2.11 to 2.14 below.
- 2.5 The surviving adult's pension and eligible child's pension is calculated using the member's pension before deduction of the early payment reduction but after any allowance for commutation.
- 2.6 Worked examples are provided in Section 4.

Members retiring from active service

- 2.7 Under regulation 60, the member's retirement account must specify the early payment reductions applying to each amount of retirement earned pension and retirement added pension.
- 2.8 The early payment reduction applying to each amount of retirement pension (ie earned, added (self only) and added (all beneficiaries)) should be calculated using the following formula,

$$\text{Early Payment Reduction} = \text{Retirement pension} \times (1 - F_A)$$

where,

- Retirement pension is taken from the relevant retirement account at the date of retirement and should include transferred in pension (see the definition in regulation 60)
- F_A is the early payment reduction factor from **Table A1 or A2**, chosen by reference to the type of retirement pension and the number of years and complete months to the member's NPA at the point of retirement.

- 2.9 For the avoidance of doubt, do not deduct any commutation amount from the amounts of retirement pension prior to carrying out the calculation in paragraph 2.8.

¹ Use the State Pension Age according to legislation at the date of retirement



2.10 The member's annual rate of full retirement pension at retirement is then calculated, in accordance with regulation 88, by subtracting the early payment reductions from the member's full retirement pension specified in the member's retirement account (together with any reductions for commutation). However, if the member or employer exercise the option to buy out any early payment reduction under regulation 112, the annual rate of full retirement pension is calculated without deduction of that early payment reduction. See section 3 for the cost of buying of the early payment reduction.

Members retiring from deferred status

2.11 Under regulation 57, the deferred member's account must specify the early payment reductions applying to each amount of deferred pension and deferred added pension.

2.12 The early payment reduction applying to each amount of deferred pension (i.e. earned, added (self only) and added (all beneficiaries)) can be calculated using the following formula,

$$\text{Early Payment Reduction} = \text{Deferred pension} \times (1 - F_B)$$

where,

- Deferred pension is taken from the relevant deferred account at the date of retirement and should include transferred in pension (see the definition in regulation 56)
- F_B is the early payment reduction factor from **Table B**, chosen by reference to the number of years and complete months to the member's SPA at the point of retirement.

2.13 For the avoidance of doubt, do not deduct any commutation amount from the amounts of deferred pension prior to carrying out the calculation in paragraph 2.12.

2.14 The member's annual rate of full retirement pension at retirement is then calculated, in accordance with regulation 89, by subtracting the early payment reductions from the each amount of deferred pension specified in the deferred member's account (together with any reductions for commutation). However, if the member or employer exercise the option to buy out any early payment reduction under regulation 112, the annual rate of full retirement pension is calculated without deduction of that early payment reduction. See section 3 for the cost of buying of the early payment reduction.

Pension credit members

2.15 Under regulation 119, the annual rate of pension payable to a pension credit member is calculated with subtraction of the early payment reduction.



2.16 The early payment reduction applying to the pension credit member's pension can be calculated using the following formula,

$$\text{Early Payment Reduction} = \text{Pension credit} \times (1 - F_B)$$

where,

- Pension credit is taken from the member's account at the date of retirement and should include pension increases awarded under the provisions of the Pensions (Increase) Act 1971
- F_B is the early payment reduction factor from **Table B**, chosen by reference to the number of years and complete months to the member's SPA at the point of retirement.

2.17 For the avoidance of doubt, do not deduct any commutation amount from the amount of pension credit prior to carrying out the calculation in paragraph 2.16.

2.18 The pension credit member's annual rate of pension at retirement is then calculated, in accordance with regulation 119, by subtracting the early payment reduction from the pension credit amount at the date of retirement (i.e. including pension increases awarded under the provisions of the Pensions (Increase) Act 1971) together with any reductions for commutation.



