



Government
Actuary's
Department



Armed Forces Pension Scheme

Actuarial valuation as at 31 March 2016

Report on membership data

Date: 28 February 2019

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Contents

1	Introduction	3
2	Summary of data used for the valuation	5
3	Data provided and checks and adjustments made	11
	Appendix A: Summary of membership data	15
	Appendix B: Supplementary data	35
	Appendix C: Summary of movements data 2012-2016	36
	Appendix D: Data items – membership data	39
	Appendix E: Data items - movements data	41
	Appendix F: Checks and adjustments applied to membership data	43
	Appendix G: Checks and exclusions applied to the movements data	49
	Appendix H: Summary of benefits	50



1 Introduction

- 1.1 This report is addressed to the Ministry of Defence.
- 1.2 Pension scheme membership data is required for the actuarial valuation of the Armed Forces Pension Scheme and related arrangements (AFPS or 'the Scheme') as at 31 March 2016, carried out in accordance with HM Treasury's Public Service Pensions (Valuations and Employer Cost Cap) Directions 2014 as amended by the (Amendment) Directions 2018 ('HMT Directions').
- 1.3 The membership data is used for the following:
- > To calculate valuation results including the uncorrected employer contribution rate, corrected employer contribution rate and past service liability (all valuation data)
 - > To assess the initial cost cap fund (active membership data as at 31 March 2015)
 - > To assess elements of the Scheme's demographic experience in order to recommend assumptions for the valuation (movements data 31 March 2012 to 31 March 2016)
- 1.4 The results of the valuation are critically dependent on the quality and correctness of the data used. The data provided was not fully correct and complete for all members and approximations have been made to enable valuation calculations to be undertaken.
- 1.5 The purposes of this report are:
- > to discuss and summarise the membership data provided, and any checks and adjustments made to the data;
 - > to enable users of the valuation report to understand the underlying membership data used in the valuation and any issues relating to it; particularly those issues that may impact on the valuation results; and
 - > to discuss and summarise the movements data provided which is used to inform decisions around scheme specific assumptions to be used for the valuation.
- 1.6 All member data provided and discussed in this report was supplied by Defence Business Services (DBS). Annual accounts for the relevant period are publicly available.
- 1.7 In preparing this report, GAD has relied on data and other information supplied by DBS as described in the report. Any checks that GAD has made on this data and information are limited to those described in the report, including any checks on the overall reasonableness and consistency of the data. These checks do not represent a full independent audit of the data supplied and do not by themselves confirm or guarantee the overall quality or correctness of the data. In particular, GAD has relied on the general completeness and accuracy of the information supplied without independent verification.



- 1.8 Summaries of the membership and movements data used for the valuation are provided in Section 2 of this report with further information in Appendices A and B of this report respectively.
- 1.9 There are a number of issues with the membership data supplied for this valuation, as outlined in paragraph 3.4.
- 1.10 There were also issues with the movement data, as outlined in paragraph 3.11. Inaccuracies in the movement data potentially feed through into the analysis of experience, and could therefore result in the scheme experience appearing higher or lower than it actually has been over the intervaluation period.
- 1.11 The issues identified with the membership and movement data were generally similar to the issues identified by GAD as part of the 2012 actuarial valuation of AFPS. GAD has made adjustments to address these issues. In GAD's opinion these adjustments are reasonable and appropriate for the purpose of the actuarial valuation. However, it should be noted that the results of the valuation could have been different if more reliable data had been available.
- 1.12 The data issues identified could affect employer contribution rates, and also member benefits via the requirements of the valuation Directions. GAD recommends that MoD continues its ongoing programme to improve valuation data quality.
- 1.13 Appendix C of our valuation assumptions report of today's date comments further on the assumptions made for data uncertainties.
- 1.14 Throughout this report the totals given for summed data may not be exactly the same as the sum of the components shown due to rounding effects.
- 1.15 This report should not be reproduced or disseminated to other parties without prior consent. The Government Actuary's Department (GAD) does not accept any liability to third parties, whether or not it has agreed to the disclosure.
- 1.16 This report has been prepared in accordance with the applicable Technical Actuarial Standards: TAS 100 and TAS 300 issued by the Financial Reporting Council (FRC). The FRC sets technical standards for actuarial work in the UK.

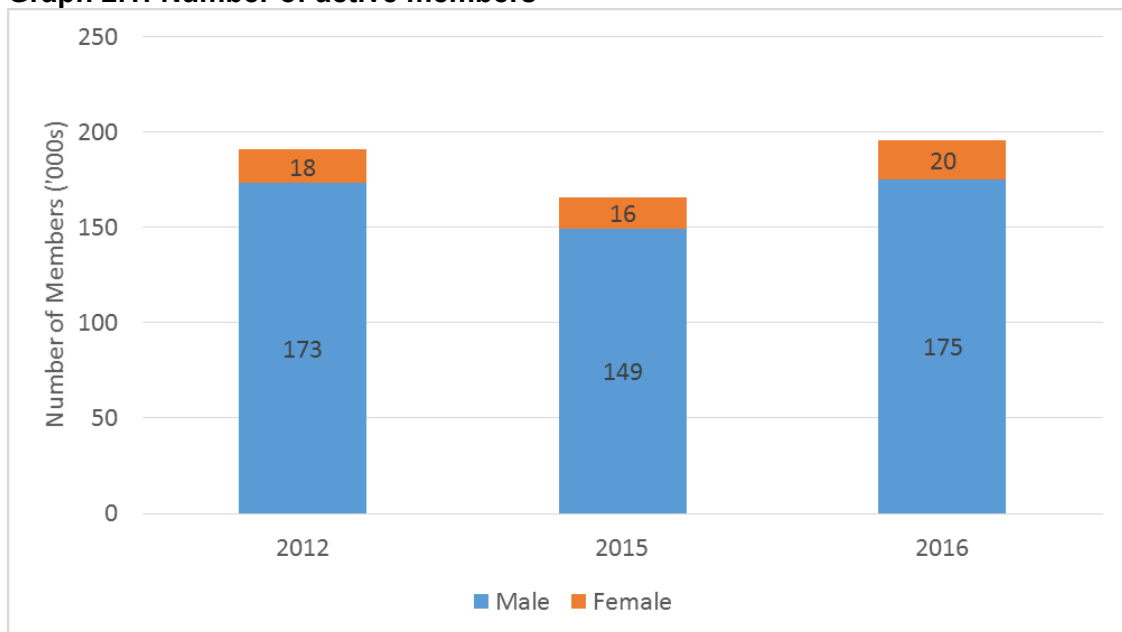


2 Summary of data used for the valuation

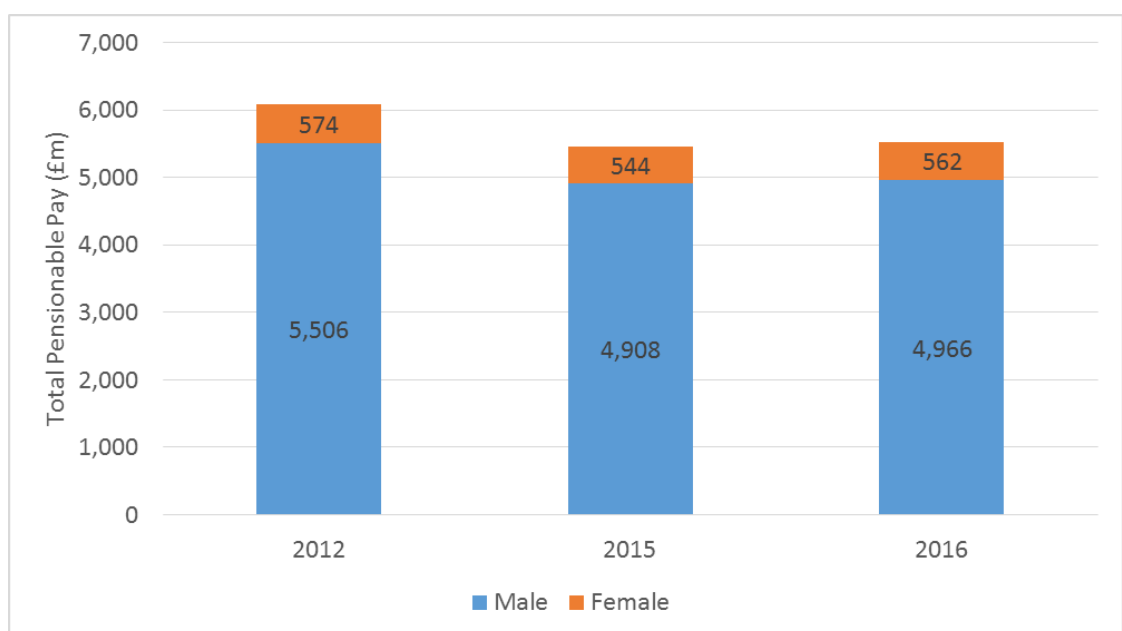
Membership data at 31 March 2016

2.1 The membership data to be used for the purposes of the 2016 valuation is summarised below together with comparative data at 2015 (for actives only) and as used for the 2012 valuation. Detailed tables are set out in Appendix A.

Graph 2.1: Number of active members

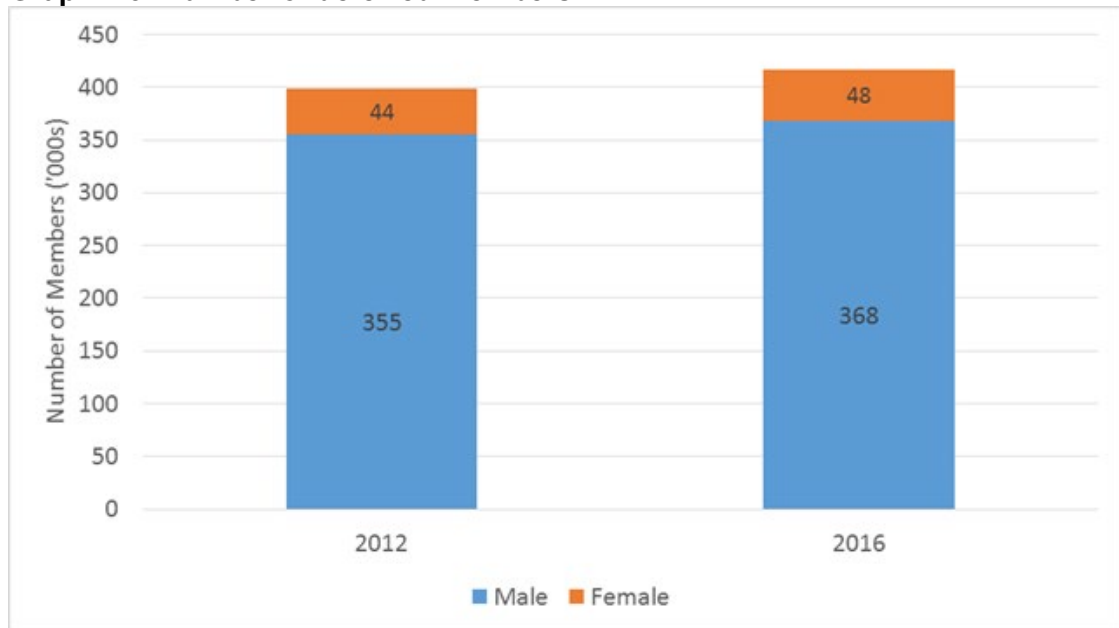


Graph 2.2: Active total pensionable pay (full time pay)

