



Civil Service Pension Scheme

Actuarial valuation as at 31 March 2020

This report is supplemental to the Advice on assumptions report dated 18 September 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 Civil Service Pension Scheme, ('CSPS') 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
Males		
Retirements in normal health	S3NMA_M	100%
Current ill-health pensioners	S3NMA_M	100%
Future ill-health pensioners	S3NMA_M	100%
Dependants	S3DMA	81%
Females		
Retirements in normal health	S3NFA_H	96%
Current ill-health pensioners	S3NFA_H	96%
Future ill-health pensioners	S3NFA_H	96%
Dependants	S3DFA	93%



Retirement ages

Age retirement rates for members with full protection in Classic, Premium and Classic Plus

Age	Salary band 1		Salary band 2		Salary band 3		Salary band 4	
	Males	Females	Males	Females	Males	Females	Males	Females
50	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
51	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
52	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
53	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
54	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
55	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.03
56	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.03
57	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
58	0.05	0.05	0.05	0.05	0.07	0.07	0.07	0.07
59	0.07	0.07	0.09	0.09	0.10	0.10	0.10	0.10
60	0.17	0.25	0.27	0.30	0.39	0.34	0.37	0.34
61	0.10	0.17	0.14	0.17	0.21	0.24	0.25	0.29
62	0.11	0.18	0.13	0.19	0.20	0.21	0.22	0.30
63	0.12	0.18	0.14	0.19	0.18	0.20	0.22	0.28
64	0.32	0.28	0.27	0.26	0.26	0.25	0.23	0.28
65	0.46	0.35	0.40	0.31	0.35	0.35	0.29	0.33
66	0.20	0.20	0.23	0.17	0.23	0.09	0.24	0.11
67	0.18	0.19	0.20	0.21	0.16	0.22	0.30	0.80
68	0.14	0.15	0.19	0.14	0.07	0.31	0.18	0.87
69	0.14	0.15	0.19	0.19	0.07	0.66	0.59	0.93
70	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Nuvos members with full protection are assumed to retire at age 65.

Age retirement rates for Salary Band 1 members with service in existing NPA 60 and 2015 Schemes

Age	SPA 65		SPA 66		SPA 67		SPA 68	
	Males	Females	Males	Females	Males	Females	Males	Females
57	0.05	0.05	0.05	0.05	0.05	0.05		
58	0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.03
59	0.07	0.07	0.07	0.07	0.07	0.07	0.04	0.04
60	0.17	0.25	0.17	0.25	0.17	0.25	0.10	0.13
61	0.10	0.17	0.10	0.17	0.10	0.17	0.07	0.11
62	0.11	0.18	0.11	0.18	0.08	0.14	0.06	0.10
63	0.12	0.18	0.12	0.18	0.09	0.14	0.06	0.10
64	0.32	0.28	0.06	0.07	0.05	0.07	0.04	0.05
65	1.00	1.00	0.16	0.24	0.06	0.07	0.05	0.07
66	1.00	1.00	1.00	1.00	0.16	0.24	0.06	0.07
67	1.00	1.00	1.00	1.00	1.00	1.00	0.16	0.24
68	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Age retirement rates for Salary Band 2 members with service in existing NPA 60 and 2015 Schemes

Age	SPA 65		SPA 66		SPA 67		SPA 68	
	Males	Females	Males	Females	Males	Females	Males	Females
57	0.05	0.05	0.05	0.05	0.05	0.05		
58	0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.03
59	0.09	0.09	0.09	0.09	0.09	0.09	0.05	0.05
60	0.27	0.30	0.27	0.30	0.27	0.30	0.15	0.15
61	0.14	0.17	0.14	0.17	0.14	0.17	0.09	0.11
62	0.13	0.19	0.13	0.19	0.10	0.15	0.07	0.10
63	0.14	0.19	0.14	0.19	0.11	0.15	0.07	0.10
64	0.27	0.26	0.06	0.07	0.05	0.07	0.04	0.05
65	1.00	1.00	0.16	0.24	0.06	0.07	0.05	0.07
66	1.00	1.00	1.00	1.00	0.16	0.24	0.06	0.07
67	1.00	1.00	1.00	1.00	1.00	1.00	0.16	0.24
68	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Age retirement rates for Salary Band 3 members with service in existing NPA 60 and 2015 Schemes

