London Borough of Barking and Dagenham Pension Fund

Review of early retirement strain factors

Barnett Waddingham LLP

18 January 2024

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Introduction

This report is addressed to London Borough of Barking and Dagenham as the administering authority to the London Borough of Barking and Dagenham Pension Fund (the Fund). The purpose of this report is to provide factors for calculating the strain on the Fund arising from members taking unreduced early retirement. We also provide a summary of these factors in the supplementary spreadsheet: *LBBD Strain factor review 2023 - factors*.

The factors provided are intended for use by the administering authority to determine the cost that may be required to be paid by a Scheme employer to the Fund should one of its employees who is a member of the Fund retire immediately under Regulation 30(6) or Regulation 30(7).

The factors set out in the Appendix should not be used for any purpose other than that set out above, nor should they be used for any Fund other than the London Borough of Barking and Dagenham Pension Fund as these have been calculated to be consistent with the method and assumptions adopted for the Fund's 2022 valuation.

This advice is provided in our capacity as Fund Actuary. It complies with Technical Actuarial Standard 100: General Actuarial Standards (TAS 100) and Technical Actuarial Standard 300: Pensions (TAS 300) as issued by the Financial Reporting Council (FRC).

The London Borough of Barking and Dagenham Pension Fund participates within the Local Government Pension Scheme (the LGPS). The LGPS is a defined benefit statutory scheme, administered in accordance with the Local Government Pension Scheme Regulations 2013, as amended.

A strain on the Fund arises when a member retires earlier than planned without any reduction being applied to their benefits to reflect early payment. Under Regulation 68, the administering authority may require a Scheme employer to make additional payments in respect of benefits becoming payable immediately to its employees without any reduction. The factors provided in this note can be used for the purposes of determining the amount to be required from a Scheme employer.

Method

We have derived factors to be applied to a member's pension that can be used to determine the cost of paying immediate benefits on an unreduced basis.

Due to the different aspects of the different tranches of benefits within the Scheme (final salary or CARE, guarantee periods, scope for commutation etc.) then the number of factors required to try and reflect these differences would be considerable and require some significant re-programming of systems. The additional "accuracy" is likely to be spurious given the purpose of the calculations in the first place and in the context of the liabilities of the Fund as a whole.

We have therefore estimated an approximate split of a member's benefits across the different tranches of benefit averaged over the next three years and would suggest that this split and indeed the methodology is therefore reviewed in a further three years' time.

The factors are unisex factors weighted by the pensions of the active membership at the 2022 valuation.

Early retirement reduction factors (ERFs)

The reduction factors used in the calculation take account of the actual factors that would be applied to members' benefits had the reduction not been waived. The latest factors were issued by the Government Actuary's Department (GAD) (in guidance dated 3 July 2023) and are set out in Appendix 1.

Augmentation factors (AugF)

Augmentation factors are then applied to give the capital value of the reduction to the member's pension and these are set out in Appendix 2.

The factors should be applied to the member's unreduced pre-commutation benefits as follows:

Strain = Unreduced pension × ERF (pension) × AugF + Unreduced lump sum × ERF (lump sum)

Accuracy

There are several reasons why the factors we have calculated cannot easily replicate the exact funding cost of the additional benefits awarded and so they are not strictly "cost neutral". Some of these ideas are explored below however we do not expect these differences would lead to a material impact on the funding of early retirement costs.

- As the financial assumptions on the funding basis are linked to market conditions, the assumptions will change each day due to market movements and therefore so too will the theoretical strain cost factors. For example, we calculate that a 0.1% reduction in the discount rate (net of inflation) would increase the factors by approximately 1%. However, variable factors would clearly not be practical from an administrative perspective and so the aim is to find a fixed set of robust factors which can be used over the long term, with periodic reviews to ensure they remain appropriate.

- Furthermore, the additional liability measured on the Fund's funding basis is measured with reference to an assumed retirement age which is the weighted average of the individual retirement ages for each tranche of benefit, with early and late retirement factors applied as appropriate. The methodology underlying the calculation of the actual strain payment outlined in this note takes a more simplified approach in order to reduce the administrative complexity.

- The strain as measured on the funding basis should theoretically be the difference between the value of the immediately payable pension and the projected pension that would have been payable at the assumed normal retirement age under the funding basis. The approach taken in this note is more simplified, instead measuring the cost of the waived reduction that has come into payment. The two approaches will lead to different answers although we do not expect the differences to be material from a long term funding perspective.

Comparison with previous factors

The table below sets out the recommended augmentation factors and compares them with the previous factors.