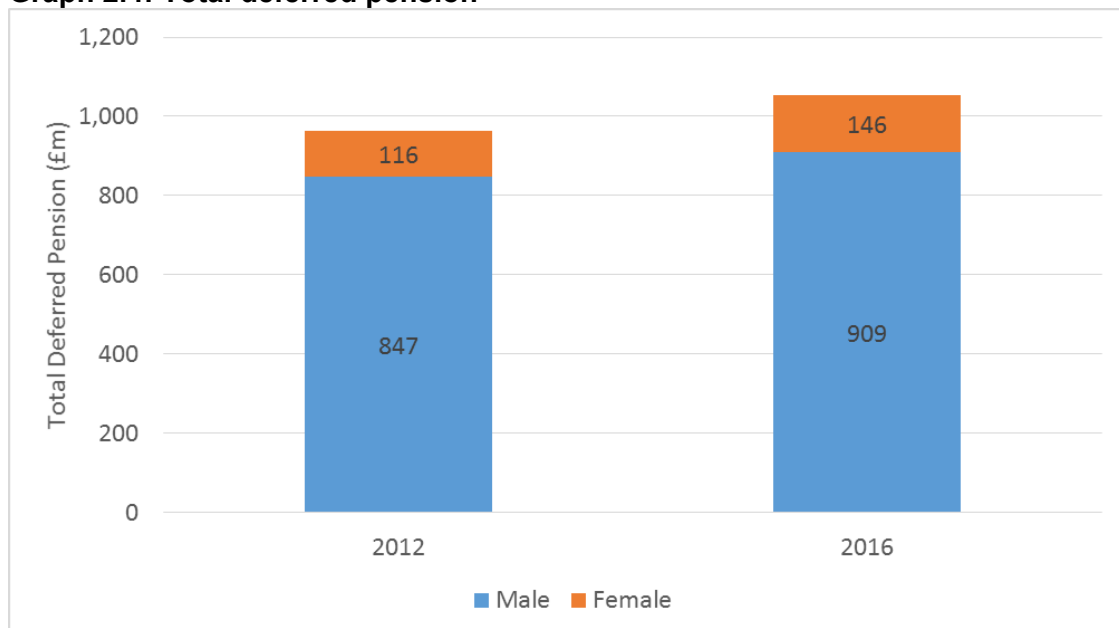




Graph 2.3: Number of deferred members

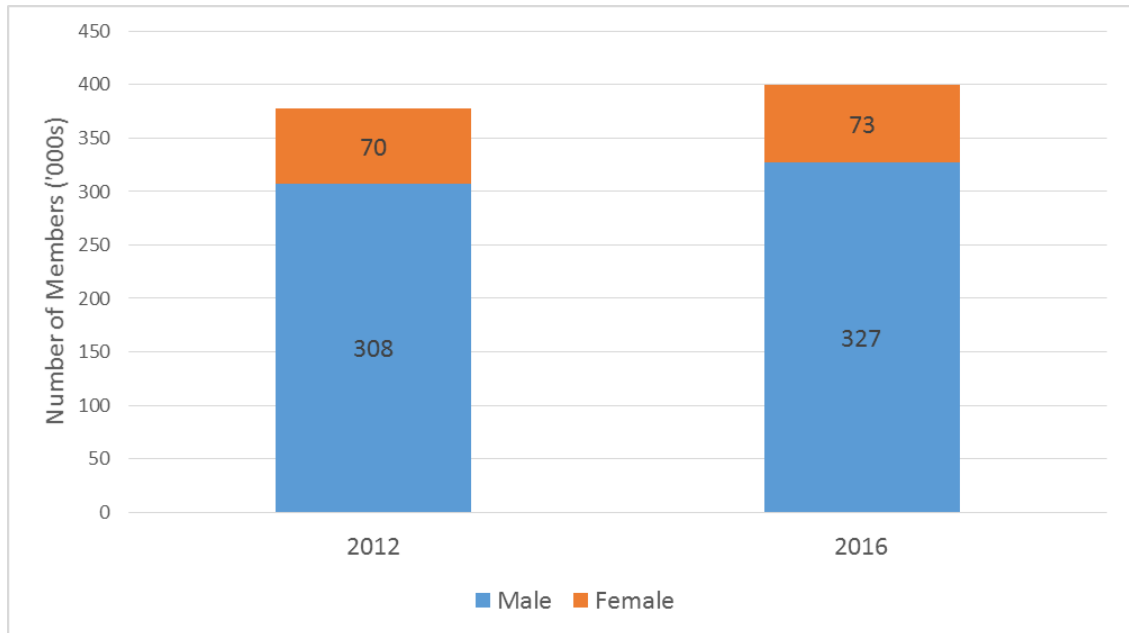


Graph 2.4: Total deferred pension

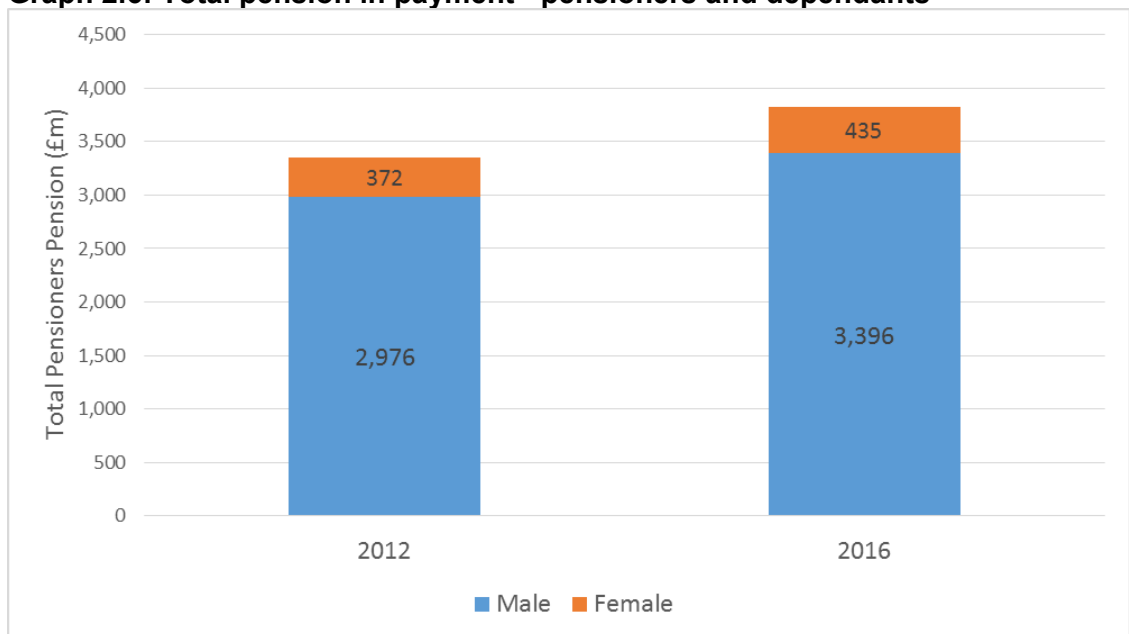




Graph 2.5: Number of pensioners and dependants¹



Graph 2.6: Total pension in payment - pensioners and dependants¹



¹ Excluding children's pensions



- 2.2 The graphs above show an increase between 2012 and 2016 in the pensioner and deferred membership by both headcount and total pension roll/deferred pension. Active membership also increased by headcount over the same period, but the total active pensionable pay decreased. The reason for this is the reduction in size of the regular armed forces, including material redundancy tranches, over this period, combined with the eligibility of lower paid volunteer reservists for AFPS 15 from 1 April 2015.
- 2.3 Around 1m records were provided to GAD across all three membership categories (active, deferred and pensioner) as at 31 March 2016. Checks were applied to these records to ensure all key data items are provided and reliable for valuation purposes. Records with key data items either missing or unreliable were excluded and remaining data updated. This approach implicitly assumes that the records with missing/unreliable data have the same average profile as the complete/reliable records. The derivation of the uprating factors and the checks and adjustments applied to the data are explained further in the next section of this report.
- 2.4 The overall uprating factors applied to each category of member are shown below with the comparative factor at 2015 for active members only.

Table 2.1: Uprating factors

	Uprating factor 2016	Uprating factor 2015
Active members	1.018	1.003
Deferred members	1.013	n/a
Pensioner members	1.001	n/a
Total membership	1.010	n/a

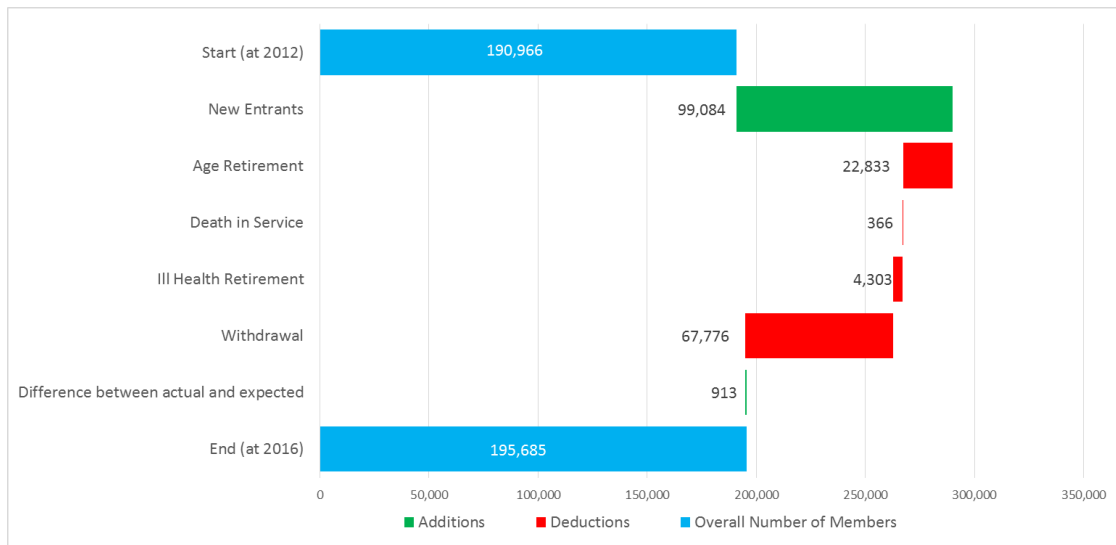
- 2.5 Making assumptions about missing data and allowing for known members with unusable data by uprating introduces uncertainty into the valuation results.

Movements data 31 March 2012 to 31 March 2016

- 2.6 The movements data provided is used for the purposes of informing the demographic assumptions to be used for the 2016 valuation. The graphs below show a reconciliation of the movements between 2012 and 2016. The underlying numbers and some further information are set out in Appendix C.

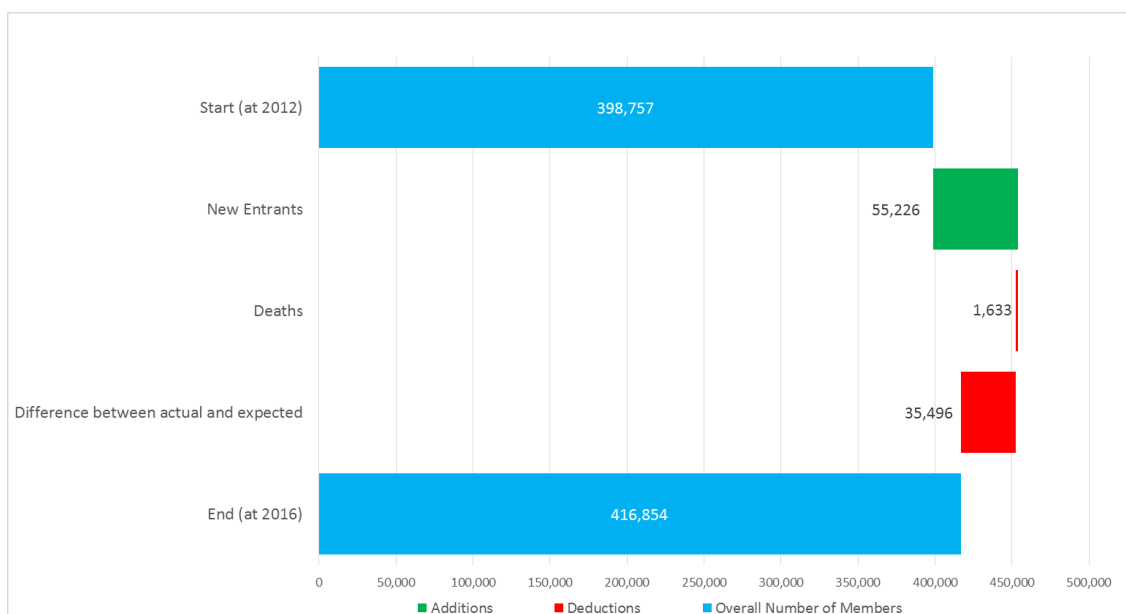


Graph 2.7: Active membership reconciliation



2.7 The difference between the expected number of active members as at 31 March 2016 and the actual number of members (actual number is around 0.5% higher than expected number of active members) introduces uncertainty into the analysis of experience for active members. More detail on the quality of the actives movements data is provided in Appendix C.

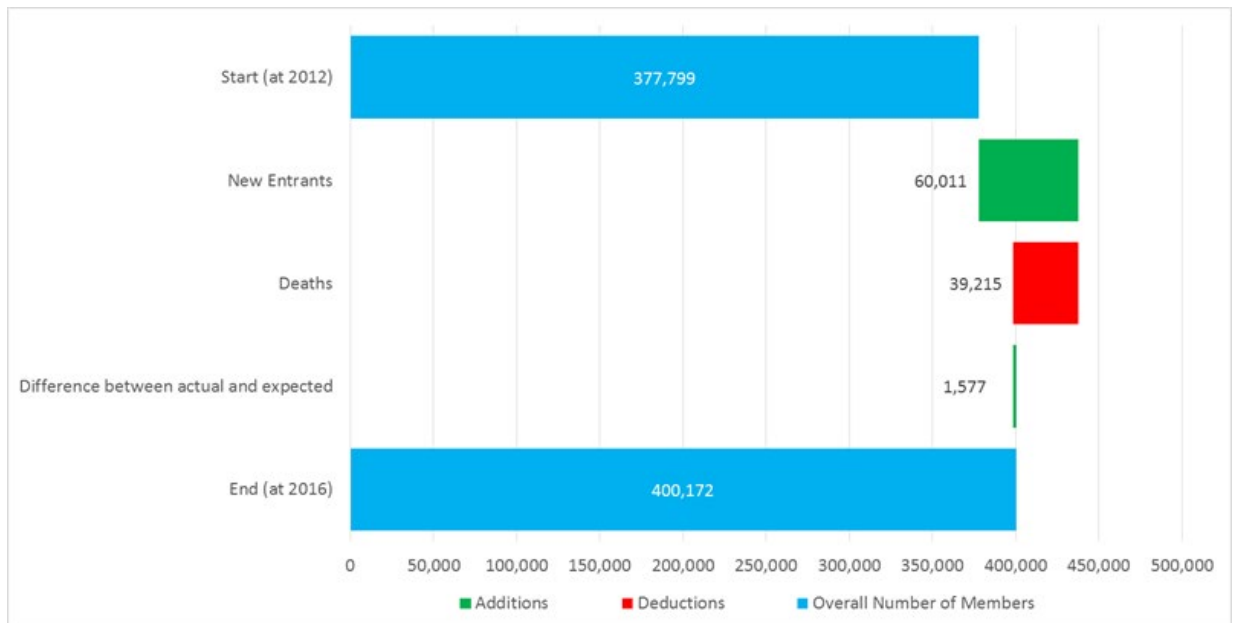
Graph 2.8: Deferred membership reconciliation





2.8 The exits shown in graph 2.8 exclude members who retired from deferred status, as no deferred retirement data was provided. Based on other data provided, we estimate that around 19,200 members may have retired from deferred status over the intervaluation period. Allowing for this improves the reconciliation. On this basis the actual number of deferreds is around 3.8% lower than the expected number of deferreds.

