



# Firefighters' Pension Schemes (England) Summary of the 2020 assumptions used in the actuarial valuation as at 31 March 2020

This report is supplemental to the Advice on assumptions report dated 19 December 2023 and should be read in conjunction with that report. This report contains further details of the 'scheme-set' assumptions to be adopted for the actuarial valuation of the Firefighters' Pension Schemes (England) as at 31 March 2020, including sample rates and values. The assumptions adopted at the previous valuation as at 31 March 2016 are set out in our Advice on assumptions report for that valuation, located at the following <https://www.gov.uk/government/publications/public-service-pensions-2016-actuarial-valuation-reports/public-service-pensions-2016-actuarial-valuation-reports>.

## Mortality after retirement

Baseline mortality	Standard table	Adjustment
Current pensioners in normal health and ill-health	S3NMA_M	109%
Future pensioners in normal health and ill-health	S3NMA_M	109%
Dependants	S3DFA	99%

As specified by HM Treasury, future improvements in mortality will be assumed to be in line with those underlying the ONS 2020 projections.



## Commutation of pension for cash at retirement

Members are assumed to commute the following proportions of their pensions for cash.

Member with service in the following schemes	1992 Scheme only	2006 Scheme only	2006 Scheme (Special Retained Members) only	2015 Scheme only
Scheme pension commuted from	1992	2006	Modified 2006	2015
All members	0%	20%	0%	20%

Member with service in the following schemes	Mixed 1992 Scheme and 2015 Scheme		Mixed 2006 Scheme and 2015 Scheme		Mixed 2006 Scheme (Special Retained) and 2015 Scheme	
	1992	2015	2006	2015	Modified 2006	2015
All members	0%	12%	20%	20%	0%	12%

In respect of benefits relating to the Matthews second option exercise, 25% of pensions are assumed to be commuted for cash.

## Retirement ages

### Age retirement rates for 1992 scheme members

Age at joining	18	19	20	21	22	23	24	25	26	27	28	29	30 and over
Age													
50	0.795	0.795	0.795	0.250	0.250	0.250	0.250	0.250	0.000	0.000	0.000	0.000	0.000
51	0.490	0.490	0.490	0.795	0.020	0.020	0.020	0.020	0.050	0.000	0.000	0.000	0.000
52	0.490	0.490	0.490	0.490	0.915	0.020	0.020	0.020	0.020	0.050	0.000	0.000	0.000
53	0.490	0.490	0.490	0.490	0.490	0.975	0.020	0.020	0.020	0.020	0.050	0.000	0.000
54	0.490	0.490	0.490	0.490	0.490	0.490	0.975	0.020	0.020	0.020	0.020	0.050	0.000
55	0.660	0.660	0.660	0.680	0.705	0.725	0.750	0.975	0.410	0.410	0.410	0.410	0.410
56	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.975	0.410	0.410	0.410	0.410
57	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.975	0.410	0.410	0.410
58	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.975	0.410	0.410
59	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.655	0.975	0.410
60 and over	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

## Age retirement rates for 2006 Scheme members and new entrants to the 2015 Scheme

Retirement Age	2006 Scheme – Standard (protected and unprotected)	2006 Scheme – Special (protected and unprotected)	2015 Scheme
55	-	1.000	0.250
56	-	-	-
57	-	-	-
58	-	-	-
59	-	-	-
60	1.000	-	1.000

## Rates of leaving service

Age	Withdrawal rate		
	1992 scheme	2006 Scheme and 2015 Scheme - Regular and Special Retained	2006 Scheme and 2015 Scheme - Standard Retained
20	0.0423	0.0423	0.0954
25	0.0423	0.0423	0.0954
30	0.0423	0.0423	0.0954
35	0.0394	0.0394	0.0882
40	0.0245	0.0245	0.0549
45	0.0136	0.0136	0.0306
50	0.0076*	0.0076	0.0171
55	0.0000	0.0000	0.0000

\* Rates are zero at age 50 if the member is eligible to retire on an unreduced pension

## Promotional pay increases

### Regular firefighter members

The salary scale shows assumed pay progression in excess of general wage inflation in comparison to an index base of 100 at entry.

Service (years)	Promotional Pay for Regular Firefighters
0	100.0
5	140.4
10	145.4
15	152.2
20	161.6
25	171.1
30	183.6
35	190.1
40	190.1

## Retained firefighter members (Standard and Special)

The salary scale shows assumed pay progression in excess of general wage inflation with an index base of 100 at age 18.

Age	Promotional Pay for Retained Firefighters
20	102.2
25	107.7
30	113.2
35	118.7
40	124.2
45	129.7
50	135.2
55	137.7
60	140.2
65	142.7

## Rates of ill-health retirement

Age	Ill-health retirement rate
20	0.00008
25	0.00016
30	0.00031
35	0.00063
40	0.00128
45	0.00260
50	0.00526
55*	0.01023
59*	0.01139

\*rates are zero if above the retirement age of the relevant scheme

40% of members retiring on ill-health grounds will receive the upper-tier benefits and the remaining 60% will receive the lower-tier benefits.

## Mortality before retirement

Age	Death before retirement
20	0.00014
25	0.00015
30	0.00021
35	0.00028
40	0.00038
45	0.00054
50	0.00079
55	0.00128
60	0.00196
65	0.00308

## Family statistics

### Proportion married or partnered at retirement for future pensioners

Proportion married	Proportion married or partnered
75%	80%

### Proportion married or partnered for current pensioners (at the valuation date)

Age	Proportion married	Proportion married or partnered
50	75%	80%
60	75%	80%
70	75%	78%
80	63%	64%
90	36%	36%

Males are assumed to be three years older than their female partners.

## Matthews second option exercise assumptions

### Eligible firefighters

Total number of firefighters eligible for the second Matthews option exercise
18,500

## Firefighter profile

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### Pattern of employment and ages

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Estimated for the eligible population from survey data provided by FRSs

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## Pay history

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### Ratio of earnings (where actual pay is not known)

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25% of reference pay

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## Assumed take-up rates

Membership group	Take-up
Members who opted for the first Matthews options exercise	100%
Others aged 55 and above	70%
Others below age 55	20%
Overall by members	~60%
Overall by pension	~70%

**19 December 2023**