Age next birthday	Augmentation factors (AugF)				
	2022	Previous (M)	Diff	Previous (F)	Diff
56	22.63	20.99	7.8%	21.61	4.7%
57	22.12	20.55	7.6%	21.18	4.4%
58	21.62	20.10	7.6%	20.75	4.2%
59	21.11	19.64	7.5%	20.31	3.9%
60	20.60	19.18	7.4%	19.87	3.7%
61	20.08	18.71	7.3%	19.43	3.3%
62	19.57	18.24	7.3%	18.98	3.1%
63	19.04	17.77	7.1%	18.53	2.7%
64	18.52	17.30	7.1%	18.08	2.4%
65	17.99	16.83	6.9%	17.62	2.1%
66	17.47	16.35	6.8%	17.17	1.7%
67	16.95	15.88	6.7%	16.72	1.4%
68	16.44	15.42	6.6%	16.26	1.1%
69	15.94	14.95	6.6%	15.81	0.8%

As can be seen in the table above, the factors have increased at all ages. The previous factors were set by the Fund's previous actuary. We don't have details of how these have been set. Based on the financial assumptions set at the Fund's last few actuarial triennial valuations, we assume that the increase in factors can be explained by a reduction in the real discount rate used due to the updated financial assumptions and market conditions. However, given we don't have information of the previous factors have been set, this is just an assumption.

Implementation

The timing of introducing these new factors requires some thought as there will no doubt be some early retirements in progress where decisions are being made based on previously calculated strain numbers. So in terms of implementing the use of these new factors then we would suggest something along the following lines:

- All previous quotes remain valid for a period of time – 3 months?
- If the retirement does not go ahead in that period then a new strain on the revised factors will be required.
- All new early retirement quotes from say the start of the month once the new factors are loaded into the system will be on the new basis.

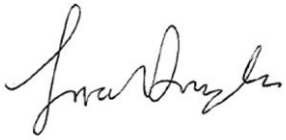
Final comments

It is also worth noting that any deviation between the strain costs that are charged to employers and the theoretical funding cost of the additional benefits will be fully considered at each triennial valuation and reflected in the certification of employers' contribution rates. Therefore, any "underpayment" or indeed "overpayment" by employers at the point of a member's early retirement would be expected to be fully recognised as part of the periodic valuations and so the difference is essentially only one of timing of the payments.

The factors we have provided may also be used for the purposes of ill-health calculations however please note that in such circumstances there may be an additional strain due to the enhanced benefits that may be awarded, particularly under Tier 1 or Tier 2 ill-health. The factors in this note may be used to calculate the cost of an ill-health enhancement, in addition to the standard strain cost, and we expect the relevant administration systems to be set up to accommodate this, however please let us know if this is not the case.

We recommend that periodic reviews of these strain factors are carried out and suggest that the next review is conducted following the 2025 actuarial valuation.

We would be happy to answer any questions arising from this note.



Liam Drysdale FFA
Associate

Appendix 1 Early retirement reduction factors

Factors to be applied to unreduced pension and lump sum before commutation. The early retirement reduction factors for pensions and lump sums are following the GAD guidelines up until 13 years and 10 years early, respectively. The factors beyond this are extrapolations using demographic assumptions consistent with the latest valuation and the SCAPE discount rate of 1.7% p.a. relative to CPI. These factors apply for male and female members.

Years early	Early retirement reduction (ERF)		Years early	Early retirement reduction (ERF)		Years early	Early retirement reduction (ERF)	
	Pension	Lump sum		Pension	Lump sum		Pension	Lump sum
0	0.0%	0.0%	17	49.5%	24.9%	34	70.8%	43.6%
1	4.9%	1.7%	18	51.2%	26.2%	35	71.6%	44.6%
2	9.3%	3.3%	19	52.9%	27.4%	36	72.4%	45.5%
3	13.5%	4.9%	20	54.6%	28.6%	37	73.2%	46.4%
4	17.4%	6.5%	21	56.1%	29.8%	38	73.9%	47.3%
5	20.9%	8.1%	22	57.6%	31.0%	39	74.6%	48.2%
6	24.3%	9.6%	23	59.0%	32.1%	40	75.3%	49.0%
7	27.4%	11.1%	24	60.3%	33.3%	41	76.0%	49.9%
8	30.3%	12.6%	25	61.6%	34.4%	42	76.6%	50.7%
9	33.0%	14.1%	26	62.8%	35.5%	43	77.2%	51.6%
10	35.6%	15.5%	27	64.0%	36.6%	44	77.8%	52.4%
11	39.5%	16.9%	28	65.1%	37.6%	45	78.4%	53.2%
12	41.8%	18.3%	29	66.1%	38.7%	46	78.9%	53.9%
13	43.9%	19.7%	30	67.1%	39.7%	47	79.5%	54.7%
14	44.8%	21.0%	31	68.1%	40.7%	48	80.0%	55.5%
15	45.7%	22.3%	32	69.1%	41.7%	49	80.5%	56.2%
16	47.6%	23.6%	33	70.0%	42.7%	50	80.9%	57.0%