Graph 2.9: Pensioner membership reconciliation*



*Children are not included in the graph above.

2.9 The actual number of pensioner members is 0.4% more than the expected number of pensioner members.



3 Data provided and checks and adjustments made

Membership data at 31 March 2016 and 31 March 2015

- 3.1 Individual member data was supplied for active members, deferred members and current beneficiaries of the following schemes:
- > Armed Forces Pension Scheme 1975 (AFPS 75)
 - > Armed Forces Pension Scheme 2005 (AFPS 05)
 - > Armed Forces Pension Scheme 2015 (AFPS 15)
 - > Full Time Reserve Service Pension Scheme 1997 (FTRS PS)
 - > Reserve Forces Pension Scheme 2005 (RFPS)
 - > Non-Regular Permanent Staff Pension Scheme (NRPS PS)²
- 3.2 Additional summary data was supplied in respect of members of the Gurkha Pension Scheme (GPS) and Royal Gibraltar Regiment Pension Scheme (RGRPS).
- 3.3 The individual data items supplied which are critical to the valuation calculations are summarised in Appendix D.

Membership data: issues identified

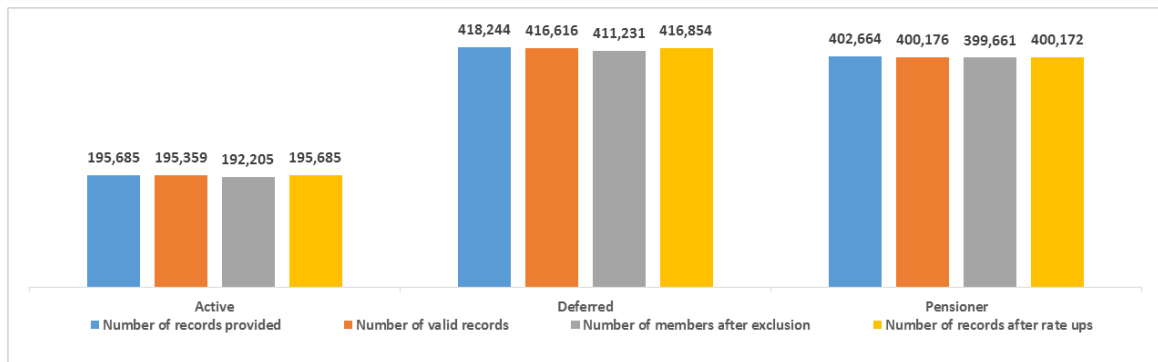
- 3.4 The following specific issues were identified. We would expect all these to be low materiality.
- > DBS informed GAD that the data in respect of active and deferred NRPS members may not be reliable. These records were removed from the data and a global uprating factor was applied for each of the active and deferred datasets.
 - > Pensionable pay – For a number of members, the pay figures provided in the fields 'Final Pensionable Salary' and 'AFPS15 Pensionable Earnings' were inconsistent. The pensionable pay to be used for calculation purposes has been derived based on a combination of the data provided.
 - > EDP and IP pensioners – For records where the specified pension in payment field was not provided, we have assumed that their EDP or IP pension (where populated) was currently in payment.
 - > Net leaver liability calculations – the lack of a universal unique identifier means that we are unable to accurately trace 2016 members back to the 2015 active data. This means that approximations have had to be made in the net leaver liability calculations required by HM Treasury Directions as part of the employer cost cap framework.

² The main scheme data for NRPS PS was not used for actives and deferreds.



- 3.5 The graph below shows the total number of records provided, the total number of valid records (records that should be included in the final valuation data - after removing NRPS records, duplicate records, suspended records, no liability records etc.), the total number of records after exclusions (those that are valid and pass our checks on the data), and the total number of records after we have rated up for the excluded records. Further details are set out in Appendix F.

Graph 3.1: Summary of data provided and excluded



Checks made and adjustments applied

- 3.6 All key data items were checked against the specification requested for both completeness and consistency.
- 3.7 Checks were carried out to determine which records would need to be excluded. The checks also identified a number of areas where adjustments to the data were appropriate. The checks and adjustments applied are summarised in Appendix F.
- 3.8 Based on the checks applied some records were excluded from the dataset for valuation purposes. Uprating factors were determined for each membership category equal to the ratio of known valid records and the number of records with adequate data (ie those that are not excluded based on our checks). Implicitly this uprating approach assumes that excluded records have the same average profile (ie age, pay and service) as included records.



3.9 Tables 3.2 and 3.3 show the derivation of the uprating factors³. Table 3.2 shows uprating where a global uprating factor is used (including for NRPS members), and table 3.3 shows uprating factors where records are uprated using data from their respective categories.

Table 3.2: Derivation of global rate up (including NRPS members) (31 March 2016)

	Total number of records provided (A)	Invalid records excluded (B)	Invalid records excluded to which a global rate up is applied (C)	Valid records (D)	Global Uprating factor
Actives	195,685	326	326	195,359	1.002
Deferreds	418,244	1,628	247	416,616	1.001
Pensioners	402,664	2,488	0	400,176	1.000
Total	1,016,593	4,442	573	1,012,151	

Table 3.3: Derivation of uprating factors (31 March 2016)

	Number of valid records (A)	Number of exclusions that are rated up	Number of members after exclusions (B)	Uprating factor (A/B)	Global Uprating factor	Number of members after rate ups
Actives	195,359	3,154	192,205	1.016	1.002	195,685
Deferreds	416,616	5,385*	411,231	1.013	1.001	416,854*
Pensioners	400,176	515**	399,661	1.001	1.000	400,172**
Total	1,012,151	9,054	1,003,097	1.009	-	1,012,711

* Nine records could not be uprated for the deferred membership – all records within their respective group were excluded so no remaining record could be uprated.

** Four records could not be uprated for the pensioner membership – all records within their respective group were excluded so no remaining record could be uprated.

Table 3.4: Derivation of uprating factors (active membership 31 March 2015)

	Number of valid records (A)	Number of exclusions that are rated up	Number of members after exclusions (B)	Uprating factor (A/B)	Global rate up (NRPS)	Number of records after rate ups
Actives	165,174*	11*	165,163	1.0001	1.0027	165,618

* Excludes 445 NRPS members

³ In practice, the uprating factors shown in table 3.3 are determined for each identifiable membership group (see Appendix F)



Movements data – 31 March 2012 to 31 March 2016

- 3.10 The movements data is analysed and used to inform how assumptions of members' future behaviours should be set for the valuation. The key data items provided for member movements are set out in Appendix E.

Movements data: issues identified

- 3.11 The following specific issues were identified:

Medium materiality

- > Mortality experience: The relevant indicators in the data provided were not sufficiently reliable to support separate analysis by normal health/ill health, officers/other ranks or members/dependants.
- > Retirement experience: There was some uncertainty around the reliability and completeness of the redundancy indicators provided with the data.
- > It was not possible to split out redundancies from other withdrawals in the data available.

Low materiality

- > No data was available about the married or partnered status of recent pensioner deaths.
- > No data was obtainable on age differences between members and their spouses or partners.

Accounting information

- 3.12 Annual accounts were available for the full intervaluation period. Certain pieces of financial accounting information have been used to perform independent checks on the dataset supplied. These checks and the data used are set out in Appendix F.

Benefit information

- 3.13 The benefits provided are set out in various regulations and orders, including:

- > The Navy, Army and Air Force Pensions (Armed Forces Pension Scheme 1975 And Attributable Benefits Scheme) (Amendment) Warrants 2010
- > The Armed Forces Pension Scheme Order 2005
- > The Armed Forces Early Department Payments Scheme Order 2005
- > The Armed Forces Pension Regulations 2014
- > The Armed Forces Early Departure Payments Scheme Regulations 2014

- 3.14 MOD has confirmed that the only uncertainties that it is aware of about the form of benefits that the Scheme is liable to provide is the potential requirement for sex equalisation of GMPs and the potential requirement for the equalisation of contingent partners' pensions. No allowance has been made for this in the valuation calculations.

- 3.15 A summary of the benefits provided to members of the Scheme is given in Appendix H.



Appendix A: Summary of membership data

Active data

Table A1: AFPS75 Active data

Category	Rank	Gender	Number of members (000s)	Total pensionable pay (£m) [#]	Average pensionable pay	Average age [*]	Average Reckonable service [*]
Protected	Officer	Male	2.7	191.2	70,909	52.0	26.6
		Female	0.1	8.8	70,121	52.0	23.6
		Total	2.8	200.0	70,874	52.0	26.4
	Other Ranks	Male	1.8	71.3	39,566	51.7	29.2
		Female	0.1	2.9	40,209	51.7	26.8
		Total	1.9	74.2	39,591	51.7	29.1
	All	Male	4.5	262.5	58,358	51.9	27.3
		Female	0.2	11.7	59,089	51.9	24.4
		Total	4.7	274.2	58,389	51.9	27.2
Unprotected	Officer	Male	10.7	638.2	59,424	41.7	17.7
		Female	1.5	90.5	59,375	39.7	14.9
		Total	12.3	728.7	59,418	41.4	17.4
	Other Ranks	Male	38.4	1,418.0	36,907	37.5	16.4
		Female	4.0	143.7	36,368	37.0	15.5
		Total	42.4	1,561.7	36,857	37.5	16.3
	All	Male	49.2	2,056.2	41,826	38.8	16.8
		Female	5.5	234.2	42,774	38.0	15.3
		Total	54.6	2,290.4	41,921	38.7	16.6
All	Officer	Male	13.4	829.4	61,729	44.1	19.8
		Female	1.6	99.3	60,191	40.8	15.7
		Total	15.1	928.7	61,561	43.7	19.3
	Other Ranks	Male	40.2	1,489.2	37,026	38.2	17.0
		Female	4.0	146.7	36,438	37.3	15.7
		Total	44.2	1,635.9	36,972	38.1	16.9
	All	Male	53.7	2,318.6	43,212	40.3	18.0
		Female	5.7	246.0	43,344	38.7	15.7
		Total	59.3	2,564.6	43,224	40.1	17.8

^{*}Weighted by pensionable pay

[#]Excluding the 2016 pay increase



Table A2: AFPS05 Active Data

Category	Rank	Gender	Number of members (000s)	Total pensionable pay (£m)#	Average pensionable pay	Average age*	Average Reckonable service*	
Protected	Officer	Male	1.6	112.2	68,699	54.4	17.8	
		Female	0.1	3.7	63,034	54.6	10.6	
		Total	1.7	115.9	68,500	54.4	17.6	
	Other Ranks	Male	1.8	68.7	38,675	53.0	19.6	
		Female	0.1	2.1	36,514	53.4	12.9	
		Total	1.8	70.8	38,608	53.0	19.4	
	All	Male	3.4	180.9	53,051	53.9	18.5	
		Female	0.1	5.8	50,015	54.2	11.4	
		Total	3.5	186.7	52,951	53.9	18.2	
Unprotected	Officer	Male	9.7	400.4	41,333	32.8	5.9	
		Female	1.9	84.6	43,611	32.9	5.3	
		Total	11.6	485.0	41,713	32.8	5.8	
	Other Ranks	Male	71.1	1,755.4	24,679	28.5	5.1	
		Female	7.4	185.7	25,048	28.2	5.0	
		Total	78.5	1,941.1	24,714	28.4	5.1	
	All	Male	80.8	2,155.8	26,675	29.3	5.2	
		Female	9.4	270.3	28,899	29.7	5.1	
		Total	90.2	2,426.1	26,906	29.3	5.2	
	All	Officer	Male	11.3	512.5	45,280	37.5	8.5
			Female	2.0	88.4	44,186	33.9	5.5
			Total	13.3	600.9	45,115	37.0	8.0
Other Ranks		Male	72.9	1,824.1	25,020	29.4	5.6	
		Female	7.5	187.8	25,136	28.5	5.1	
		Total	80.4	2,011.9	25,031	29.3	5.6	
All		Male	84.2	2,336.7	27,743	31.2	6.3	
		Female	9.5	276.2	29,158	30.2	5.2	
		Total	93.7	2,612.8	27,886	31.1	6.2	

*Weighted by pensionable pay

Excluding the 2016 pay increase



Table A3: AFPS15 Active data

Category	Rank	Gender	Number of members (000s)	Total pensionable pay (£m) [#]	Average pensionable pay	Average age*	Average Reckonable service
Unprotected	Officer	Male	5.3	67.6	12,866	39.3	n/a
		Female	1.1	12.2	11,310	37.9	n/a
		Total	6.3	79.8	12,600	39.0	n/a
	Other Ranks	Male	32.1	243.2	7,571	30.2	n/a
		Female	4.2	27.4	6,528	29.8	n/a
		Total	36.3	270.6	7,451	30.1	n/a
All		Male	37.4	310.8	8,315	32.1	n/a
		Female	5.3	39.7	7,507	32.3	n/a
		Total	42.7	350.4	8,215	32.1	n/a

