



# Teachers' Pension Scheme (England and Wales)

## 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 26 October 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 Teachers' Pension Scheme (England and Wales) 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 link:

[2016-assumptions-report---tps\\_ew---final.ashx \(teacherspensions.co.uk\)](https://www.teacherspensions.co.uk/2016-assumptions-report---tps_ew---final.ashx).

### Mortality after retirement

| Baseline mortality            | Standard table | Adjustment |
|-------------------------------|----------------|------------|
| <b>Males</b>                  |                |            |
| Retirements in normal health  | S3NMA          | 93%        |
| Current ill-health pensioners | S3IMA          | 86%        |
| Future ill-health pensioners  | S3IMA          | 86%        |
| Dependants                    | S3DMA          | 87%        |
| <b>Females</b>                |                |            |
| Retirements in normal health  | S3NFA          | 93%        |
| Current ill-health pensioners | S3IFA          | 102%       |
| Future ill-health pensioners  | S3IFA          | 102%       |
| Dependants                    | S3DFA          | 90%        |



## Commutation of pension for cash at retirement

|                   | NPA 60 service | NPA 65 service | 2015 scheme service |
|-------------------|----------------|----------------|---------------------|
| Males and females | 6%             | 17.5%          | 17.5%               |

## Retirement ages

### Age retirement rates with service only in NPA60 section or NPA65 section

| Age | NPA 60 |         | NPA 65 |         |
|-----|--------|---------|--------|---------|
|     | Males  | Females | Males  | Females |
| 55  | 0.09   | 0.08    | -      | -       |
| 56  | 0.08   | 0.07    | -      | -       |
| 57  | 0.11   | 0.09    | -      | -       |
| 58  | 0.14   | 0.12    | -      | -       |
| 59  | 0.16   | 0.14    | -      | -       |
| 60  | 0.37   | 0.40    | 0.09   | 0.08    |
| 61  | 0.27   | 0.32    | 0.08   | 0.07    |
| 62  | 0.22   | 0.27    | 0.11   | 0.09    |
| 63  | 0.22   | 0.25    | 0.14   | 0.11    |
| 64  | 0.24   | 0.25    | 0.15   | 0.13    |
| 65  | 0.42   | 0.35    | 1.00   | 1.00    |
| 66  | 0.35   | 0.31    | 1.00   | 1.00    |
| 67  | 0.28   | 0.24    | 1.00   | 1.00    |
| 68  | 0.28   | 0.21    | 1.00   | 1.00    |
| 69  | 0.27   | 0.27    | 1.00   | 1.00    |
| 70  | 1.00   | 1.00    | 1.00   | 1.00    |

### Age retirement rates for new entrants to the 2015 scheme

| Age | SPA 65 |         | SPA 66 |         | SPA 67 |         | SPA 68 |         |
|-----|--------|---------|--------|---------|--------|---------|--------|---------|
|     | Males  | Females | Males  | Females | Males  | Females | Males  | Females |
| 55  | -      | -       | -      | -       | -      | -       | -      | -       |
| 56  | -      | -       | -      | -       | -      | -       | -      | -       |
| 57  | -      | -       | -      | -       | -      | -       | -      | -       |
| 58  | -      | -       | -      | -       | -      | -       | -      | -       |
| 59  | -      | -       | -      | -       | -      | -       | -      | -       |
| 60  | 0.09   | 0.08    | 0.09   | 0.08    | 0.09   | 0.08    | 0.09   | 0.08    |
| 61  | 0.08   | 0.07    | 0.08   | 0.07    | 0.08   | 0.07    | 0.08   | 0.07    |
| 62  | 0.11   | 0.09    | 0.11   | 0.09    | 0.11   | 0.09    | 0.11   | 0.09    |
| 63  | 0.14   | 0.11    | 0.14   | 0.11    | 0.14   | 0.11    | 0.14   | 0.11    |
| 64  | 0.15   | 0.13    | 0.15   | 0.13    | 0.15   | 0.13    | 0.15   | 0.13    |
| 65  | 1.00   | 1.00    | 0.50   | 0.50    | 0.33   | 0.33    | 0.25   | 0.25    |
| 66  | 1.00   | 1.00    | 1.00   | 1.00    | 0.50   | 0.50    | 0.33   | 0.33    |
| 67  | 1.00   | 1.00    | 1.00   | 1.00    | 1.00   | 1.00    | 0.50   | 0.50    |
| 68  | 1.00   | 1.00    | 1.00   | 1.00    | 1.00   | 1.00    | 1.00   | 1.00    |

## Age retirement rates for members with service in NPA60 section and 2015 scheme

| Age | SPA 67 |         | SPA 68 |         |
|-----|--------|---------|--------|---------|
|     | Males  | Females | Males  | Females |
| 55  | 0.07   | 0.06    | 0.02   | 0.02    |
| 56  | 0.06   | 0.05    | 0.02   | 0.02    |
| 57  | 0.08   | 0.07    | 0.03   | 0.02    |
| 58  | 0.11   | 0.09    | 0.04   | 0.03    |
| 59  | 0.12   | 0.10    | 0.04   | 0.03    |
| 60  | 0.31   | 0.34    | 0.16   | 0.16    |
| 61  | 0.26   | 0.31    | 0.14   | 0.15    |
| 62  | 0.21   | 0.24    | 0.14   | 0.14    |
| 63  | 0.22   | 0.24    | 0.16   | 0.16    |
| 64  | 0.22   | 0.24    | 0.17   | 0.17    |
| 65  | 0.46   | 0.40    | 0.32   | 0.30    |
| 66  | 0.46   | 0.41    | 0.38   | 0.36    |
| 67  | 0.40   | 0.37    | 0.47   | 0.46    |
| 68  | 0.51   | 0.47    | 0.84   | 0.83    |
| 69  | 0.53   | 0.38    | 0.85   | 0.80    |
| 70  | 1.00   | 1.00    | 1.00   | 1.00    |