Appendix 2 Augmentation factors

Age next birthday	Augmentation factors (AugF)	Age next birthday	Augmentation factors (AugF)	Age next birthday	Augmentation factors (AugF)
19	38.54	36	32.08	53	24.12
20	38.20	37	31.65	54	23.62
21	37.85	38	31.21	55	23.12
22	37.50	39	30.77	56	22.63
23	37.15	40	30.33	57	22.12
24	36.79	41	29.88	58	21.62
25	36.43	42	29.42	59	21.11
26	36.06	43	28.95	60	20.60
27	35.68	44	28.49	61	20.08
28	35.30	45	28.01	62	19.57
29	34.92	46	27.54	63	19.04
30	34.53	47	27.05	64	18.52
31	34.13	48	26.57	65	17.99
32	33.73	49	26.08	66	17.47
33	33.33	50	25.59	67	16.95
34	32.92	51	25.10	68	16.44
35	32.50	52	24.61	69	15.94

Please note that no uplift adjustment should be applied to these factors. These factors apply for male and female members.

Appendix 3 Assumptions

For the purposes of this exercise, it is appropriate to use the method and assumptions consistent with those used for the 2022 actuarial valuation of the Fund. The factors in this note are based on market conditions as at 31 March 2022 and are summarised below:

Actuarial assumptions		
Discount rate (% p.a.)		4.3%
Rate of pension increases (% p.a.)		2.9%
Post retirement mortality		
	Member base table	2022 Club Vita tables
	Dependant base table	2022 Club Vita tables
	CMI Model	CMI 2021
	Long term rate of improvement	1.25%
	Smoothing parameter	7.0
	Initial addition parameter (% p.a.)	0.0
	2020 weight parameter	5%
	2021 weight parameter	5%
Commutation	It is assumed that members will exchange 50% of their commutable pension for cash at retirement.	

The discount rate assumption is set with reference to the Fund's long term investment strategy and therefore reflects the long term expected return on assets for the Fund. The approach to setting this assumption is in line with the Fund's 2022 actuarial valuation. Consistent with the method adopted for the 2022 valuation, we have included in the discount rate assumption an explicit prudence allowance of 1.8%. Further details of the assumptions can be found in the relevant Fund actuarial valuation report.

In calculating a set of unisex factors, we have taken into account the ratio of active members' pension between male and female members based on the ratio at the Fund's 2022 valuation. This was estimated to be 37% male and 63% female. The Fund's 2022 valuation membership data was checked for reasonableness as part of the 2022 valuation and we are happy that it is sufficient for the purpose of this report.

Appendix 4 Examples

Example 1

Consider a member with the following benefits

Example 1	
Gender	Male
Age at date of retirement	60
Pre-2008 pension	£5,000
Pre-2008 lump sum	£15,000
Post-2008, pre-2014 pension	£2,000
Post-2014 pension	£1,000
NRA for pre-2008 benefits	65
NRA for post-2008, pre-2014 benefits	65
NRA for post-2014 benefits	67

In this case, the member is retiring five years early with respect to their pre-2014 benefits and seven years early with respect to their post-2014 benefits. Note that the relevant augmentation factor in this case is 20.08, as the member's age at their next birthday will be 61.

The calculation of the strain cost would therefore be as follows:

(£5,000 x 20.9% + £2,000 x 20.9% + £1,000 x 27.4%) x 20.08 + 15,000 x 8.1% = **£36,094**

Example 2

Consider a member with the following benefits:

Example 2	
Gender	Female
Age at date of retirement	61.5
Pre-2008 pension	£3,000
Pre-2008 lump sum	£9,000
Post-2008, pre-2014 pension	£1,000
Post-2014 pension	£500
NRA for pre-2008 benefits	63
NRA for post-2008, pre-2014 benefits	65
NRA for post-2014 benefits	67

In this case, the member is retiring one and a half years early with respect to their pre-2008 benefits, three and a half years early with respect to their post-2008/pre-2014 benefits and five and a half years early with respect to their post-2014 benefits. It will therefore be required to interpolate the early retirement factors.

The member is 61.5 years old, i.e. her age next birthday is 62 so an augmentation factor of 19.57 is used.

(£3,000 x 0.5 x (4.9% + 9.3%) + £1,000 x 0.5 x (13.5% + 17.4%) + £500 x 0.5 x (20.9% + 24.3%)) x 19.57 + £9,000 x 0.5 x (1.7% + 3.3%) = **£9,628**