[#]Excluding the 2016 pay increase

Table A4: Active data – All members

Category	Rank	Gender	Number of members (000s)	Total pensionable pay (£m) [#]	Average pensionable pay	Average age*	Average Reckonable service*	
Protected	Officer	Male	4.3	303.4	70,076	52.9	23.3	
		Female	0.2	12.5	67,845	52.8	19.7	
		Total	4.5	315.9	69,985	52.9	23.2	
	Other Ranks	Male	3.6	140.0	39,124	52.3	24.5	
		Female	0.1	5.0	38,589	52.4	21.0	
		Total	3.7	145.0	39,105	52.3	24.4	
	All		Male	7.9	443.3	56,070	52.7	23.7
			Female	0.3	17.5	55,735	52.7	20.1
			Total	8.2	460.9	56,057	52.7	23.5
Unprotected	Officer	Male	25.7	1,106.1	43,078	38.3	13.1	
		Female	4.5	187.4	41,213	36.5	10.3	
		Total	30.2	1,293.5	42,798	38.1	12.7	
	Other Ranks	Male	141.7	3,416.6	24,116	32.3	10.1	
		Female	15.6	356.8	22,924	31.9	9.6	
		Total	157.2	3,773.4	23,998	32.3	10.1	
	All		Male	167.4	4,522.7	27,026	33.8	10.9
			Female	20.1	544.2	27,059	33.5	9.8
			Total	187.5	5,067.0	27,029	33.8	10.8
All	Officer	Male	30.0	1,409.5	46,973	41.5	15.4	
		Female	4.7	199.9	42,251	37.6	10.9	
		Total	34.7	1,609.4	46,330	41.0	14.9	
	Other Ranks	Male	145.3	3,556.6	24,486	33.1	10.7	
		Female	15.7	361.9	23,054	32.1	9.8	
		Total	160.9	3,918.4	24,346	33.0	10.6	
	All		Male	175.3	4,966.1	28,336	35.5	12.1
			Female	20.4	561.8	27,501	34.1	10.2
			Total	195.7	5,527.8	28,249	35.3	11.9

*Weighted by pensionable pay

[#] Excluding the 2016 pay increase



Table A5: 2015 Active data – All members

Type of member:	Rank	Gender	Number of members (000s)	Total pensionable pay (£m)#	Average pensionable pay	Average age*	Average Reckonable service*
Protected	Officer	Male	4.9	354.2	72,134	52.1	23.1
		Female	0.2	15.0	72,026	52.0	18.6
		Total	5.1	369.2	72,130	52.1	22.9
	Other Ranks	Male	4.0	160.7	40,236	51.5	25.7
		Female	0.1	5.6	40,178	51.2	23.1
		Total	4.1	166.3	40,234	51.5	25.6
	All	Male	8.9	514.8	57,829	52.0	23.9
		Female	0.3	20.7	59,212	51.8	19.8
		Total	9.3	535.5	57,881	51.9	23.7
Unprotected	Officer	Male	20.4	1,015.7	49,795	37.4	13.4
		Female	3.5	174.4	50,148	35.6	10.6
		Total	23.9	1,190.1	49,846	37.1	13.0
	Other Ranks	Male	120.2	3,377.5	28,106	31.6	10.4
		Female	12.3	348.5	28,294	31.2	10.0
		Total	132.5	3,726.1	28,123	31.6	10.4
	All	Male	140.6	4,393.2	31,253	33.0	11.1
		Female	15.8	522.9	33,105	32.7	10.2
		Total	156.4	4,916.1	31,440	32.9	11.0
All	Officer	Male	25.3	1,369.9	54,129	41.2	15.9
		Female	3.7	189.4	51,386	36.9	11.3
		Total	29.0	1,559.3	53,780	40.7	15.4
	Other Ranks	Male	124.2	3,538.2	28,496	32.5	11.1
		Female	12.5	354.2	28,427	31.5	10.2
		Total	136.6	3,892.4	28,489	32.4	11.0
	All	Male	149.5	4,908.1	32,836	35.0	12.5
		Female	16.1	543.6	33,669	33.4	10.6
		Total	165.6	5,451.6	32,917	34.8	12.3

*Weighted by pensionable pay

Excluding the 2015 pay increase



Table A6: Comparison of active membership as at 31 March 2012 and 31 March 2016

Rank	Gender	2016					2012				
		Number of members (000s)	Total pensionable pay (£m)	Average pensionable pay	Average age*	Average reck serv*	Number of members (000s)	Total pensionable pay (£m)	Average pensionable pay	Average age*	Average reck serv*
OF	Male	30	1,409	46,973	41	15	28	1,473	52,786	41	16
	Female	5	200	42,251	38	11	4	193	48,514	36	10
	Total	35	1,609	46,330	41	15	32	1,665	52,253	40	15
OR	Male	145	3,557	24,486	33	11	145	4,033	27,776	32	11
	Female	16	362	23,054	32	10	14	381	27,433	31	10
	Total	161	3,918	24,346	33	11	159	4,414	27,746	32	11
All	Male	175	4,966	28,336	35	12	173	5,506	31,806	34	12
	Female	20	562	27,501	34	10	18	574	32,121	32	10
	Total	196	5,528	28,249	35	12	191	6,080	31,836	34	12

*Weighted by pensionable pay



Deferreds

Table A7: AFPS75 deferred data

Rank	Gender	Number of members (000s)	Total deferred pension (£m) [#]	Average pension £	Average age [*]
OF	Male	8.7	49.9	5,774	47.2
	Female	2.0	11.3	5,598	45.3
	Total	10.7	61.3	5,741	46.9
OR	Male	303.7	766.0	2,522	48.1
	Female	39.8	120.9	3,036	47.4
	Total	343.6	886.9	2,581	48.0
All	Male	312.4	816.0	2,612	48.0
	Female	41.8	132.2	3,159	47.2
	Total	354.2	948.1	2,677	47.9

*Weighted by deferred pension

[#]0% pension increase in April 2016

Table A8: AFPS05 deferred data

Rank	Gender	Number of members (000s)	Total deferred pension (£m) [#]	Average pension £	Average age [*]
OF	Male	5.8	11.6	1,997	40.7
	Female	1.3	2.5	1,960	38.3
	Total	7.1	14.2	1,990	40.3
OR	Male	50.3	81.1	1,613	31.6
	Female	5.2	11.0	2,100	37.3
	Total	55.5	92.1	1,659	32.3
All	Male	56.1	92.7	1,653	32.7
	Female	6.5	13.5	2,072	37.5
	Total	62.6	106.2	1,697	33.3

*Weighted by deferred pension

[#]0% pension increase in April 2016

Table A9: All deferred data

Rank	Gender	Number of members (000s)	Total deferred pension (£m) [#]	Average pension £	Average age [*]
OF	Male	14.5	61.6	4,254	46.0
	Female	3.3	13.8	4,179	44.1
	Total	17.8	75.4	4,240	45.6
OR	Male	354.0	847.1	2,393	46.5
	Female	45.1	131.9	2,927	46.6
	Total	399.1	979.0	2,453	46.5
All	Male	368.5	908.7	2,466	46.5
	Female	48.4	145.7	3,012	46.3
	Total	416.9	1,054.4	2,529	46.4

*Weighted by deferred pension

[#]0% pension increase in April 2016



Table A10: Comparison of deferred membership as at 31 March 2012 and 31 March 2016

Rank	Gender	2016				2012			
		Number of members (000s)	Total deferred pension (£m)	Average pension £	Average age*	Number of members (000s)	Total deferred pension (£m)	Average pension £	Average age*
OF	Male	14	62	4,254	46	12	50	4,361	47
	Female	3	14	4,179	44	3	10	4,125	44
	Total	18	75	4,240	46	14	61	4,318	47
OR	Male	354	847	2,393	46	344	797	2,319	46
	Female	45	132	2,927	47	41	105	2,574	45
	Total	399	979	2,453	47	385	902	2,346	46
All	Male	368	909	2,466	46	355	847	2,385	46
	Female	48	146	3,012	46	44	116	2,665	45
	Total	417	1,054	2,529	46	399	963	2,415	46

*Weighted by deferred pension



Pensioners

Table A11: AFPS75 pensioner data

Type of Pensioner:	Rank	Gender	Number of members (000s)	Total pension (£m)#	Average pension £	Average age*	Total 2015 pension £m
Member	Officer	Male	41.6	848.3	20,395	66.3	0.1
		Female	2.2	35.4	15,753	57.4	0.0
		Total	43.8	883.7	20,157	65.9	0.1
	Other Ranks	Male	276.3	2,368.4	8,573	63.9	0.3
		Female	9.4	65.7	6,963	54.7	0.0
		Total	285.7	2,434.1	8,519	63.6	0.3
	All	Male	317.9	3,216.7	10,120	64.5	0.3
		Female	11.7	101.2	8,654	55.7	0.0
		Total	329.6	3,317.9	10,068	64.3	0.3
Dependant	Officer	Male	0.3	3.9	12,839	79.9	0.0
		Female	7.0	71.6	10,295	77.0	0.0
		Total	7.3	75.5	10,401	77.1	0.0
	Other Ranks	Male	1.1	6.0	5,533	76.0	0.0
		Female	53.7	254.6	4,741	76.0	0.0
		Total	54.8	260.6	4,756	76.0	0.0
	All	Male	1.4	9.9	7,136	77.5	0.0
		Female	60.7	326.3	5,378	76.2	0.0
		Total	62.1	336.1	5,417	76.2	0.0
All	Officer	Male	41.9	852.2	20,340	66.3	0.1
		Female	9.2	107.1	11,628	70.5	0.0
		Total	51.1	959.3	18,771	66.8	0.1
	Other Ranks	Male	277.4	2,374.4	8,561	63.9	0.3
		Female	63.2	320.4	5,073	71.6	0.0
		Total	340.5	2,694.7	7,914	64.8	0.3
	All	Male	319.2	3,226.6	10,107	64.6	0.3
		Female	72.4	427.4	5,907	71.3	0.0
		Total	391.6	3,654.0	9,331	65.4	0.4

*Weighted by pension

#Includes April 2016 pension increase



Table A12: AFPS75 pensioner data⁴

Type of Pensioner:	Rank		Number of members (000s)	Total pension (£m) [#]	Average pension £	Average age*	Total 2015 pension £m
Member	Officer	Pre 2001	23.0	452.6	19,660	73.6	0.0
		Post 2001	20.8	431.1	20,706	57.9	0.1
		Total	43.8	883.7	20,157	65.9	0.1
	Other Ranks	Pre 2001	158.9	1,518.5	9,557	69.6	0.0
		Post 2001	126.8	915.6	7,220	53.8	0.3
		Total	285.7	2,434.1	8,519	63.6	0.3
	All	Pre 2001	181.9	1,971.1	10,835	70.5	0.0
		Post 2001	147.6	1,346.7	9,122	55.1	0.3
		Total	329.6	3,317.9	10,068	64.3	0.3
Dependant	Officer	Pre 2001	0.3	3.3	11,555	72.8	0.0
		Post 2001	7.0	72.2	10,353	77.3	0.0
		Total	7.3	75.5	10,401	77.1	0.0
	Other Ranks	Pre 2001	23.4	119.8	5,110	79.4	0.0
		Post 2001	31.3	140.8	4,492	73.1	0.0
		Total	54.8	260.6	4,756	76.0	0.0
	All	Pre 2001	23.7	123.1	5,188	79.2	0.0
		Post 2001	38.3	213.0	5,558	74.5	0.0
		Total	62.1	336.1	5,417	76.2	0.0
All	Officer	Pre 2001	23.3	456.0	19,560	73.6	0.0
		Post 2001	27.8	503.3	18,108	60.6	0.1
		Total	51.1	959.3	18,771	66.8	0.1
	Other Ranks	Pre 2001	182.3	1,638.3	8,985	70.3	0.0
		Post 2001	158.2	1,056.4	6,679	56.4	0.3
		Total	340.5	2,694.7	7,914	64.8	0.3
	All	Pre 2001	205.6	2,094.3	10,184	71.0	0.0
		Post 2001	186.0	1,559.8	8,388	57.7	0.4
		Total	391.6	3,654.0	9,331	65.4	0.4

*Weighted by pension

Includes April 2016 pension increase

⁴ The HMT Directions specify that for the purposes of determining the uncorrected employer contribution rate, liabilities and notional assets in relation to pre-2001 pensioners must be ignored. We have therefore shown the split of pre- and post-2001 pensioners above.