3 Option to buy out the early payment reduction

Introduction

- 3.1 Members and employers have the option to buy out the early payment reduction, as calculated in paragraphs 2.8 and 2.12 for active members and deferred members respectively, by making a special payment at the point of retirement.
- 3.2 The restrictions and criteria which apply to this option are set out in regulation 112 of the Police Pension Scheme (Scotland) Regulations 2015.
- 3.3 The cost of buying out the early payment reduction applying to each amount of retirement or deferred pension (ie earned, added (self only) and added (all beneficiaries)) should be calculated using the formula below,

$$\text{Buy-out cost} = F_c \times \text{EPR}$$

where,

- F_c is the buy-out factor from **Table C** chosen by reference to the member's age at retirement in years and complete months
- EPR is the early payment reduction for each account to be bought out.

- 3.4 An example calculation is set out in Section 4.



4 Example calculations

Example 1: Early retirement of an active member with added pension

Member Details

Date of birth	1 November 1970
Date of retirement	1 November 2025
Age at retirement (years and complete months)	55 years and 0 months
Period to NPA 60 (years and complete months)	5 years and 0 months

Retirement account details

Retirement earned pension at retirement	£9,000 pa
Retirement added pension (self only) at retirement	£250 pa

Early payment reduction

As the member is retiring from active service the formula in paragraph 2.8 should be used.

Retirement earned pension

$F_A = 0.865$ (from **Table A1**)

Early payment reduction on retirement earned pension

$$\begin{aligned} &= \text{Retirement earned pension} \times (1 - F_A) \\ &= £9,000 \times (1 - 0.865) \\ &= £9,000 \times 0.135 \\ &= £1,215 \end{aligned}$$

The member's retirement earned pension should be reduced by £1,215 pa to £7,785 pa on retirement (prior to any allowance for commutation).

Retirement added pension

$F_A = 0.787$ (from **Table A2**)

Early payment reduction on retirement added pension

$$\begin{aligned} &= \text{Retirement added pension} \times (1 - F_A) \\ &= £250 \times (1 - 0.787) \\ &= £250 \times 0.213 \\ &= £53.25 \end{aligned}$$

The member's retirement added pension should be reduced by £53.25 pa to £196.75 pa on retirement (prior to any allowance for commutation).



The member's retirement account must specify:-

Early payment reduction on retirement earned pension = £1,215 pa

Early payment reduction on retirement added pension = £53.25 pa

The member's annual rate of full retirement earned pension = £7,785 pa

The member's annual rate of full retirement added pension = £196.75 pa

Any deductions for commutation should then be made in accordance with the scheme regulations.



Example 2: Early retirement of a deferred member

Member Details

Date of birth	1 May 1976
Date of retirement	1 June 2032
SPA	67
Age at retirement	56 years 1 month
Period to SPA (years and complete months)	10 years and 11 months

Deferred account details

Deferred pension at retirement	£3,000 pa
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Early payment reduction

As the member is retiring from deferred status, the formula in paragraph 2.12 should be used.

$F_B = 0.560$ (from **Table B**)

Early payment reduction on deferred earned pension

$$\begin{aligned} &= \text{Deferred earned pension} \times (1 - F_B) \\ &= £3,000 \times (1 - 0.560) \\ &= £3,000 \times 0.440 \\ &= £1,320 \end{aligned}$$

The member's deferred pension should be reduced by £1,320 pa to £1,680 pa on retirement (prior to any allowance for commutation).

The member's retirement account must specify:-

Early payment reduction on deferred earned pension = £1,320 pa

The member's annual rate of full deferred pension = £1,680 pa

Any deductions for commutation should then be made in accordance with the scheme regulations.