Age	SPA 65		SPA 66		SPA 67		SPA 68	
	Males	Females	Males	Females	Males	Females	Males	Females
57	0.05	0.05	0.05	0.05	0.05	0.05		
58	0.07	0.07	0.07	0.07	0.07	0.07	0.04	0.04
59	0.10	0.10	0.10	0.10	0.10	0.10	0.05	0.05
60	0.39	0.34	0.39	0.34	0.39	0.34	0.21	0.20
61	0.21	0.24	0.21	0.24	0.21	0.24	0.12	0.15
62	0.20	0.21	0.20	0.21	0.15	0.16	0.09	0.10
63	0.18	0.20	0.18	0.20	0.13	0.15	0.08	0.10
64	0.26	0.25	0.06	0.07	0.05	0.07	0.04	0.05
65	1.00	1.00	0.16	0.24	0.06	0.07	0.05	0.07
66	1.00	1.00	1.00	1.00	0.16	0.24	0.06	0.07
67	1.00	1.00	1.00	1.00	1.00	1.00	0.16	0.24
68	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Age retirement rates for Salary Band 4 members with service in existing NPA 60 and 2015 Schemes

Age	SPA 65		SPA 66		SPA 67		SPA 68	
	Males	Females	Males	Females	Males	Females	Males	Females
57	0.05	0.05	0.05	0.05	0.05	0.05		
58	0.07	0.07	0.07	0.07	0.07	0.07	0.04	0.04
59	0.10	0.10	0.10	0.10	0.10	0.10	0.05	0.05
60	0.37	0.34	0.37	0.34	0.37	0.34	0.20	0.20
61	0.25	0.29	0.25	0.29	0.25	0.29	0.14	0.17
62	0.22	0.30	0.22	0.30	0.16	0.22	0.10	0.14
63	0.22	0.28	0.22	0.28	0.16	0.21	0.10	0.14
64	0.23	0.28	0.06	0.07	0.05	0.07	0.04	0.05
65	1.00	1.00	0.16	0.24	0.06	0.07	0.05	0.07
66	1.00	1.00	1.00	1.00	0.16	0.24	0.06	0.07
67	1.00	1.00	1.00	1.00	1.00	1.00	0.16	0.24
68	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Age retirement rates for Nuvos members with service in existing and 2015 Schemes

Age	SPA 65		SPA 66		SPA 67		SPA 68	
	Males	Females	Males	Females	Males	Females	Males	Females
65	1.00	1.00	0.67	0.67	0.50	0.50	0.25	0.25
66	1.00	1.00	1.00	1.00	0.25	0.25	0.06	0.07
67	1.00	1.00	1.00	1.00	1.00	1.00	0.16	0.24
68	1.00	1.00	1.00	1.00	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
60	0.03	0.05	0.03	0.05	0.03	0.05	0.03	0.05
61	0.04	0.05	0.03	0.05	0.03	0.05	0.03	0.05
62	0.05	0.07	0.04	0.05	0.03	0.05	0.03	0.05
63	0.06	0.07	0.05	0.07	0.04	0.05	0.03	0.05
64	0.16	0.24	0.06	0.07	0.05	0.07	0.04	0.05
65	1.00	1.00	0.16	0.24	0.06	0.07	0.05	0.07
66	1.00	1.00	1.00	1.00	0.16	0.24	0.06	0.07
67	1.00	1.00	1.00	1.00	1.00	1.00	0.16	0.24
68	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Rates of ill-health retirement

Ill-health retirement rates for all members

Age	Males	Females
20	0.0001	0.0001
25	0.0001	0.0001
30	0.0002	0.0002
35	0.0005	0.0004
40	0.0009	0.0007
45	0.0013	0.0010
50	0.0020	0.0019
55	0.0036	0.0032
60	0.0058	0.0058
65*	0.0079	0.0081

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

In all non-Classic scheme sections 50% of male ill-health retirements and 50% of female ill-health retirements are assumed to qualify for upper-tier awards. There is a single tier for ill-health retirements in the Classic section so no assumption is needed.