Table A13: AFPS05 pensioner data

Type of Pensioner:	Rank	Gender	Number of members (000s)	Total pension (£m)#	Average pension £	Average age*	Total 2015 pension £m
Member	Officer	Male	3.1	101.5	32,315	60.3	0.0
		Female	0.0	1.3	27,372	61.3	0.0
		Total	3.2	102.8	32,243	60.3	0.0
	Other Ranks	Male	4.8	68.1	14,153	56.3	0.1
		Female	0.1	0.7	9,494	47.2	0.0
		Total	4.9	68.8	14,085	56.2	0.1
	All	Male	8.0	169.6	21,327	58.7	0.1
		Female	0.1	1.9	16,489	56.4	0.0
		Total	8.1	171.6	21,256	58.7	0.1
Dependant	Officer	Male	0.0	0.0	13,665	50.0	0.0
		Female	0.1	2.2	18,327	59.0	0.0
		Total	0.1	2.2	18,289	58.9	0.0
	Other Ranks	Male	0.0	0.0	4,110	43.4	0.0
		Female	0.4	3.0	8,328	51.5	0.0
		Total	0.4	3.1	8,247	51.4	0.0
	All	Male	0.0	0.0	5,287	45.5	0.0
		Female	0.5	5.2	10,797	54.6	0.0
		Total	0.5	5.2	10,706	54.5	0.0
All	Officer	Male	3.1	101.5	32,309	60.3	0.0
		Female	0.2	3.4	20,858	59.8	0.0
		Total	3.3	105.0	31,737	60.3	0.0
	Other Ranks	Male	4.8	68.1	14,139	56.3	0.1
		Female	0.4	3.7	8,521	50.7	0.0
		Total	5.3	71.8	13,674	56.0	0.1
	All	Male	8.0	169.7	21,311	58.7	0.1
		Female	0.6	7.2	11,918	55.1	0.0
		Total	8.6	176.8	20,653	58.5	0.1

*Weighted by pension

Includes April 2016 pension increase



Table A14: AFPS15 pensioner data

[Table omitted for data protection reasons as only one member]



Table A15: All pensioner data

Rank	Gender	Number of members (000s)	Total pension (£m)#	Average pension £	Average age*	Total 2015 pension £m
Officer	Male	45.0	953.8	21,175	65.7	0.1
	Female	9.4	110.5	11,791	70.2	0.0
	Total	54.4	1,064.3	19,559	66.2	0.1
Other Ranks	Male	282.2	2,442.5	8,656	63.7	0.3
	Female	63.6	324.1	5,096	71.4	0.0
	Total	345.8	2,766.6	8,001	64.6	0.4
All	Male	327.2	3,396.3	10,379	64.3	0.4
	Female	73.0	434.6	5,956	71.1	0.1
	Total	400.2	3,830.8	9,573	65.0	0.4

*Weighted by pension

Includes April 2016 pension increase

Table A16: All pensioner data

		Number of members (000s)	Total pension (£m)	Average Pension (£)	Average age**	Total 2015 pension £m
OF	Pre 2001	23.3	456.0	19,560	73.6	0.0
	Post 2001	31.1	608.3	19,557	60.6	0.1
	Total	54.4	1,064.3	19,559	66.2	0.1
OR	Pre 2001	182.3	1,638.3	8,985	70.3	0.0
	Post 2001	163.4	1,128.3	6,904	56.3	0.4
	Total	345.8	2,766.6	8,001	64.6	0.4
All	Pre 2001	205.6	2,094.3	10,184	71.0	0.0
	Post 2001	194.5	1,736.6	8,927	57.8	0.4
	Total	400.2	3,830.8	9,573	65.0	0.4



Table A17: Comparison of pensioner and dependant membership as at 31 March 2012 and 31 March 2016

		2016					2012 [#]			
		Number of members (000s)	Total pension (£m)	Average Pension (£)	Average age*	Total 2015 pension £m	Number of members (000s)	Total pension (£m)	Average Pension (£)	Average age*
OF	Pre 2001	23	456	19,560	74	0.0	39	603	15,303	73
	Post 2001	31	608	19,557	61	0.1	25	435	17,465	59
	Total	54	1,064	19,559	66	0.1	64	1,038	16,140	67
OR	Pre 2001	182	1,638	8,985	70	0.0	201	1,571	7,797	68
	Post 2001	163	1,128	6,904	56	0.4	115	739	6,445	53
	Total	346	2,767	8,001	65	0.4	316	2,310	7,306	63
All	Pre 2001	206	2,094	10,184	71	0.0	241	2,174	9,025	69
	Post 2001	195	1,737	8,927	58	0.4	140	1,174	8,410	55
	Total	400	3,831	9,573	65	0.4	380	3,348	8,799	64

*Weighted by pension

[#]Includes children's pensions



Table A18: Comparison of pensioner only membership as at 31 March 2012 and 31 March 2016

		2016					2012			
		Number of members (000s)	Total pension (£m)	Average Pension (£)	Average age*	Total 2015 pension £m	Number of members (000s)	Total pension (£m)	Average Pension (£)	Average age*
OF	Pre 2001	23	453	19,660	74	0	30	532	17,450	72
	Post 2001	24	534	22,237	58	0.1	18	369	21,053	57
	Total	47	987	20,976	65	0.1	48	901	18,767	66
OR	Pre 2001	159	1,519	9,557	70	0	173	1,470	8,509	67
	Post 2001	132	984	7,475	54	0.4	95	669	7,050	52
	Total	291	2,503	8,613	63	0.4	268	2,140	7,991	62
All	Pre 2001	182	1,971	10,835	71	0	203	2,002	9,849	68
	Post 2001	156	1,518	9,751	55	0.4	112	1,039	9,234	53
	Total	338	3,489	10,335	64	0.4	316	3,041	9,630	63

*Weighted by pension



Table A19: Comparison of dependants only membership as at 31 March 2012 and 31 March 2016

		2016					2012 [#]			
		Number of members (000s)	Total pension (£m)	Average Pension (£)	Average age*	Total 2015 pension £m	Number of members (000s)	Total pension (£m)	Average Pension (£)	Average age*
OF	Pre 2001	0	3	11,555	73	0	9	71	7,980	80
	Post 2001	7	74	10,487	77	0	7	65	8,891	75
	Total	7	78	10,529	77	0	16	137	8,391	78
OR	Pre 2001	23	120	5,110	79	0	29	100	3,506	74
	Post 2001	32	144	4,536	73	0	20	70	3,541	66
	Total	55	264	4,780	76	0	48	170	3,520	71
All	Pre 2001	24	123	5,188	79	0	38	172	4,570	77
	Post 2001	39	218	5,623	74	0	27	135	4,990	70
	Total	63	341	5,458	76	0	65	307	4,746	74