## Age retirement rates for members with service in NPA65 and 2015 scheme

| Age | SPA 65 |         | SPA 66 |         | SPA 67 |         | SPA 68 |         |
|-----|--------|---------|--------|---------|--------|---------|--------|---------|
|     | Males  | Females | Males  | Females | Males  | Females | Males  | Females |
| 55  | -      | -       | -      | -       | -      | -       | -      | -       |
| 56  | -      | -       | -      | -       | -      | -       | -      | -       |
| 57  | -      | -       | -      | -       | -      | -       | -      | -       |
| 58  | -      | -       | -      | -       | -      | -       | -      | -       |
| 59  | -      | -       | -      | -       | -      | -       | -      | -       |
| 60  | 0.09   | 0.08    | 0.09   | 0.08    | 0.09   | 0.08    | 0.09   | 0.08    |
| 61  | 0.08   | 0.07    | 0.08   | 0.07    | 0.08   | 0.07    | 0.08   | 0.07    |
| 62  | 0.11   | 0.09    | 0.11   | 0.09    | 0.11   | 0.09    | 0.11   | 0.09    |
| 63  | 0.14   | 0.11    | 0.14   | 0.11    | 0.14   | 0.11    | 0.14   | 0.11    |
| 64  | 0.15   | 0.13    | 0.15   | 0.13    | 0.15   | 0.13    | 0.15   | 0.13    |
| 65  | 1.00   | 1.00    | 1.00   | 1.00    | 0.76   | 0.76    | 0.41   | 0.41    |
| 66  | 1.00   | 1.00    | 1.00   | 1.00    | 0.78   | 0.78    | 0.48   | 0.48    |
| 67  | 1.00   | 1.00    | 1.00   | 1.00    | 1.00   | 1.00    | 0.61   | 0.61    |
| 68  | 1.00   | 1.00    | 1.00   | 1.00    | 1.00   | 1.00    | 1.00   | 1.00    |

## Rates of leaving service (net of re-entry within 5 years) for all members

| Age | Males | Females |
|-----|-------|---------|
| 20  | 0.094 | 0.064   |
| 25  | 0.076 | 0.057   |
| 30  | 0.058 | 0.051   |
| 35  | 0.034 | 0.030   |
| 40  | 0.034 | 0.027   |
| 45  | 0.034 | 0.027   |
| 50  | 0.036 | 0.031   |
| 55  | 0.036 | 0.035   |
| 60  | 0.036 | 0.037   |
| 65* | 0.036 | 0.038   |

\*Rates are zero if above the NPA/SPA of the relevant section.

## Promotional pay increases for all members

| Age | Males | Females |
|-----|-------|---------|
| 20  | 89    | 89      |
| 25  | 100   | 100     |
| 30  | 125   | 124     |
| 35  | 151   | 143     |
| 40  | 168   | 152     |
| 45  | 179   | 158     |
| 50  | 186   | 164     |
| 55  | 190   | 168     |
| 60  | 192   | 170     |
| 65  | 194   | 172     |

## Rates of ill-health retirement for all members

| Age | Males  | Females |
|-----|--------|---------|
| 20  | -      | -       |
| 25  | 0.0000 | 0.0000  |
| 30  | 0.0000 | 0.0001  |
| 35  | 0.0001 | 0.0002  |
| 40  | 0.0002 | 0.0003  |
| 45  | 0.0006 | 0.0006  |
| 50  | 0.0018 | 0.0015  |
| 55  | 0.0032 | 0.0029  |
| 60  | 0.0047 | 0.0043  |
| 65* | 0.0057 | 0.0058  |

\* rates are zero if above the NPA of the relevant section.

In all scheme sections, 50% of men and 50% of women are assumed to qualify for upper tier ill-health retirement awards.

## Mortality before retirement for all members

| Age | Males  | Females |
|-----|--------|---------|
| 20  | 0.0001 | 0.0000  |
| 25  | 0.0001 | 0.0001  |
| 30  | 0.0002 | 0.0001  |
| 35  | 0.0003 | 0.0002  |
| 40  | 0.0004 | 0.0003  |
| 45  | 0.0006 | 0.0004  |
| 50  | 0.0008 | 0.0006  |
| 55  | 0.0014 | 0.0009  |
| 60  | 0.0023 | 0.0012  |
| 65  | 0.0036 | 0.0017  |

## Family statistics

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

|                | Accrual before 1/1/2007 | Accrual on or after 1/1/2007    |
|----------------|-------------------------|---------------------------------|
|                | Proportion married      | Proportion married or partnered |
| <b>Males</b>   | 77%                     | 77%                             |
| <b>Females</b> | 58%                     | 58%                             |

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

| Age | Accrual before 1/1/2007 |         | Accrual on or after 1/1/2007 |         |
|-----|-------------------------|---------|------------------------------|---------|
|     | Males                   | Females | Males                        | Females |
| 50  | 74%                     | 58%     | 78%                          | 60%     |
| 60  | 74%                     | 58%     | 78%                          | 60%     |
| 70  | 74%                     | 46%     | 76%                          | 47%     |
| 80  | 61%                     | 23%     | 62%                          | 23%     |
| 90  | 35%                     | 7%      | 35%                          | 7%      |

Men are assumed to be three years older than their partners and women are assumed to be two years younger than their partners.

No allowance is made for pensions to cease on remarriage.

**Garth Foster, Actuary, Government Actuary's Department**

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