Example 3: Member opts to buy out the early payment reduction

Member Details

Date of birth	1 June 1965
Date of retirement	5 July 2022
Member age at retirement	57 years 1 month
Early payment reduction to be bought out	£500 pa

The cost of the buy-out option should be calculated using the formula in paragraph 3.3.

$$F_C = 20.92 \text{ (from Table C)}$$

$$\begin{aligned} \text{Cost of buy-out} &= F_C \times \text{EPR} \\ &= 20.92 \times £500 \\ &= £10,460.00 \end{aligned}$$

Therefore the member (or if relevant, the employer) needs to pay the scheme £10,460 in order to buy out the member's early payment reduction.



Appendix A: Tables of factors

Table A1 – Early payment reduction factor – Retirement from active service before NPA – Retirement earned pension

Males and females

months	Period to NPA (in years and complete months)					
	Years					
months	0	1	2	3	4	5
0	0.999	0.968	0.938	0.911	0.888	0.865
1	0.996	0.966	0.936	0.909	0.886	
2	0.994	0.963	0.934	0.907	0.884	
3	0.991	0.961	0.931	0.905	0.882	
4	0.989	0.958	0.929	0.903	0.880	
5	0.986	0.956	0.927	0.901	0.878	
6	0.984	0.953	0.925	0.899	0.876	
7	0.981	0.951	0.922	0.897	0.874	
8	0.979	0.948	0.920	0.895	0.872	
9	0.976	0.946	0.918	0.893	0.870	
10	0.973	0.943	0.916	0.891	0.868	
11	0.971	0.941	0.913	0.889	0.866	



Table A2 – Early payment reduction factor – Retirement from active service before NPA – Retirement added pension (self only and all beneficiaries)

Males and females

months	Period to NPA (in years and complete months)					
	Years					
0	1	2	3	4	5	
0	1.000	0.951	0.905	0.863	0.823	0.787
1	0.996	0.947	0.901	0.859	0.820	
2	0.992	0.943	0.898	0.856	0.817	
3	0.988	0.939	0.894	0.853	0.814	
4	0.984	0.935	0.891	0.849	0.811	
5	0.979	0.932	0.887	0.846	0.808	
6	0.975	0.928	0.884	0.843	0.805	
7	0.971	0.924	0.880	0.840	0.802	
8	0.967	0.920	0.877	0.836	0.799	
9	0.963	0.916	0.873	0.833	0.796	
10	0.959	0.913	0.870	0.830	0.793	
11	0.955	0.909	0.866	0.826	0.790	



Table B – Early payment reduction factor – retirement from deferred status before SPA

Males and females

months	Period to SPA (in years and complete months)									
	Years									
0	1	2	3	4	5	6	7	8	9	
0	1.000	0.939	0.885	0.835	0.789	0.748	0.709	0.674	0.642	0.612
1	0.995	0.935	0.880	0.831	0.786	0.744	0.706	0.671	0.639	0.609
2	0.990	0.930	0.876	0.827	0.782	0.741	0.703	0.669	0.637	0.607
3	0.985	0.926	0.872	0.823	0.779	0.738	0.701	0.666	0.634	0.605
4	0.980	0.921	0.868	0.820	0.775	0.735	0.698	0.663	0.632	0.602
5	0.975	0.917	0.864	0.816	0.772	0.732	0.695	0.661	0.629	0.600
6	0.970	0.912	0.860	0.812	0.768	0.728	0.692	0.658	0.627	0.598
7	0.965	0.907	0.855	0.808	0.765	0.725	0.689	0.655	0.624	0.595
8	0.960	0.903	0.851	0.804	0.761	0.722	0.686	0.652	0.622	0.593
9	0.955	0.898	0.847	0.801	0.758	0.719	0.683	0.650	0.619	0.591
10	0.950	0.894	0.843	0.797	0.754	0.716	0.680	0.647	0.617	0.588
11	0.944	0.889	0.839	0.793	0.751	0.712	0.677	0.644	0.614	0.586

months	Period to SPA (in years and complete months)			
	Years			
10	11	12	13	
0	0.584	0.558	0.533	0.511
1	0.581	0.556	0.531	
2	0.579	0.554	0.530	
3	0.577	0.552	0.528	
4	0.575	0.550	0.526	
5	0.573	0.547	0.524	
6	0.571	0.545	0.522	
7	0.568	0.543	0.520	
8	0.566	0.541	0.518	
9	0.564	0.539	0.517	
10	0.562	0.537	0.515	
11	0.560	0.535	0.513	