*Weighted by pension

[#]Includes children's pensions



Chart A1: Active Members full-time equivalent (FTE) pensionable pay by age

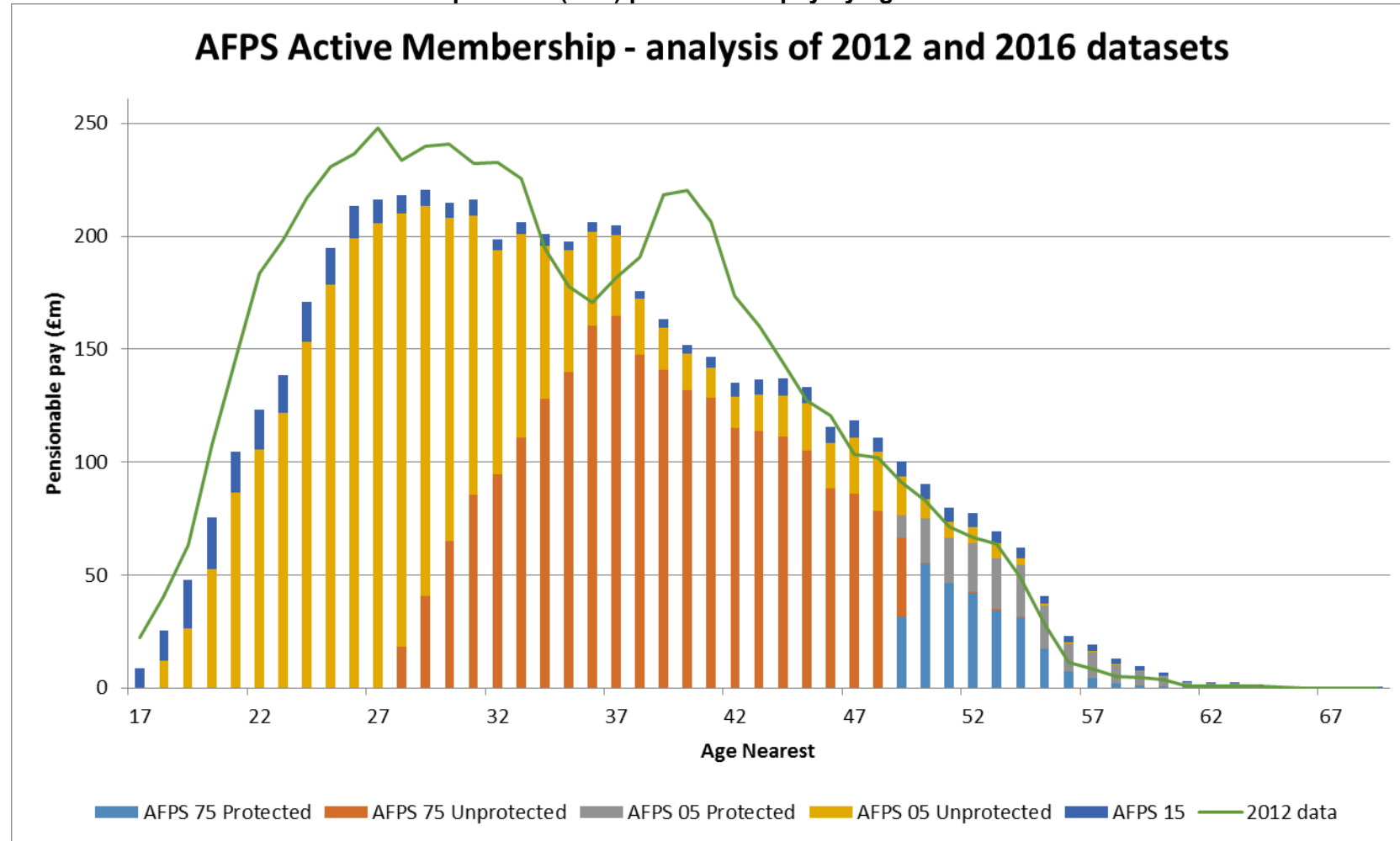




Chart A2: Deferred pension data by age

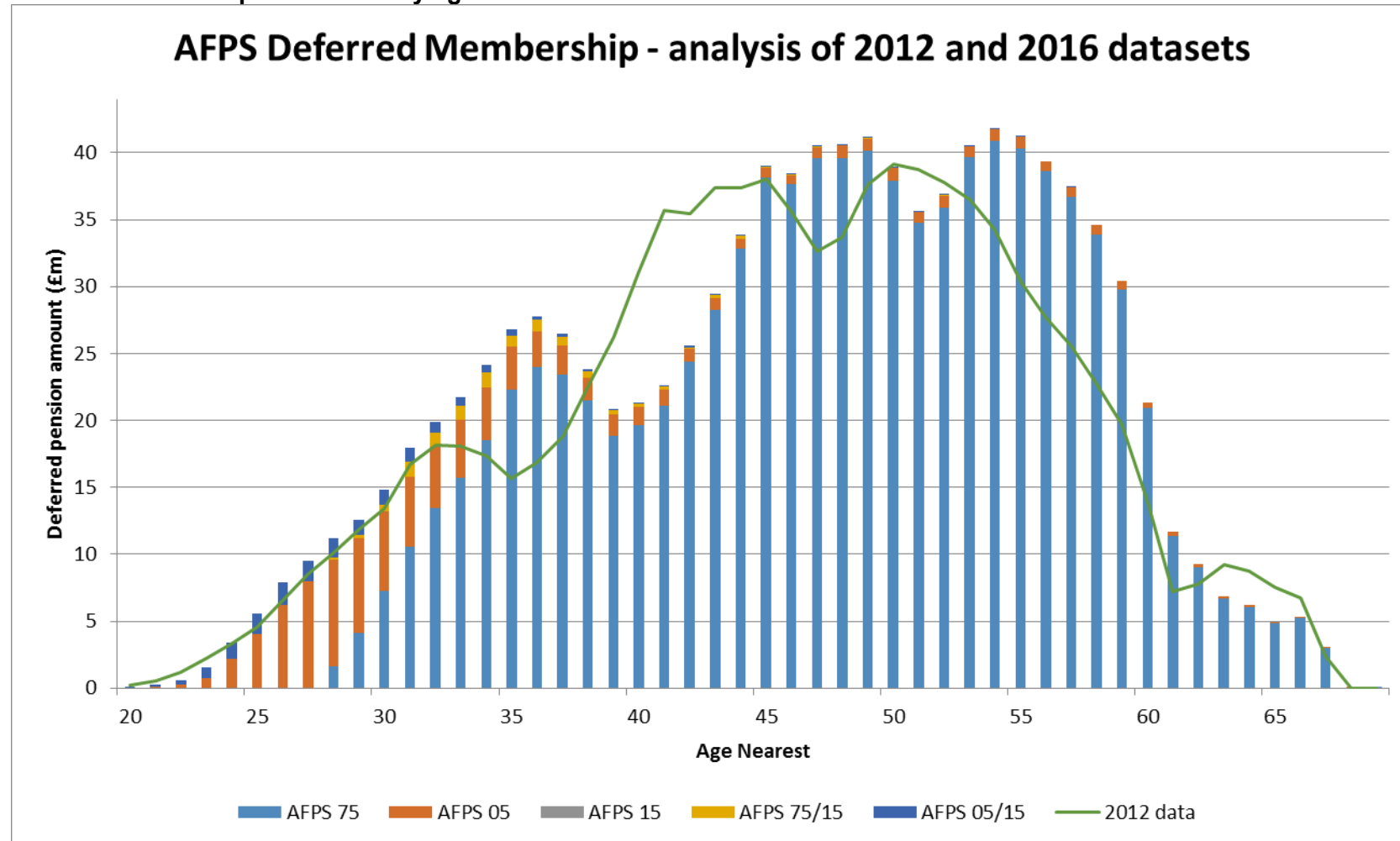




Chart A3: Summary of pension amount by age

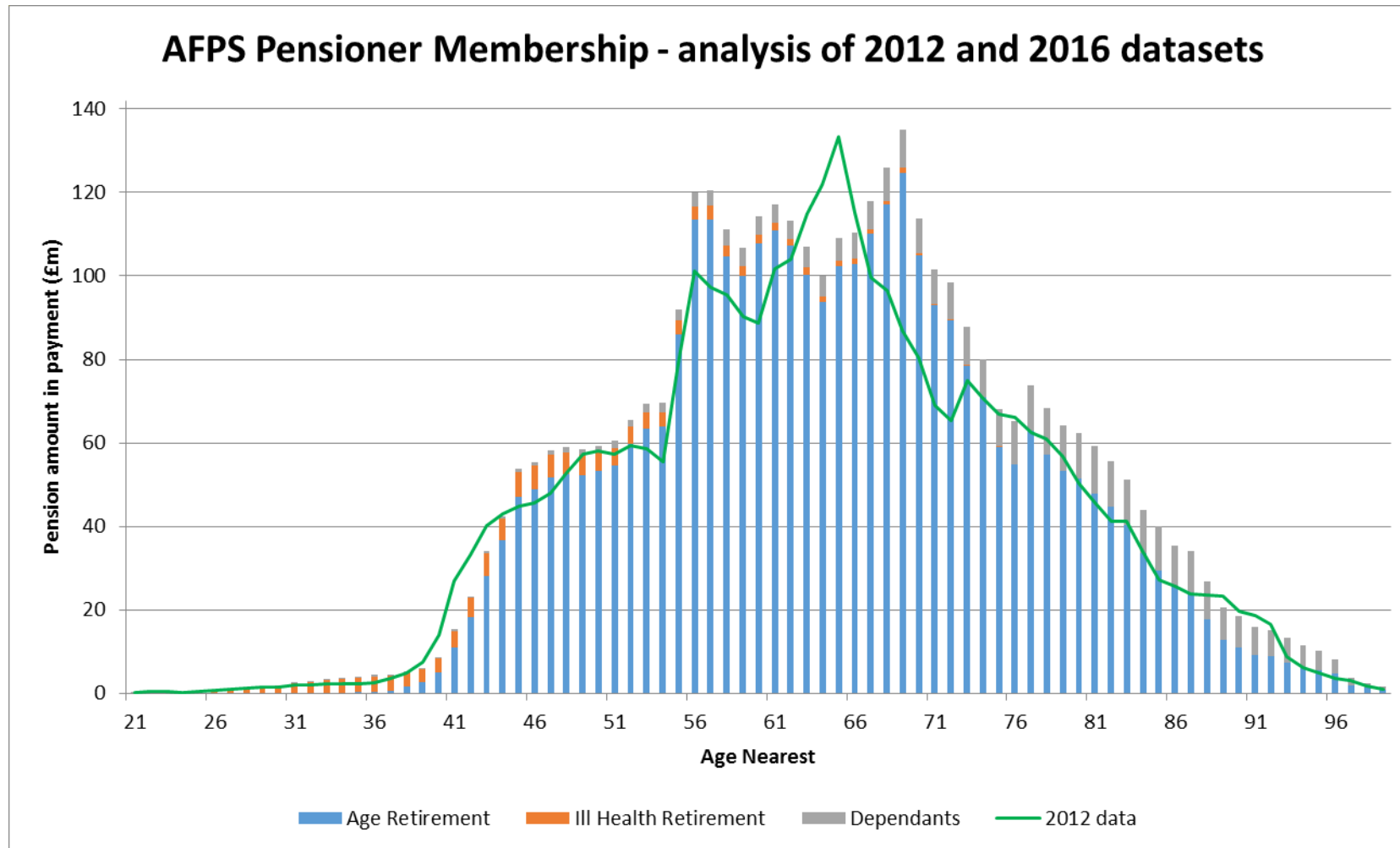




Chart A4: Active membership: Distribution of whole time equivalent pensionable pay as at 31 March 2016

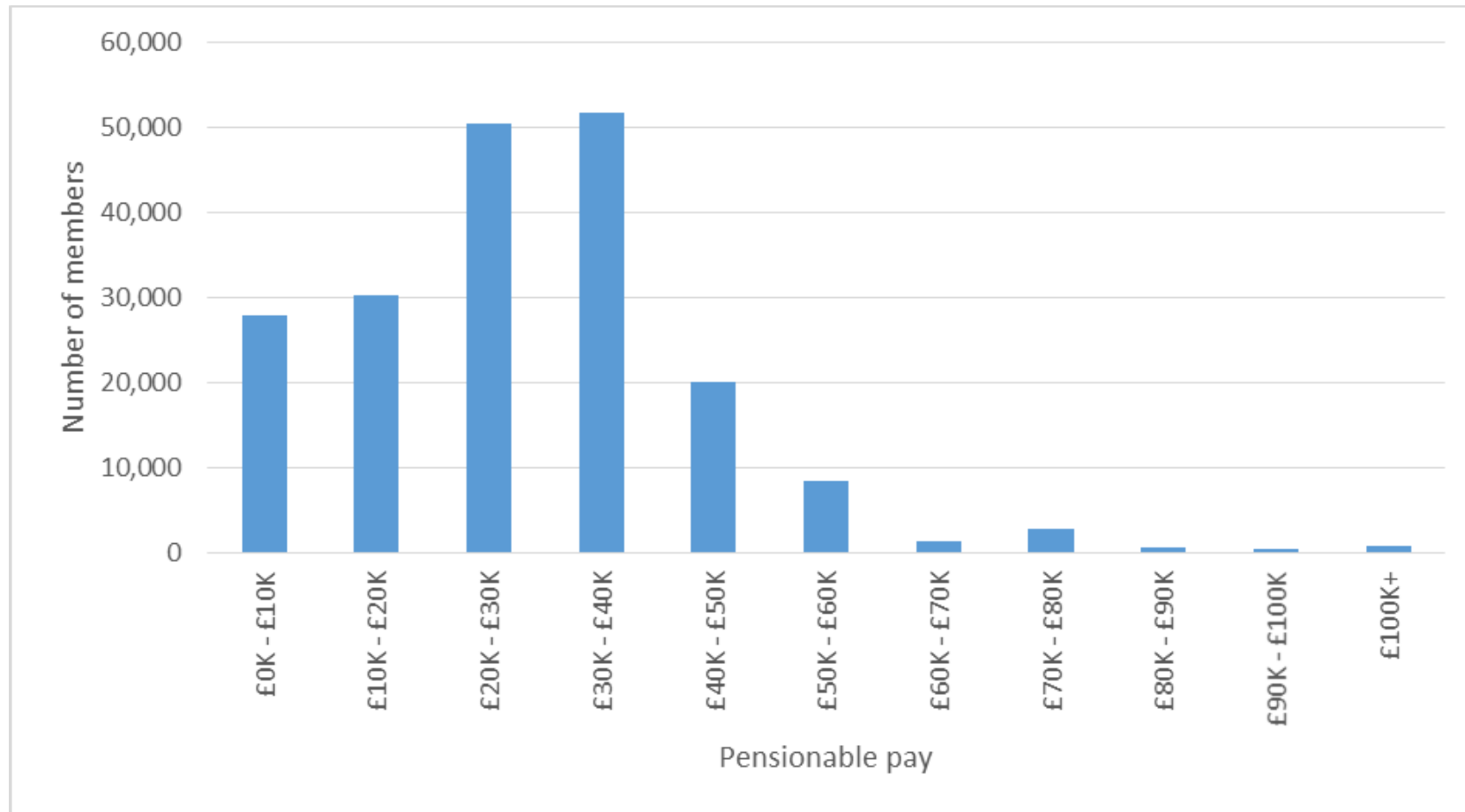
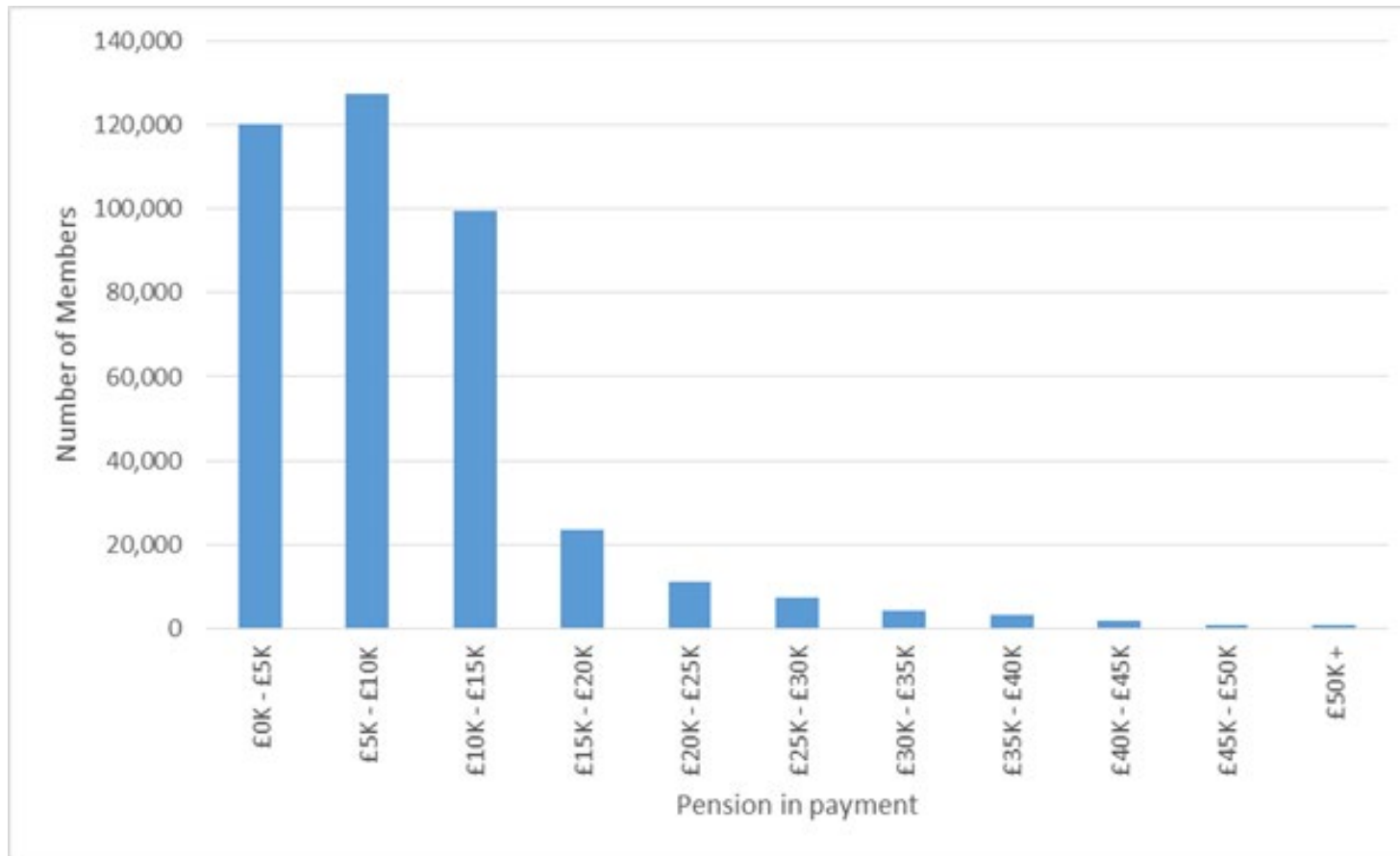




Chart A5: Pensioner membership: Distribution of pension as at 31 March 2016





Appendix B: Supplementary data

B.1 The additional data received in respect of GPS and RGRPS members is set out below.

Category	Scheme	Number of members	Total pensionable pay / pension (£m)	Average pay / pension (£)	Average age (weighted by pay / pension)
Actives	GPS	0	0	0	n/a
	RGRPS	216	n/a	n/a	n/a
Deferreds	GPS	0	0	0	n/a
	RGRPS	44	n/a	n/a	n/a
Pensioners Pre 2001	GPS	20,291	60.6	2,988	67.6
	RGRPS	n/a	n/a	n/a	n/a
Pensioners Post 2001	GPS	2,125	4.6	2,142	57.1
	RGRPS	n/a	n/a	n/a	n/a
Pensioners Total	GPS	22,416	65.2	2,908	66.9
	RGRPS	167	n/a	n/a	n/a



Appendix C: Summary of movements data 2012-2016

Table C1: Reconciliation of active membership over the intervaluation period (2012-16) and the prior intervaluation period (2005-12)

	Reconciliation of membership over intervaluation period 2012-2016 000s	Prior intervaluation period 2005-2012 000s
Actives		
Number at start of period	191	199
Adjustment for data cleanse		
Additions		
• New entrants	99	136
• Rejoiners and re-employed	0	
Deductions:		
• Deaths	(0)	(1)
• Retirements	(27)	(43)
• Withdrawals	(68)	(115)
Number expected at end of period	195	177
Valuation data at end of period	196	191

C.1 The number of exits in table C1 excludes those records which have failed data checks (e.g. movement date missing or outside of the intervaluation period). The number of entrants has been implied from members in the 2016 membership data who are recorded as joining the scheme during the intervaluation period.