Rates of leaving service

Withdrawal rates (net of re-entry) for all members

Age	Salary band 1		Salary band 2		Salary band 3		Salary band 4	
	Males	Females	Males	Females	Males	Females	Males	Females
20	0.130	0.121	0.060	0.059	0.044	0.059	0.035	0.030
25	0.099	0.100	0.038	0.050	0.032	0.050	0.034	0.020
30	0.080	0.060	0.027	0.035	0.026	0.030	0.030	0.025
35	0.063	0.050	0.022	0.024	0.020	0.020	0.025	0.025
40	0.053	0.045	0.017	0.017	0.018	0.020	0.025	0.025
45	0.047	0.035	0.015	0.016	0.015	0.020	0.028	0.030
50	0.025	0.025	0.016	0.015	0.016	0.020	0.025	0.030
55	0.025	0.025	0.016	0.015	0.016	0.020	0.025	0.040
60	0.041	0.032	0.020	0.025	0.030	0.035	0.020	0.025
65	0.020	0.020	0.020	0.020	0.020	0.020	0.000	0.000

*rates are zero if above NPA (Where NPA is assumed to be that which would apply in the 2015 scheme for those members who are unprotected or have tapered protection).

Mortality before retirement

Death before retirement rates for all members

Age	Males	Females
20	0.0003	0.0001
25	0.0003	0.0001
30	0.0004	0.0002
35	0.0004	0.0003
40	0.0006	0.0004
45	0.0009	0.0006
50	0.0012	0.0010
55	0.0020	0.0014
60	0.0031	0.0022
65	0.0049	0.0035

Promotional pay increases

Promotional salary scales for all members

Age	Salary band 1*		Salary band 2*		Salary band 3**		Salary band 4**	
	Males	Females	Males	Females	Males	Females	Males	Females
20	115.2	115.2	115.2	115.2				
25	139.0	139.0	139.0	139.0				
30	163.7	163.7	163.7	163.7	107.5	107.5	107.5	107.5
35	182.5	182.5	182.5	182.5	122.4	122.4	122.4	122.4
40	194.7	194.7	194.7	194.7	135.6	135.6	135.6	135.6
45	201.8	201.8	201.8	201.8	147.3	147.3	147.3	147.3
50	206.5	206.5	206.5	206.5	158.6	158.6	158.6	158.6
55	210.0	210.0	210.0	210.0	168.9	168.9	168.9	168.9
60	211.9	211.9	211.9	211.9	174.3	174.3	174.3	174.3
65	213.3	213.3	213.3	213.3	176.6	176.6	176.6	176.6

*index starts at base of 100 at age 17

**index starts at base of 100 at age 28

Commutation of pension for cash at retirement

	Classic Scheme	Non-Classic schemes	2015 scheme
Males and females	9.0%	20.0%	20.0%

Classic Plus members are assumed to commute 20.0% of their post 1 October 2002 pension.

Family statistics

Recommended proportion married or partnered at retirement for future pensioners

	Classic members Proportion married	Non-Classic members Proportion married or partnered
Males	68%	73%
Females	50%	50%

Recommended proportion married or partnered at valuation date for current pensioners

Age	Classic members		Non-classic members	
	Males	Females	Males	Females
50	70%	51%	74%	53%
60	70%	51%	74%	53%
70	69%	41%	72%	42%
80	59%	20%	59%	20%
90	33%	5%	33%	5%

Male members are assumed to be 3 years older than their partners and female members are assumed to be 2 years younger than their partners.

18 September 2023