Table C – Early payment reduction buy-out factors
Males and females

Years	Age in years and complete months on day pension commences											
	Months											
	0	1	2	3	4	5	6	7	8	9	10	11
55	21.93	21.89	21.85	21.81	21.77	21.73	21.69	21.65	21.61	21.57	21.53	21.49
56	21.45	21.41	21.37	21.33	21.29	21.25	21.21	21.17	21.13	21.08	21.04	21.00
57	20.96	20.92	20.88	20.84	20.80	20.76	20.72	20.68	20.63	20.59	20.55	20.51
58	20.47	20.43	20.39	20.35	20.30	20.26	20.22	20.18	20.14	20.10	20.05	20.01
59	19.97	19.93	19.89	19.84	19.80	19.76	19.72	19.67	19.63	19.59	19.55	19.51
60	19.46	19.42	19.38	19.33	19.29	19.25	19.20	19.16	19.12	19.08	19.03	18.99
61	18.95	18.90	18.86	18.82	18.77	18.73	18.68	18.64	18.60	18.55	18.51	18.47
62	18.42	18.38	18.33	18.29	18.25	18.20	18.16	18.11	18.07	18.02	17.98	17.94
63	17.89	17.85	17.80	17.76	17.71	17.67	17.62	17.58	17.53	17.49	17.44	17.40
64	17.35	17.31	17.26	17.22	17.17	17.13	17.08	17.04	16.99	16.94	16.90	16.85
65	16.81	16.76	16.72	16.67	16.62	16.58	16.53	16.49	16.44	16.39	16.35	16.30
66	16.26	16.21	16.16	16.12	16.07	16.02	15.98	15.93	15.88	15.84	15.79	15.74
67	15.70	15.65	15.60	15.56	15.51	15.46	15.42	15.37	15.32	15.28	15.23	15.18



Appendix B: Principal assumptions underlying factors

Financial assumptions

Nominal discount rate	4.448%
CPI	2.00%
Real discount rate (in excess of CPI)	2.40%

Mortality assumptions

Base mortality tables and adjustments	117% of S2NMA (M) and 117% 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	70%
Allowance for commutation	Nil



Appendix C: Limitations

- C.1 This guidance should not be used for any purpose other than those set out in this guidance.
- C.2 The factors contained in this guidance are subject to regular review. Scheme managers and administrators need to ensure that they are using the latest factors, as relevant, when processing cases.
- C.3 Advice provided by GAD must be taken in context and is intended to be considered in its entirety. Individual sections, if considered in isolation, may be misleading, and conclusions reached by a review of some sections on their own may be incorrect. GAD does not accept responsibility for advice that is altered or used selectively. Clarification should be sought if there is any doubt about the intention or scope of advice provided by GAD.
- C.4 This guidance only covers the actuarial principles around the calculation and application of early payment reduction and option to buy out early payment reduction factors. Any legal advice in this area should be sought from an appropriately qualified person or source.
- C.5 Scheme managers and administrators should satisfy themselves that early payment reduction and option to buy out early payment reduction calculations and benefit awards comply with all legislative requirements including, but not limited to, tax and contracting-out requirements.
- C.6 This guidance is based on the Regulations in force at the time of writing. It is possible that future changes to the Regulations might create inconsistencies between this guidance and the Regulations. If users of this guidance believe there to be any such inconsistencies, they should bring this to the attention of SPPA and GAD. Under no circumstances should this guidance take precedence over the Regulations. Administrators should ensure that they comply with all relevant Regulations.