Table C2: Reconciliation of deferred and pensioner membership over the intervaluation period (2012-16) and the prior intervaluation period (2005-12)

	Reconciliation of membership over intervaluation period 2012-2016 000s	Prior intervaluation period 2005-2012 000s
Deferreds		
Number at start of period	399 [#]	288
Adjustment for data cleanse		
Additions		
New deferreds	55	not available
Deductions:		
• Deaths	(2)	
• Retirements	(19)*	
• Rejoiners to active	(0)	
• Other exits	(0)	not available
Number expected at end of period	433	not available
Valuation data at end of period	417	399 [#]

*Implied number of retirements from deferment

[#]Excludes deferred members more than 7 years past retirement age

Pensioners		
Number at start of period	378*	347
Adjustment for data cleanse		
Additions		
• New pensioners including new dependants	60	107
Deductions:		
• Deaths	(39)	(66)
Number expected at end of period	399	388
Valuation data at end of period	400*	380

*Doesn't include children

C.2 As above, data records which have failed data checks are excluded from the reconciliations for deferred and pensioner membership numbers.

C.3 The number of entrants to deferred status has been inferred from members in the 2016 membership and movement data who are recorded as becoming deferred members over the intervaluation period. Similarly, the number of entrants to pensioner status has been inferred from members in the 2016 membership and movement data who are recorded as becoming deferred members over the intervaluation period.



- C.4 No data on retirements from deferment was provided. However, we estimate that around 19,200 members may have retired from deferred status over the intervaluation period. This has been estimated by comparing the implied number of new member pensioners to the number of new member pensioners who came from active status.
- C.5 The following indicators provided in the data in respect of pensioner deaths were not sufficiently reliable to use for our analysis of experience, and therefore our analysis was carried out at a global level:
- > Normal/ill-health pensioners
 - > Members/dependants
 - > Officers/other ranks.
- C.6 It is likely that different assumptions may have been recommended if more detailed and/or more reliable data had been available.
- C.7 The following tables summarise the experience data received.

Table C3: Summary of active exits experience

Movement Type	Number of movements	Average Age of movement
Entrant	99,084	28.3
Death	366	33.6
Ill Health Retirement [#]	4,303	35.4
Normal Health Retirement	22,833	45.5
Withdrawal [#]	67,776	29.4

[#] Tier 1 ill-health members are treated as withdrawals rather than ill-health retirements

Table C4: Summary of deferred pensioner exits experience

Movement Type	Number of movements	Average Age of movement
New Deferred	55,226	31.1
Death	1,633	53.1
Retirements [*]	19,200	n/a

^{*}Implied number of retirements from deferment

Table C5: Summary of pensioner exits experience

Movement Type	Number of movements	Average Age of movement
Entrant	60,011	54.3
Death	39,215	81.2



Appendix D: Data items – membership data

Key data items are shown below. These are the items where a valid and reasonable data value is required to determine a liability.

Actives

The following data was provided separately for each year of the inter-valuation period for active staff who joined, rejoined or left the Scheme during that year:

- > Scheme
- > Service (eg Navy/Army/Air Force)
- > Career marker
- > Date of birth
- > Gender
- > Rank
- > Marital status
- > Pensionable rank
- > Date of joining
- > Reckonable service
- > Non-reckonable service
- > Salary
- > Pensionable salary
- > Supplement service

Deferreds

For deferred pensioners whose pension started or ceased during each year in the inter-valuation period, we were provided with the following details for each individual:

- > Scheme
- > Service
- > Career marker
- > Date of birth
- > Gender
- > Marital status
- > Rank
- > Date joined scheme
- > Discharge date
- > Age 60 lump sum
- > Age 60 pension
- > Age 65 lump sum
- > Age 65 pension
- > Spouse's contingent lump sum
- > Spouse's contingent pension



Pensioners

For pensioners and dependants whose pension started or ceased during each year in the inter-valuation period, we were provided with the following details for each individual:

- > Scheme
- > Service
- > Career marker
- > Date of birth
- > Gender
- > Marital status
- > Rank
- > Pension type
- > Discharge date
- > Pension date
- > Pension amount
- > AFPS 75 basic lump sum
- > AFPS 75 basic pension
- > AFPS 75 actual lump sum
- > AFPS 75 actual pension
- > AFPS 75 age 55 pension
- > AFPS 05 EDP lump sum
- > AFPS 05 EDP
- > AFPS 05 age 55 EDP
- > AFPS 05 age 65 lump sum
- > AFPS 05 age 65 pension
- > Spouse lump sum
- > Spouse pension
- > GMP pre-1988
- > GMP post-1988



Appendix E: Data items - movements data

Retirements

The following data was provided in respect of active members who left service with an immediate pension or EDP during the inter-valuation period:

- > Scheme
- > Service
- > Date of birth
- > Gender
- > Marital status
- > Rank
- > Discharge date
- > Reckonable service in old scheme
- > Reckonable service in AFPS15
- > Date old scheme pension commenced
- > Date AFPS15 pension commenced
- > Initial old scheme pension amount
- > Old scheme immediate lump sum
- > Initial AFPS15 pension amount
- > Initial AFPS15 lump sum
- > AFPS15 post-commutation pension amount
- > Pension type
- > AFPS05 or AFPS15 ill-health tier

Early leavers

The following data was provided in respect of active members who left service without an immediate pension or EDP during the inter-valuation period:

- > Scheme
- > Service
- > Date of birth
- > Gender
- > Marital status
- > Rank
- > Discharge date
- > Reckonable service in old scheme
- > Reckonable service in AFPS15
- > Old scheme deferred pension amount
- > AFPS15 deferred pension amount



Deaths

The following data was provided in respect of members or dependants who died in the inter-valuation period:

- > Scheme
- > Service
- > Date of birth
- > Gender
- > Marital status
- > Rank
- > Date of death
- > Status
- > Pension from old scheme at date of death
- > Pension from AFPS15 at date of death
- > EDP amount from old scheme at date of death
- > EDP from AFPS15 at date of death
- > Non-retirement lump sum benefits from old scheme at date of death
- > Non-retirement lump sum benefits from AFPS15 at date of death

Tier 1 ill-health

The following data was provided in respect of members of AFPS 05 and AFPS 15 who were awarded Tier 1 ill-health lump sums in the inter-valuation period:

- > Scheme
- > Service
- > Date of birth
- > Gender
- > Marital status
- > Rank
- > Discharge date
- > Reckonable service
- > AFPS05 Tier 1 lump sum amount
- > AFPS15 Tier 1 lump sum amount



Appendix F: Checks and adjustments applied to membership data

Checks and exclusion

Exclusions and upratings were identified as follows.

Table F1 – Active members as at 31 March 2016

Reason for Exclusion	Number of exclusions ^β
Duplicate records removed [#]	0
NRPS members – data unreliable	326
Missing reckonable service	781
FTE pay missing or outside reasonable range	2,332
Member could not be assigned category	326
Invalid or missing DJS	0
Post 2015 pension missing or out of range	2,637
Missing date of birth or age range outside reasonable range or part-time proportion outside reasonable range	14
Total number of exclusions*	3,480
Total exclusions for rating up	3,480

[#] Indicates initial exclusions which are assumed to have no attaching liability and therefore we have not uprated for these members (ie invalid records).

^β If a record fails for more than one reason it is included multiple times in the numbers of exclusions shown

* Totals only count failed records once (ie they ignores multiple failures). Therefore, the total number of exclusions is not the sum of the number of exclusions for each reason.



Table F2 – Active members as at 31 March 2015

Reason for Exclusion	Number of exclusions ^β
NRPS records	477
Salary missing or less than £1	11
Total number of exclusions*	488
Total exclusions for rating up[#]	455

^β If a record fails for more than one reason it is included multiple times in the numbers shown

* Totals only count failed records once (ie they ignores multiple failures). Therefore, the total number of exclusions is not the sum of the number of exclusions for each reason.

[#] The rating up allowed for the number of members in the NRPS summary data, rather than the number of records in the raw data.

Table F3 – Deferred members as at 31 March 2016

Reason for Exclusion	Number of exclusions ^β
Duplicate records removed [#]	0
NRPS members – data unreliable	247
Member pension missing outside reasonable range	6,727
Age outside range and member could not be assigned a category	9
Invalid section	1,640
Total number of exclusions*	7,022
Total exclusions for rating up	5,632

[#] Indicates initial exclusions which are assumed to have no attaching liability and therefore we have not updated for these members (ie invalid records).

^β If a record fails for more than one reason it is included multiple times in the numbers shown

* Totals only count failed records once (ie they ignores multiple failures). Therefore, the total number of exclusions is not the sum of the number of exclusions for each reason.



Table F4 – Pensioners as at 31 March 2016

Reason for Exclusion	Number of exclusions ^ß
Duplicate records removed [#]	0
Date pension commenced after valuation date	1
Member pension missing outside reasonable range	523
Child members removed	2,486
Invalid section	1
Total number of exclusions*	3,003
Total exclusions for rating up	515

[#] Indicates initial exclusions which are assumed to have no attaching liability and therefore we have not uprated for these members (ie invalid records).

^ß If a record fails for more than one reason it is included multiple times in the numbers shown

* Totals only count failed records once (ie they ignores multiple failures). Therefore, the total number of exclusions is not the sum of the number of exclusions for each reason.

Table F5 – Summary of total exclusions for data as at 31 March 2016

	Total number of excluded records (valid and no liability)	Total number of valid records excluded
Actives	3,480	3,480
Deferreds	7,022	5,632
Pensioners	3,007	515
Total exclusions	13,505	9,627

Table F6: Total data supplied as at 31 March 2016

31 March 2016	Total number of records provided	Invalid records excluded	Valid records	Number of records after rate ups
Actives	195,685	326	195,359	195,685
Deferreds	418,244	1,628	416,616	416,854*
Pensioners	402,664	2,488	400,176	400,172**

* Nine records could not be uprated for the deferred membership – all records within their respective group were excluded so no remaining record could be uprated.

** Four records could not be uprated for the pensioner membership – all records within their respective group were excluded so no remaining record could be uprated.



Table F7: Total data supplied (31 March 2015)

31 March 2015	Total number of records provided	Invalid records excluded	Valid records	Number of records after rate ups
Actives	165,651	477	165,174	165,618

Table F8: Derivation of global rate (31 March 2016)

31 March 2016	Total number of records provided (A)	Number of exclusions (B)	Invalid records excluded to which a global rate up is applied (C)	Valid records (D)	Uprating factor (A/B)
Actives	195,685	326	326	195,359	1.01811
Deferreds	418,244	1,628	247	416,616	1.01367
Pensioners	402,664	2,488	0	400,176	1.00128
Total	1,016,593	4,442	573	1,012,138	1.00958

Table F9: Derivation of uprating factors (31 March 2016)

31 March 2016	Number of valid records (A)	Number of exclusions that are rated up	Number of members after exclusions (B)	Uprating factor (A/B)	Global Uprating factor	Number of members after rate ups
Actives	195,359	3,154	192,205	1.016	1.002	195,685
Deferreds	416,616	5,385	411,231	1.013	1.001	416,854
Pensioners	400,176	515	399,661	1.001	1.000	400,172
Total	1,012,151	9,054	1,003,097	1.009		1,012,711

Table F10: Derivation of uprating factors (active membership 31 March 2015)

31 March 2015	Number of valid records (A)	Number of exclusions that are rated up	Number of members after exclusions (B)	Uprating factor (A/B)	Global rate up	Number of records after rate ups
Actives	165,174*	11*	165,163	1.0001	1.0027	165,618

* Excludes 445 NRPS members



Adjustments applied to data for included members

- > **Pensionable Pay:** The pensionable pay to be used for calculation purposes has been derived based on a combination of the data provided for 'Final Pensionable Salary' and 'AFPS15 Pensionable Earnings'.
- > **Part-time reservists:** Part-time reservists, who have been eligible to join the scheme since 1 April 2015, have a significantly different salary profile to 'normal' active members, so we have allowed for this when uprating for part-time reservists.
- > **EDP and IP pensioners:** For records where the specified pension in payment field was not provided, we have assumed that their EDP or IP pension (where populated) is currently in payment.
- > **Pension debits and child dependants:** Explicitly provided active and deferred pension debits and child dependants have been excluded from the final dataset on grounds of materiality. Pension credits remain in the data and will be valued alongside other members as we expect that many of the corresponding debits have already been implemented to pensions in payment.
- > **Unique identifier:** We understand that there is no universal unique identifier which allows us to trace 2016 members to the 2015 and 2012 data sets. This will affect the 'net leaver liability' calculations as required by the HMT Directions.
- > **RGRPS and GPS members:** Only one GPS member was included in the raw data provided and this record has been excluded without rating up. There were no RGRPS members present in the raw data, however this membership group will be considered separately from the main valuation calculations.
- > **Guaranteed minimum pensions (GMPs):** Robust GMP data was unavailable. An adjustment will be applied to the overall liabilities to allow for GMPs on an approximate basis.



Checks on updated dataset

Financial accounting information taken from published scheme accounts were used to perform independent checks on the dataset supplied.

Actives – as at 31 March 2016

For actives the total pensionable payroll in the adjusted 2016 actives data (£5.53bn) was compared with pensionable pay recorded in the 2015-16 resource accounts (£5.57bn). The pensionable payroll from the data is fairly close (0.7% lower) to that implied from the accounts.

Actives – as at 31 March 2015

The total pensionable payroll in the adjusted 2015 actives data (£5.45bn) was compared with pensionable pay recorded in the resource accounts (£5.51bn). The pensionable payroll from the data is fairly close (1.1% lower) to that implied from the accounts.

Pensioners – as at 31 March 2016

For pensioners the total pensioner payroll in the adjusted pensioner data (£3.83bn) was compared with pensioner payroll recorded in the 2015-16 resource accounts (£3.79bn). The pensioner payroll from the data is 1% higher.

It was not possible to undertake any independent checks on the deferreds data.



Appendix G: Checks and exclusions applied to the movements data

Checks were undertaken to ensure all records with sufficient information to assign the movement to the correct category for analysis were taken into account.

The active movements data is used to analyse experience of members who retire, die or leave active service. For these purposes only relevant records and those with reasonable critical data were used for analysis purposes. The subset of data used, checks applied and resulting numbers of exclusions are shown below.

Table G1 – Active members

Reason for Exclusion	Number of exclusions ^β
Number of exits from active status in raw data	102.9k
Removed assumed duplicates and other multiple records ⁺	4.4k
Removed records where movements dates do not fall within the intervaluation period or is missing	1.3k
Unreliable data	0.3k
Removed records where age is not appropriate	2k
Removed records which correspond to dependants pensions	0.4k
Total exclusions	7.6k
Total exits from active status analysed	95.3k

⁺ Indicates initial exclusions which are assumed to have no attaching liability and therefore we have not uprated for these members

^β If a record fails for more than one reason it is included multiple times in the numbers shown

The pensioner movements data was used to analyse mortality experience and family statistics. For these purposes only relevant records and those with reasonable critical data were used for analysis purposes. The subset of data used, checks applied and resulting numbers of exclusions are shown below.

Table G2 – Pensioners

Reason for Exclusion	Number of exclusions ^β
Number of exits from pensioners status in raw data	39.4k
Removed records where movements dates do not fall within the intervaluation period	0.2k
Total exits from pensioner status analysed	39.2k



Appendix H: Summary of benefits

Table H1 – Armed Forces Pension Scheme 1975

		Armed Forces Pension Scheme 1975
1.	Type of Scheme	Defined Benefit
2.	Contracting out status prior to 2016	Contracted Out
3.	Employees Covered	Staff who joined AFPS75 pre 6 April 2005 and did not opt to transfer at 6/4/06 in the Offer To Transfer
4.	Normal Retiring Age (NRA)	Active member may retire with unreduced immediate pensions on attaining 16 years' service (for Officers) and 22 years' service (for Other Ranks). The deferred pension age is 60 for benefits accrued prior to 6 April 2006 and age 65 for benefits accrued on or after 6 April 2006.
5.	Pensionable Pay (PP)	Representative Pay which is the same for members with same rank and service retiring in the same year, regardless of actual earnings. For 2 Star Officer's and above PP is actual basic pay.
6.	Averaging period for Determining Final Pensionable Pay (FPP)	No averaging. Representative Pay or actual pay over final year prior to exit/retirement.
7.	Member's Contributions	Non-Contributory
8.	<u>Increase to pensions</u> - In payment - In deferment	Index linked increases after age 55 based on the Pension Increase Order Act Index linked increases based on the Pension Increase Order Act
9.	<u>Benefits on Retirement</u> Age retirement (1) Member Pension (2) Lump sum Ill-health retirement – Non Attributable (1) Member Pension (2) Lump sum	Full Career Pension (i.e. 48.5% of FPP) after 34 years' reckonable service as an Officer or 37 years' reckonable service as an Other Rank. (Accrual over career is not uniform) 3 x member's pension Invaliding Pension - based on length of service and maybe enhanced if member has at least 5 years' reckonable service. 3 x member's invaliding pension



		Armed Forces Pension Scheme 1975
10.	<u>Benefits on death-in-service</u> (1) Lump sum (2) Spouse's/partner's pension (3) Spouse's Short Term Pension	<p>Max (lump sum that would have been paid on ill-health grounds, 3 x representative pay)</p> <p>50% of the ill-health pension that the member would have received on date of death.</p> <p>A short term family pension is payable equal to full pay for the first 91 days of the widow(er) hood, extended to 182 days if there are children.</p>
11.	<u>Benefits on death-after-retirement</u> (1) Lump sum (2) Spouse's/partner's pension (3) Spouse's Short Term Pension	<p>None</p> <p>50% of member's pension on retirement</p> <p>Short term pension payable at the level of member's pension for the first 91 days of the widow(er) hood, extended to 182 days if there are children.</p>
12.	<u>Benefits on withdrawal</u> - Less than 2 years' reckonable service - 2 or more years' reckonable service Immediate Pension Preserved Benefits Death Before Retirement (1) Lump sum (2) Spouse's/partner's pension Transfer Value	<p>No preserved pension, but can take transfer value equal to the value of the notional accrued pension</p> <p>Available to Officers who have completed 16 years from age 21 or Other Ranks who have completed 22 years' service from age 18.</p> <p>Pension and lump sum payable from age 60 for Pre-April 06 benefits and payable from age 65 for Post-April 06 benefits.</p> <p>Preserved Pensions are calculated as 3% of full career pension (ie 3% of 48.5%) for each year of service for Officers and 2.75% of full career pension for each year of service for Other Ranks.</p> <p>3 x member's preserved pension at death may be paid 50% of member's preserved pension</p> <p>Yes</p>
13.	Children's Pensions	One half of member's pension is divided equally between eligible children, with no one child receiving more than a quarter.
14.	Definition of partner	Spouse
15.	Cessation on remarriage	No - from 1 April 2015



Table H2 – Armed Forces Pension Scheme 2005

		Armed Forces Pension Scheme 2005
1.	Type of Scheme	Final Salary
2.	Contracting out status prior to 2016	Contracted Out
3.	Employees Covered	New entrants on or after 6/4/05 and existing members who opted to transfer their earlier service on 6/4/06 in the Offer To Transfer
4.	Normal Retiring Age (NRA)	55 from active service (but deferred pensions paid from 65)
5.	Pensionable Pay (PP)	Basic Pay (including that on Professional Aviator Spine) excluding any additional allowances.
6.	Averaging period for Determining Final Pensionable Pay (FPP)	Highest amount of pensionable pay for 365 consecutive days' within the final 3 years of reckonable service with earlier tax years brought up to current value by application of the current appropriate indexation.
7.	Member's Contributions	Non-Contributory
8.	<u>Increase to pensions</u> - In payment - In deferment	Index linked increases after age 55 based on the Pension Increase Order Act Index linked increases based on the Pension Increase Order Act
9.	<u>Benefits on Retirement</u> Age retirement (1) Member Pension (2) Lump sum Ill-health retirement Tier 1 - Medically discharged because unable to do service job but ability to get gainful employment is not deemed to be significantly impaired. Tier 2 - Discharged with condition that is not deemed to leave you permanently incapable of gainful employment, although employment prospects deemed to be significantly impaired. Tier 3- Discharged with a serious disability which it is deemed leaves you permanently incapable of any further full time employment.	1/70th x FPP x reckonable service (max 40yrs) 3 x member's pension Either EDP benefits payable (see 12) OR a lump sum payable of 1/8 x PP x (Min(2,Max(6/12, Reckonable Service))) plus normal preserved pension and lump sum benefits payable at age 65 Benefits as on age retirement but with a service enhancement of: 1/3 of the time remaining up to the normal retirement age of 55 Benefits as on age retirement but with a service enhancement of: 1/2 of the time remaining up to the normal retirement age of 55, with a minimum pension based on 20 years service.
10.	<u>Benefits on death-in-service</u> (4) Lump sum (5) Spouse's/partner's pension (6) Spouse's Short Term Pension	4 x PP 62.5% of the member's pension as if they had been awarded a Tier 3 Ill Health pension None



		Armed Forces Pension Scheme 2005
11.	<u>Benefits on death-after-retirement</u> (4) Lump sum (5) Spouse's/partner's pension (6) Spouse's Short Term Pension	5 year guarantee of member's pension less the amount of lump sum taken at retirement 62.5% of member's pension on retirement None
12.	<u>Benefits on withdrawal</u> - Less than 2 years' reckonable service - 2 or more years' reckonable service Immediate Pension Preserved Benefits Death Before Retirement (3) Lump sum (4) Spouse's/partner's pension Transfer Value	No preserved pension, but can take transfer value equal to the value of the notional accrued pension Early Departure Payments (EDP) may be payable up to age 65 as well as an EDP lump sum from the EDP Scheme if the eligibility criteria is met (i.e. reach age 40 or over AND have served at least 18 years). In addition to the EDP benefits a normal preserved pension and lump sum as for Age Retirement benefits will also be payable from age 65. Pension and lump sum as for Age Retirement benefits but payable from age 65. 3 x member's preserved pension at death 62.5% of member's preserved pension Yes
13.	Children's Pensions Where a spouse's pension is payable Where a spouse's pension is not payable	1 child – 25% of member's pension 2 or more children – the difference between the member's pension and the spouse's pension is divided equally between the children. Up to 3 children – 33% of member's pension is payable to each child. 4 or more children – member's pension is equally divided between the children. Note: on death in service the child's pension is based on the ill health pension that the member would have received at the date of death.
14.	Definition of partner	Widow(er) Civil partner Eligible partner
15.	Cessation on remarriage	No



Table H3 – Armed Forces Pension Scheme 2015

1.	Type of scheme	Career average revalued earnings
2.	Contracting out status prior to 2016	Contracted out
3.	Employees covered	All regulars, reserves and members of non-regular permanent staff except Protected Members
4.	Normal Pension Age (NPA)	60 from active service (but deferred pensions paid from State Pension Age)
5.	Pensionable pay (PP)	Basic pay and any other amount to be treated as pensionable. Excludes allowances and additions in respect of particular duties.
6.	Averaging period for determining Final Pensionable Pay (FPP)	Highest amount of pensionable pay for 365 consecutive days' within the final 3 years of reckonable service with earlier tax years brought up to current value by application of Pension Increase Orders.
7.	Annual earned pension (AEP)	1/47 th of PP for each scheme year
8.	Index adjustment in service (IA)	Based on Treasury orders, reflecting annual change in Average Weekly Earnings index.
9.	Member's contributions	Non-contributory
10.	<u>Increase to pensions</u> - In payment	Index linked increases based on Pension Increase Orders. Only paid after age 55 (including increases earned before age 55).
	- In deferment	Index linked increases based on Pension Increase Orders
11.	<u>Benefits on retirement</u> Age retirement (1) Member pension (2) Lump sum Ill-health retirement Tier 1 - Medically discharged because unable to do service job but ability to get gainful employment is not deemed to be significantly impaired. Tier 2 - Discharged with condition that is not deemed to leave you permanently incapable of gainful employment, although employment prospects deemed to be significantly impaired. Tier 3- Discharged with a serious disability which it is deemed leaves you permanently incapable of any further full time employment.	 The sum of each year's AEP revalued with the appropriate IAs to date of exit By commutation at 12:1 Either EDP benefits payable (see 14) OR a lump sum payable of 1/8 x FPP x Reckonable Service, with a minimum of 1/2 x FPP and a maximum of 2 x FPP plus normal preserved pension payable at State Pension Age Benefits as on age retirement but with an enhancement equivalent to one-third of the time remaining up to the normal pension age of 60 Benefits as on age retirement but with a service enhancement equivalent to half the time remaining up to the normal pension age of 60, with a minimum pension equivalent to the lesser of > 25 years' service > pensionable service plus prospective service to normal pension age.



12.	<u>Benefits on death in service</u> (1) Lump sum (2) Dependant's pension	4 x FPP 62.5% of the member's pension as if they had been awarded a Tier 3 ill health pension
13.	<u>Benefits on death after retirement</u> (1) Lump sum (2) Dependant's pension	5 year guarantee of member's pension after commutation 62.5% of member's pension after commutation
14.	<u>Benefits on withdrawal</u> - Less than 2 years' reckonable service - 2 or more years' reckonable service Early departure payments (EDP) if over age 40 and served at least 20 years Preserved benefits Death Before Retirement (1) Lump sum (2) Dependant's pension Transfer Value	No preserved pension, but can take transfer value equal to the value of the notional accrued pension EDP income payments up to State Pension Age. Amount is 34% of preserved pension, plus 0.85% for each year served past EDP qualification point. EDP lump sum of 2.25 times preserved pension. In addition to the EDP benefits preserved benefits as for Age Retirement benefits will also be payable from State Pension Age. As for Age Retirement benefits but payable from State Pension Age. 3 x member's preserved pension at death 62.5% of member's preserved pension Yes
15.	<u>Children's pensions</u> Where a dependant's pension is payable Where a dependant's pension is not payable	1 child – 25% of member's pension 2 or more children – the difference between the member's pension and the dependant's pension is divided equally between the children. Up to 3 children – 33% of member's pension is payable to each child. 4 or more children – member's pension is equally divided between the children. Note: on death in service the child's pension is based on the ill health pension that the member would have received at the date of death.
16.	Definition of dependant	Widow(er) Civil partner Eligible partner
17.	Cessation on remarriage	No



Notes:

- > The above AFPS75, AFPS05 and AFPS15 summaries show Non-Attributable benefits only.
- > Eligibility criteria for most benefits is at least 2 years reckonable service
- > Entitlement to a Non-Attributable benefit arises when the member's injury/illness or death is not attributable to their service in the Armed Forces.
- > Attributable benefits are in addition to the above and are provided under the structure of the Armed Forces Compensation Scheme (AFCS) regardless of the pension scheme to which the member belongs
- > Some specialist groups of employees (such as Professional Aviators) are entitled to additional supplement based benefits if they are members of the AFPS75 scheme.